

<u>Docket No. 20190061-EI</u> Comprehensive Exhibit List for Entry into Hearing Record January 14–15, 2020					
EXH #	Witness	I.D. # As Filed	Exhibit Description	Issue Nos.	Entered
STAFF					
1		Exhibit List	Comprehensive Exhibit List		
FLORIDA POWER & LIGHT COMPANY – DIRECT					
2	Matthew Valle ¹	MV-1	STR - Tariff No. 8.932 in Legislative and Proposed Formats.	1,4	
3	William F. Brannen	WFB-1	List of FPL Universal PV Solar Energy Centers in Service.	5	
4	William F. Brannen	WFB-2	Typical Solar Energy Center Block Diagram.	5	
5	William F. Brannen	WFB-3	Specifications for FPL SolarTogether Projects 1, 2, 3, and 4.	5	
6	William F. Brannen	WFB-4	Construction Schedules for the FPL SolarTogether Projects.	5	
7	*Juan E. Enjamio ²	JE-1	Load Forecast	1	

¹ Testimony Amended on January 9, 2020. (DN 00131-2020)

² Steven R. Sim is adopting the prefiled testimony and Interrogatory Responses of Juan E. Enjamio.

8	*Juan E. Enjamio	JE-2	FPL Fuel Price Forecast	1	
9	*Juan E. Enjamio	JE-3	FPL Resource Plans	1	
10	*Juan E. Enjamio	JE-4	CPVRR - Costs and (Benefits)	1	
11	Scott R. Bores	SRB-1	Summary CPVRR Analysis for FPL SolarTogether Phase 1.	3	
OFFICE OF PUBLIC COUNSEL – DIRECT					
12	James R. Dauphinais ³	JRD-1	FPL Forecasted CPVRR Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities for FPL Customers as a Whole (FPL Base Case Only).	1-5	
13	James R. Dauphinais	JRD-2	FPL Forecasted CPVRR Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities for FPL Customers as a whole (All FPL Cases).	1-5	
14	James R. Dauphinais	JRD-3	FPL Forecasted CPVRR Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities for Participating Customers (All FPL Cases).	1-5	

³ Testimony Amended on January 9, 2020. (DN 00138-2020)

15	James R. Dauphinais	JRD-4	FPL Forecasted CPVRR Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities for Non-Participating Customers (FPL Base Case Only).	1-5	
16	James R. Dauphinais	JRD-5	FPL Forecasted CPVRR Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities for Non-Participating Customers (All FPL Cases).	1-5	
17	James R. Dauphinais	JRD-6	Public Discovery Responses Cited to by Mr. Dauphinais.	1-5	
18	James R. Dauphinais	JRD-7	CDI Confidential Discovery Responses Cited to by Mr. Dauphinais.	1-5	
19	James R. Dauphinais	JRD-8	FPL Rebuttal Testimony forecasted CPVRR Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities for FPL Customers as a Whole (FPL Base Case Only). Supplemental Testimony	1-5	
20	James R. Dauphinais	JRD-9	FPL Rebuttal Testimony forecasted CPVRR Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities for FPL Customers as a Whole (All FPL Cases). Supplemental Testimony	1-5	

21	James R. Dauphinais	JRD-10	FPL Rebuttal Testimony forecasted CPVRR Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities for Participating Customers (All FPL Cases). Supplemental Testimony	1-5	
22	James R. Dauphinais	JRD-11	FPL Rebuttal Testimony forecasted CPVRR Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities for Non-Participating Customers (All FPL Cases). Supplemental Testimony	1-5	
23	James R. Dauphinais	JRD-12	Discovery Responses Cited to by Mr. Dauphinais in his Supplemental Testimony. Supplemental Testimony	1-5	
VOTE SOLAR – DIRECT					
24	Matt Cox	MC-1	Resume of Max Cox, PhD	2,3,4	
25	Matt Cox	MC-2	Map of Customer Electricity Burdens in FPL's Service Territory.	2,3,4	
WALMART – DIRECT					
26	Steve W. Chriss	SWC-1	Witness Qualifications Statement	Approval of the Settlement Agreement	

SOUTHERN ALLIANCE FOR CLEAN ENERGY – DIRECT					
27	Bryan A. Jacob	BAJ-1	Resume of Bryan A. Jacob.	4	
FLORIDA POWER & LIGHT COMPANY – REBUTTAL					
28	Matthew Valle	MV-2	STR - Revised Tariff No. 8.932 in Legislative and Proposed Formats.	1,4	
29	Matthew Valle	MV-3	Net Metering Subsidy Supplemental Testimony	1,4	
30	*Juan E. Enjamio	JE-5	Need Without New Generation Resources ⁴	1	
31	*Juan E. Enjamio	JE-6	Resource Plans	1	
32	*Juan E. Enjamio	JE-7	CPVRR (Amended)	1	
33	*Juan E. Enjamio	JE-8	System Average Rate Impact	1	
34	*Juan E. Enjamio	JE-9	Sensitivity Analysis	1	
35	*Juan E. Enjamio	JE-10	Sensitivity Analysis - General Body of Customers.	1	

⁴ Exhibit JE-5 Amended on January 9, 2020. (DN 00131-2020)

36	Scott R. Bores ⁵	SRB-2	Updated CPVRR Analysis for FPL SolarTogether Phase 1.	3	
37	Terry Deason	JTD-1	Curriculum Vitae	2	
STAFF HEARING EXHIBITS					
38	<p>Valle (1-3, 25, 48-57, 59, 60-61, 63-71, 80, 90, 94, 100-101, 105, 112, 116, 121-123, 125-127, 130-133, 135-136, 138-146, 148, 150-155)</p> <p>Brannen (4-23)</p> <p>Bores (58-59, 72, 74, 81-82, 84-87, 89, 105, 107-108, 113, 116, 118, 138, 145-147, 154, 156-157)</p> <p>*Enjamio (24, 27, 29-47, 73, 74-76, 78-79, 92, 95-96, 100-101, 103, 107, 109, 113, 115, 118, 158-159)</p>		<p>FPL's Response to Staff's First Set of Interrogatories Nos. 1-25, 27, 29-61, 63-74, 76, 78-82, 84-87, 89-90, 92, 94-96, 100-101, 103, 105, 107-109, 112-113, 115-116, 118, 121-123, 125-127, 130-133, 135-136, 138-148, 150-159.</p> <p>Additional files contained on Staff Hearing Exhibits CD/USB for Nos. 33, 39, 46, 55, 72, 75, 78-79, 81, 92, 95, 113, 125, 146, 147</p> <p>(Amended Nos. 78, 79, 100)</p> <p>(Confidential Nos. 34, 96, 147)</p> <p>Confidential DN. 05668-2019</p> <p><i>[Bates Nos. 00001-00226]</i></p>	1, 2, 3, 4	

⁵ Testimony Amended on January 9, 2020. (DN 00131-2020)

39	<p>Valle (161-162, 164, 166, 169-173, 176, 185, 188-189)</p> <p>Brannen (173-175)</p> <p>Bores (170, 183)</p> <p>*Enjamio (177, 181, 190-193, 195-196, 198)</p>		<p>FPL's Response to Staff's Second Set of Interrogatories Nos. 161-162, 164, 166, 169-177, 181, 183, 185, 188-193, 195-196, 198.</p> <p>Additional files contained on Staff Hearing Exhibits CD/USB for Nos. 181, 190, 198</p> <p>(Amended Nos. 181, 189, 190, 195, 198)</p> <p><i>[Bates Nos. 00227-00264]</i></p>	1, 2, 3, 4	
40	<p>Bores (203)</p> <p>*Enjamio (200, 205-206)</p>		<p>FPL's Response to Staff's Third Set of Interrogatories Nos. 200, 203, 205-206.</p> <p>Additional files contained on Staff Hearing Exhibits CD/USB for No. 205)</p> <p>(Amended No. 206)</p> <p><i>[Bates Nos. 00265-00274]</i></p>	3, 4	
41	<p>Bores (207)</p> <p>Valle (208)</p>		<p>FPL's Response to Staff's Fourth Set of Interrogatories Nos. 207-208.</p> <p><i>[Bates Nos. 00275-00279]</i></p>	2, 3	
42	<p>Bores (209-210)</p> <p>*Enjamio (210)</p>		<p>FPL's Response to Staff's Fifth Set of Interrogatories Nos. 209-210.</p> <p>Additional files contained on Staff Hearing Exhibits CD/USB for No. 210</p> <p><i>[Bates Nos. 00280-00284]</i></p>	2	

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43	*Enjamio (211)		FPL's Response to Staff's Sixth Set of Interrogatories No. 211. <i>[Bates Nos. 00285-00288]</i>	3	
44	Valle (212-213, 215, 217-218) Bores (214, 217, 220) *Enjamio (221) Deason (213-214)		FPL's Response to Staff's Seventh Set of Interrogatories Nos. 212-215, 217-218, 220-221. <i>[Bates Nos. 00289-00301]</i>	1,2, 3	
45	*Enjamio (222-228, 230, 232) Valle (230, 232) Bores (232) Brannen (232)		FPL's Amended Response to Staff's Eighth Set of Interrogatories Nos. 222-228, 230, 232. Additional files contained on Staff Hearing Exhibits CD/USB for Nos. 224, 226- 228 <i>[Bates Nos. 00302-00317]</i>	1, 3, 4,5	
46	Bores (233-234, 237) *Enjamio (233,235-236, 238) Valle (239-240)		FPL's Response to Staff's Ninth Set of Interrogatories Nos. 233-240. Additional files contained on Staff Hearing Exhibits CD/USB for Nos. 233-236, 238, 240 <i>[Bates Nos. 00318-00339]</i>	1, 2, 3, 4	
47	*Enjamio (241) Valle (241)		FPL's Response to Staff's Tenth Set of Interrogatories No. 241. <i>[Bates Nos. 00340-00346]</i>	1, 2, 3, 4	

48	Bores (242-245) Deason (245)		FPL's Response to Staff's Eleventh Set of Interrogatories Nos. 242-245. <i>[Bates Nos. 00347-00353]</i>	1, 3, 4	
49	Brannen (246) *Enjamio (250) Bores (251-253)		FPL's Response to Staff's Twelfth Set of Interrogatories Nos. 246, 250-253. Additional files contained on Staff Hearing Exhibits CD/USB for No. 250 (Supplemental No. 250) <i>[Bates Nos. 00354-00362]</i>	1, 2, 3, 4	
50	Bores (254) Sim (254)		FPL's Response to Staff's Thirteenth Set of Interrogatories No. 254. Additional files contained on Staff Hearing Exhibits CD/USB for No. 254 <i>[Bates Nos. 00363-00366]</i>	3	
51	Sims (255-258) Valle (258) Bores(259)		FPL's Response to Staff's Fourteenth Set of Interrogatories Nos. 255-259. <i>[Bates Nos. 00367-00375]</i>	3, 4	
52	Sims (8)		FPL's Response to OPC's Second Set of Interrogatories Amended No. 8. <i>[Bates Nos. 00376-00378]</i>	4	
53	Valle (25)		FPL's Response to OPC's Fifth Set of Interrogatories No. 25. <i>[Bates Nos. 00379-00381]</i>	2, 4	

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54	Valle (29)		FPL's Response to OPC's Sixth Set of Interrogatories No. 29. <i>[Bates Nos. 00382-00385]</i>	2,4	
55	Valle (35)		FPL's Response to OPC's Eighth Set of Interrogatories No. 35. <i>[Bates Nos. 00386-00389]</i>	2	
56	Valle (53)		FPL's Response to OPC's Twelfth Set of Interrogatories No.53. <i>[Bates Nos. 00390-00392]</i>	3	
57	Sim (26)		FPL's Response to Vote Solar's First Set of Interrogatories No. 26. Additional files contained on Staff Hearing Exhibits CD/USB for No. 26 <i>[Bates Nos. 00393-00395]</i>	3	
58	Dauphinais (1)		OPC's Response to Staff's First Set of Interrogatories No. 1. <i>[Bates Nos. 00396-00399]</i>	3, 4	
59	Jacob (1-2)		SACE's Response to Staff's First Set of Interrogatories Nos. 1-2. <i>[Bates Nos. 00400-00402]</i>	4	
60	Cox (1)		Vote Solar's Response to Staff's First Set of Interrogatories No. 1. <i>[Bates Nos. 00403-00408]</i>	4	

61			Deposition of Terry Deason taken on December 10, 2019. Errata of Deposition completed on January 6, 2020. <i>[Bates Nos. 00409-00460]</i>		
62			Deposition of William F. Brannen taken on December 17, 2019. Errata of Deposition completed on January 9, 2020. Confidential DN. 00190- 2020 <i>[Bates Nos. 00461-00465]</i>		
HEARING EXHIBITS					
Live Exhibit Number	Witness	Party	Description		Moved In/Due Date of Late Filed
63	Valle	Staff	SolarTogether Subscription Availability by Customer Type		
64	Valle	Staff	Scenario Savings Allocations for Solar Facilities and SolarTogether		
65	Valle	Staff	Staff's Interrogatories Nos. 139 (CEL 38), 241 (CEL 47), 254 (CEL 50), 209 CEL 42, and 234a (CEL 46)		Not Entered
66	Sims	Staff	Deposition of Steven R. Sim		Not Entered
67	Sims	Staff	Levelized System Average Electric Rate of Resource Plans		

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68	Sims	Staff	Solar PV Percent of Net Energy Load		
69	Bores	OPC	Brannen Deposition Exhibit No. 3		
70	Bores	OPC	Bores Late Filed Deposition Exhibit No. 3		

FLORIDA POWER & LIGHT COMPANY

Original Sheet No.8.932

FPL SOLARTOGETHER RIDER
(OPTIONAL PROGRAM)

RATE SCHEDULE: STR

AVAILABLE:

The FPL SolarTogetherSM Rider ("FPL SolarTogether" or "the Program") is available in all territory served, subject to subscription availability. This optional program allows FPL customers to subscribe to a portion of universal solar capacity built for the benefit of the Program and receive a credit for the actual solar production associated with their subscription.

APPLICATION:

In conjunction with the otherwise applicable metered rate schedule. All rates and charges under the customers' otherwise applicable metered rate schedule shall apply.

MONTHLY SUBSCRIPTION:

The Monthly Subscription shall be equal to the sum of the *Monthly Subscription Charge + Monthly Subscription Credit* as follows:

Monthly Subscription	
Subscription Charge \$/kW-Month	Subscription Credit ¢/kWh
See Sheet No. 8.934	See Sheet No. 8.934

LIMITATION OF SERVICE:

Any customer taking service under a metered rate schedule who has no delinquent balances with FPL is eligible to participate. Eligible customers may elect a subscription level in 1 kW units representing up to 100% of their previous 12-month total kWh usage. Increases in number of units purchased will be limited to once per year and subject to program availability.

BILLING:

Participants are subject to the minimum bill on their otherwise applicable rate schedule. The FPL SolarTogether Monthly Subscription Charge and offsetting Monthly Subscription Credit will appear as separate line items on a participant's bill during every month of enrollment, and are subject to all applicable taxes and fees.

Monthly Subscription Credit amounts may not result in a total bill less than zero (\$0). Any excess credit amounts will be applied in subsequent months to ensure participant total bill amounts meet this requirement.

TERMS OF SERVICE:

Not less than one (1) billing cycle. Participants may, at any time following their first billing cycle, terminate their participation ("Voluntary Termination") or reduce the number of subscribed units purchased. Participants may be terminated from the program by FPL if the customer becomes delinquent on the customer's electric service account or for failure to satisfy eligibility requirements ("Involuntary Termination"). Upon either Voluntary or Involuntary Termination, the account is prohibited from re-enrolling for a twelve (12) month period.

(Continued on Sheet No. 8.933)

Issued by: Tiffany Cohen, Director, Rates and Tariffs
Effective:

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 2
PARTY: FLORIDA POWER & LIGHT
COMPANY – DIRECT
DESCRIPTION: Matthew Valle MV-1

FLORIDA POWER & LIGHT COMPANY

Original Sheet No. 8.933

(Continued from Sheet No. 8.932)

SPECIAL PROVISIONS:

Upon customer request, if the customer moves within FPL's service territory, program participation may continue at a new service address with no impact the customer's program enrollment date subject to the limitations and terms outlined above. Notification to transfer participation must be made by the customer to the Company and the Company will have 45 days to complete the transfer.

RULES AND REGULATIONS:

Service under this rider is subject to orders of governmental bodies having jurisdiction and to the currently effective "General Rules and Regulations for Electric Service" on file with the Florida Public Service Commission. In case of conflict between any provisions of this schedule and said "General Rules and Regulations for Electric Service" the provisions of this rider shall apply. The participant subscription is neither a security nor an ownership interest in the solar asset and therefore no owned interest is to be surrendered, sold, or traded.

(Continued on Sheet No. 8.934)

Issued by: Tiffany Cohen, Director, Rates and Tariffs
Effective:

FLORIDA POWER & LIGHT COMPANY

Original Sheet No. 8.934

(Continued from Sheet No. 8.933)

MONTHLY SUBSCRIPTION
FPL SOLARTOGETHER PARTICIPANT RATES

Phase 1		
Participant Program Year	Subscription Charge \$/kW-Month	Subscription Credit ¢/kWh
1	\$6.76	(3.42881)
2	\$6.76	(3.47853)
3	\$6.76	(3.52897)
4	\$6.76	(3.58014)
5	\$6.76	(3.63205)
6	\$6.76	(3.68471)
7	\$6.76	(3.73814)
8	\$6.76	(3.79234)
9	\$6.76	(3.84733)
10	\$6.76	(3.90312)
11	\$6.76	(3.95972)
12	\$6.76	(4.01714)
13	\$6.76	(4.07539)
14	\$6.76	(4.13448)
15	\$6.76	(4.19443)
16	\$6.76	(4.25525)
17	\$6.76	(4.31695)
18	\$6.76	(4.37955)
19	\$6.76	(4.44305)
20	\$6.76	(4.50747)
21	\$6.76	(4.57283)
22	\$6.76	(4.63914)
23	\$6.76	(4.70641)
24	\$6.76	(4.77465)
25	\$6.76	(4.84388)
26	\$6.76	(4.91412)
27	\$6.76	(4.98537)
28	\$6.76	(5.05766)
29	\$6.76	(5.13100)
30	\$6.76	(5.20540)

Issued by: Tiffany Cohen, Director, Rates and Tariffs
Effective:

FLORIDA POWER & LIGHT COMPANY

Original Sheet No. 8.932

FPL SOLARTOGETHER RIDER
(OPTIONAL PROGRAM)

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AVAILABLE:

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In conjunction with the otherwise applicable metered rate schedule. All rates and charges under the customers' otherwise applicable metered rate schedule shall apply.

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Monthly Subscription	
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See Sheet No. 8.934	See Sheet No. 8.934

LIMITATION OF SERVICE:

Any customer taking service under a metered rate schedule who has no delinquent balances with FPL is eligible to participate. Eligible customers may elect a subscription level in 1 kW units representing up to 100% of their previous 12-month total kWh usage. Increases in number of units purchased will be limited to once per year and subject to program availability.

BILLING:

Participants are subject to the minimum bill on their otherwise applicable rate schedule. The FPL SolarTogether Monthly Subscription Charge and offsetting Monthly Subscription Credit will appear as separate line items on a participant's bill during every month of enrollment, and are subject to all applicable taxes and fees.

Monthly Subscription Credit amounts may not result in a total bill less than zero (\$0). Any excess credit amounts will be applied in subsequent months to ensure participant total bill amounts meet this requirement.

TERMS OF SERVICE:

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(Continued on Sheet No. 8.933)

Issued by: Tiffany Cohen, Director, Rates and Tariffs
Effective:

FLORIDA POWER & LIGHT COMPANY

Original Sheet No. 8.933

(Continued from Sheet No. 8.932)

SPECIAL PROVISIONS:

Upon customer request, if the customer moves within FPL's service territory, program participation may continue at a new service address with no impact the customer's program enrollment date subject to the limitations and terms outlined above. Notification to transfer participation must be made by the customer to the Company and the Company will have 45 days to complete the transfer.

RULES AND REGULATIONS:

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Effective:

FLORIDA POWER & LIGHT COMPANY

Original Sheet No. 8.934

(Continued from Sheet No. 8.933)

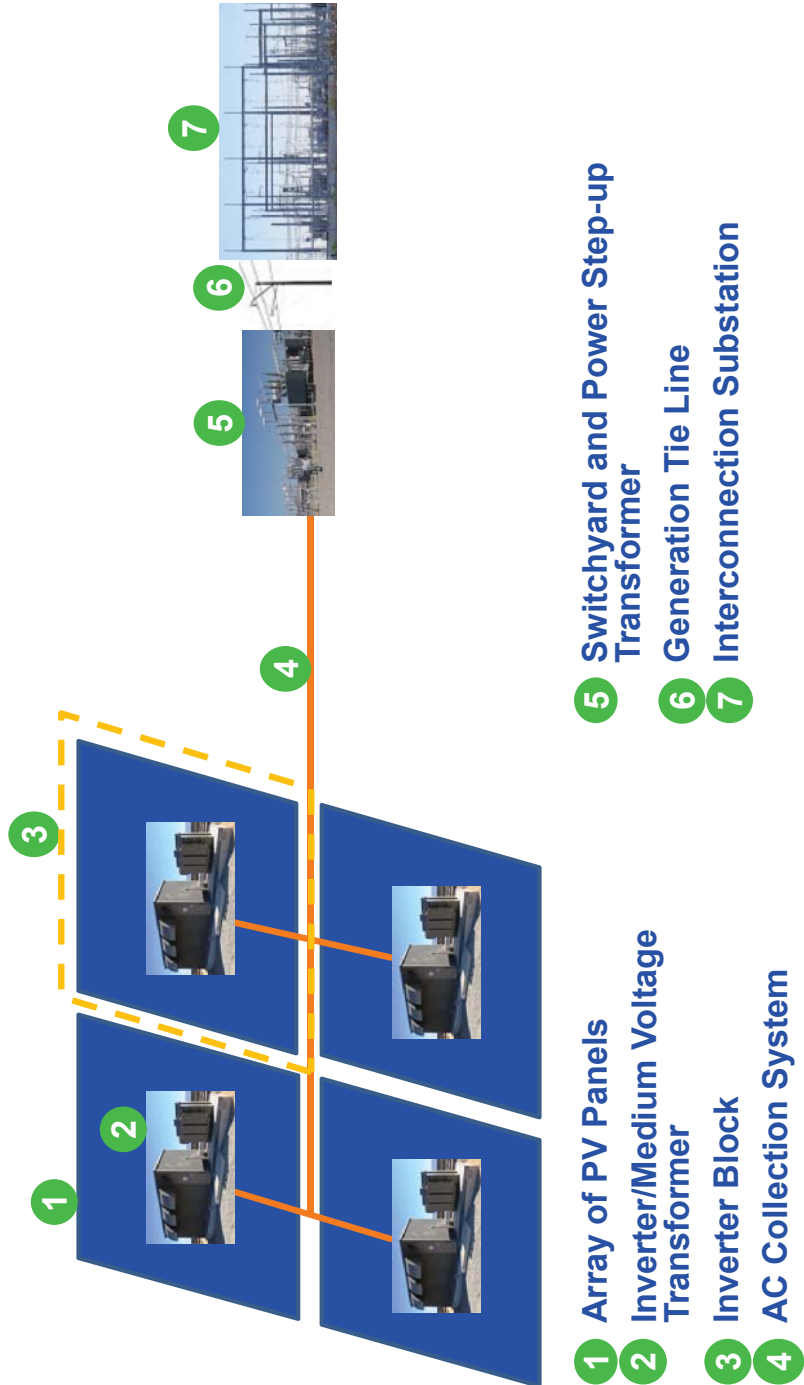
MONTHLY SUBSCRIPTION
FPL SOLARTOGETHER PARTICIPANT RATES

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Participant Program Year	Subscription Charge \$/kW-Month	Subscription Credit ¢/kWh
1	\$6.76	(3.42881)
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7	\$6.76	(3.73814)
8	\$6.76	(3.79234)
9	\$6.76	(3.84733)
10	\$6.76	(3.90312)
11	\$6.76	(3.95972)
12	\$6.76	(4.01714)
13	\$6.76	(4.07539)
14	\$6.76	(4.13448)
15	\$6.76	(4.19443)
16	\$6.76	(4.25525)
17	\$6.76	(4.31695)
18	\$6.76	(4.37955)
19	\$6.76	(4.44305)
20	\$6.76	(4.50747)
21	\$6.76	(4.57283)
22	\$6.76	(4.63914)
23	\$6.76	(4.70641)
24	\$6.76	(4.77465)
25	\$6.76	(4.84388)
26	\$6.76	(4.91412)
27	\$6.76	(4.98537)
28	\$6.76	(5.05766)
29	\$6.76	(5.13100)
30	\$6.76	(5.20540)

Issued by: Tiffany Cohen, Director, Rates and Tariffs
Effective:

<u>List of FPL Universal PV Solar Centers in Service</u>		
Solar Energy Center	Capacity (MW_{AC})	In-Service Date
DeSoto	25.0	October 27, 2009
Space Coast	10.0	April 16, 2010
Babcock Ranch	74.5	December 31, 2016
Citrus	74.5	December 31, 2016
Manatee	74.5	December 31, 2016
Coral Farms	74.5	January 1, 2018
Horizon	74.5	January 1, 2018
Wildflower	74.5	January 1, 2018
Indian River	74.5	January 1, 2018
Loggerhead	74.5	March 1, 2018
Barefoot Bay	74.5	March 1, 2018
Hammock	74.5	March 1, 2018
Blue Cypress	74.5	March 1, 2018
Interstate	74.5	January 31, 2019
Miami-Dade	74.5	January 31, 2019
Pioneer Trail	74.5	January 31, 2019
Sunshine Gateway	74.5	January 1, 2019
FPL Total	1,152.5	

Typical Solar Energy Center Block Diagram



Specifications for FPL SolarTogether Project 1, Site 1

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 1, Site 1	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	99.00 MW _{DC}
PV Panel Suppliers	BYD
PV Panel Technologies	72 cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	328
Number of Panels (Average)	302,006
Inverter DC Input (MW _{DC})	4.13
DC/AC Ratio	1.33
Number of Power Conversion Units (PCU)	24
PCU Supplier	Power Electronics
Inverter Type	HEM FS3430M
Inverter Rating (MVA/V)	3.430/660
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	ABB
Medium Voltage Transformer Type	3-Phase, 60 Hz, 3-Windings
Medium Voltage Transformer Rating (MVA)	3.51
Number of Inverters	24
Inverter Capacity Installed (MVA)	85.2 MVA @ 35°C
Number of Medium Voltage Transformers	24
Medium Voltage Transformer Capacity Installed (MVA)	84.24
Number of Panel Per PCU Block (Average)	12,584
PV Panel Support Mechanism	Fixed
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	241.5 kV

Specifications for FPL SolarTogether Project 1, Site 2

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 1, Site 2	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	98.43 MW _{DC}
PV Panel Suppliers	BYD
PV Panel Technologies	72 cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	326
Number of Panels (Average)	296,205
Inverter DC Input (MW _{DC})	4.10
DC/AC Ratio	1.32
Number of Power Conversion Units (PCU)	24
PCU Supplier	Power Electronics
Inverter Type	HEM FS3430M
Inverter Rating (MVA/V)	3.43/660
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	ABB
Medium Voltage Transformer Type	3-Phase, 60 Hz, 3-Windings
Medium Voltage Transformer Rating (MVA)	3.51
Number of Inverters	24
Inverter Capacity Installed (MVA)	85.2 @ 35°C
Number of Medium Voltage Transformers	24
Medium Voltage Transformer Capacity Installed (MVA)	84.24
Number of Panel Per PCU Block (Average)	12,342
PV Panel Support Mechanism	Fixed
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	117.5 kV

Specifications for FPL SolarTogether Project 1, Site 3

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 1, Site 3	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	94.65 MW _{DC}
PV Panel Suppliers	BYD
PV Panel Technologies	72 cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	328 W
Number of Panels (Average)	288,057
Inverter DC Input (MW _{DC})	3.94
DC/AC Ratio	1.27
Number of Power Conversion Units (PCU)	24
PCU Supplier	Power Electronics
Inverter Type	HEM FS3430M
Inverter Rating (MVA/V)	3.430/660
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	ABB
Medium Voltage Transformer Type	3-Phase, 60 Hz, 3-Windings
Medium Voltage Transformer Rating (MVA)	3.55
Number of Inverters	24
Inverter Capacity Installed (MVA)	85.2 MVA @ 35°C
Number of Medium Voltage Transformers	24
Medium Voltage Transformer Capacity Installed (MVA)	84.24
Number of Panel Per PCU Block (Average)	12,002
PV Panel Support Mechanism	Tracker System
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	241.5 kV

Specifications for FPL SolarTogether Project 2, Site 1

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 2, Site 1	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	95.06 MW _{DC}
PV Panel Suppliers	Trina
PV Panel Technologies	72 cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	335
Number of Panels (Average)	284,657
Inverter DC Input (MW _{DC})	3.97
DC/AC Ratio	1.28
Number of Power Conversion Units (PCU)	24
PCU Supplier	Power Electronics
Inverter Type	HEM FS3430M
Inverter Rating (MVA/V)	3.43/660
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	ABB
Medium Voltage Transformer Type	3-Phase, 60 Hz, 3-Windings
Medium Voltage Transformer Rating (MVA)	3.51
Number of Inverters	24
Inverter Capacity Installed (MVA)	85.2 @ 35°C
Number of Medium Voltage Transformers	24
Medium Voltage Transformer Capacity Installed (MVA)	84.24
Number of Panel Per PCU Block (Average)	11,861
PV Panel Support Mechanism	Tracker
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	117.5 kV

Specifications for FPL SolarTogether Project 2, Site 2

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 2, Site 2	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	114.43 MW _{DC}
PV Panel Suppliers	Trina
PV Panel Technologies	72 cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	330
Number of Panels (Average)	347,700
Inverter DC Input (MW _{DC})	4.77
DC/AC Ratio	1.54
Number of Power Conversion Units (PCU)	24
PCU Supplier	Power Electronics
Inverter Type	HEM FS3430M
Inverter Rating (MVA/V)	3.430/660
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	ABB
Medium Voltage Transformer Type	3-Phase, 60 Hz, 3-Windings
Medium Voltage Transformer Rating (MVA)	3.51
Number of Inverters	24
Inverter Capacity Installed (MVA)	85.2 MVA @ 35°C
Number of Medium Voltage Transformers	24
Medium Voltage Transformer Capacity Installed (MVA)	84.24
Number of Panel Per PCU Block (Average)	14,488
PV Panel Support Mechanism	Fixed
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	141.5 kV

Specifications for FPL SolarTogether Project 2, Site 3

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 2, Site 3	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	114.74 MW _{DC}
PV Panel Suppliers	Trina
PV Panel Technologies	72 cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	332
Number of Panels (Average)	345,360
Inverter DC Input (MW _{DC})	4.78
DC/AC Ratio	1.54
Number of Power Conversion Units (PCU)	24
PCU Supplier	Power Electronics
Inverter Type	HEM FS3430M
Inverter Rating (MVA/V)	3.430/660
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	ABB
Medium Voltage Transformer Type	3-Phase, 60 Hz, 3-Windings
Medium Voltage Transformer Rating (MVA)	3.51
Number of Inverters	24
Inverter Capacity Installed (MVA)	85.2 MVA @ 35°C
Number of Medium Voltage Transformers	24
Medium Voltage Transformer Capacity Installed (MVA)	84.24
Number of Panel Per PCU Block (Average)	14,390
PV Panel Support Mechanism	Fixed
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	Hyundai
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	241.5 kV

Specifications for FPL SolarTogether Project 3, Site 1

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 3, Site 1	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	108.04 MW _{DC}
PV Panel Suppliers	BYD
PV Panel Technologies	144 half-cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	335
Number of Panels (Average)	322,500
Inverter DC Input (MW _{DC})	4.50
DC/AC Ratio	1.45
Number of Power Conversion Units (PCU)	24
PCU Supplier	Power Electronics
Inverter Type	HEM FS3430M
Inverter Rating (MVA/V)	3.430/660
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	ABB
Medium Voltage Transformer Type	3-Phase, 60 Hz, 3-Windings
Medium Voltage Transformer Rating (MVA)	3.51
Number of Inverters	24
Inverter Capacity Installed (MVA)	85.2 MVA @ 35°C
Number of Medium Voltage Transformers	24
Medium Voltage Transformer Capacity Installed (MVA)	84.24
Number of Panel Per PCU Block (Average)	13,438
PV Panel Support Mechanism	Fixed
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	241.5 kV

Specifications for FPL SolarTogether Project 3, Site 2

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 3, Site 2	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	93.87 MW _{DC}
PV Panel Suppliers	BYD
PV Panel Technologies	144 half-cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	335
Number of Panels (Average)	280,209
Inverter DC Input (MW _{DC})	3.91
DC/AC Ratio	1.26
Number of Power Conversion Units (PCU)	24
PCU Supplier	Power Electronics
Inverter Type	HEM FS3430M
Inverter Rating (MVA/V)	3.43/660
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	ABB
Medium Voltage Transformer Type	3-Phase, 60 Hz, 3-Windings
Medium Voltage Transformer Rating (MVA)	3.51
Number of Inverters	24
Inverter Capacity Installed (MVA)	85.2 MVA @ 35°C
Number of Medium Voltage Transformers	24
Medium Voltage Transformer Capacity Installed (MVA)	84.24
Number of Panel Per PCU Block (Average)	11,675
PV Panel Support Mechanism	Tracker
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	117.5 kV

Specifications for FPL SolarTogether Project 3, Site 3

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 3, Site 3	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	93.87 MW _{DC}
PV Panel Suppliers	BYD
PV Panel Technologies	144 half-cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	335
Number of Panels (Average)	280,209
Inverter DC Input (MW _{DC})	3.75
DC/AC Ratio	1.26
Number of Power Conversion Units (PCU)	25
PCU Supplier	GE
Inverter Type	LV5+ 1566
Inverter Rating (MVA/V)	3.4/660
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	GE Prolec
Medium Voltage Transformer Type	3-Phase, 60 Hz, 2-Windings
Medium Voltage Transformer Rating (MVA)	3.43
Number of Inverters	25
Inverter Capacity Installed (MVA)	85.75 @ 35° C
Number of Medium Voltage Transformers	25
Medium Voltage Transformer Capacity Installed (MVA)	85.75
Number of Panel Per PCU Block (Average)	11,208
PV Panel Support Mechanism	Tracker
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	117.5 kV

Specifications for FPL SolarTogether Project 3, Site 4

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 3, Site 4	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	93.87 MW _{DC}
PV Panel Suppliers	BYD
PV Panel Technologies	144 half-cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	335
Number of Panels (Average)	280,209
Inverter DC Input (MW _{DC})	3.75
DC/AC Ratio	1.26
Number of Power Conversion Units (PCU)	25
PCU Supplier	GE
Inverter Type	LV5+ 1566
Inverter Rating (MVA/V)	3.4/660
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	GE Prolec
Medium Voltage Transformer Type	3-Phase, 60 Hz, 2-Windings
Medium Voltage Transformer Rating (MVA)	3.43
Number of Inverters	25
Inverter Capacity Installed (MVA)	85.75 @ 35° C
Number of Medium Voltage Transformers	25
Medium Voltage Transformer Capacity Installed (MVA)	85.75
Number of Panel Per PCU Block (Average)	11,208
PV Panel Support Mechanism	Tracker
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	241.5 kV

Specifications for FPL SolarTogether Project 3, Site 5

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 3, Site 5	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	93.87 MW _{DC}
PV Panel Suppliers	BYD
PV Panel Technologies	144 half-cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	335
Number of Panels (Average)	280,209
Inverter DC Input (MW _{DC})	3.75
DC/AC Ratio	1.26
Number of Power Conversion Units (PCU)	25
PCU Supplier	GE
Inverter Type	LV5+ 1566
Inverter Rating (MVA/V)	3.4/660
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	GE Prolec
Medium Voltage Transformer Type	3-Phase, 60 Hz, 2-Windings
Medium Voltage Transformer Rating (MVA)	3.43
Number of Inverters	25
Inverter Capacity Installed (MVA)	85 @ 35 ° C
Number of Medium Voltage Transformers	25
Medium Voltage Transformer Capacity Installed (MVA)	85.75@ 35 ° C
Number of Panel Per PCU Block (Average)	11,208
PV Panel Support Mechanism	Tracker System
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	241.5 kV

Specifications for FPL SolarTogether Project 3, Site 6

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 3, Site 6	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	93.87 MW _{DC}
PV Panel Suppliers	BYD
PV Panel Technologies	144 half-cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	335
Number of Panels (Average)	280,209
Inverter DC Input (MW _{DC})	4.47
DC/AC Ratio	1.26
Number of Power Conversion Units (PCU)	21
PCU Supplier	TMEIC
Inverter Type	5 x 840KW/840KVA
Inverter Rating (MVA/V)	4.05/630
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	GE Prolec
Medium Voltage Transformer Type	3-Phase, 60 Hz, 2-Windings
Medium Voltage Transformer Rating (MVA)	4.25
Number of Inverters	21
Inverter Capacity Installed (MVA)	85.05 @ 35° C
Number of Medium Voltage Transformers	21
Medium Voltage Transformer Capacity Installed (MVA)	89.25
Number of Panel Per PCU Block (Average)	13,343
PV Panel Support Mechanism	Tracker
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	241.5 kV

Specifications for FPL SolarTogether Project 4, Site 1

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 4, Site 1	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	113.24 MW _{DC}
PV Panel Suppliers	BYD
PV Panel Technologies	144 half-cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	335
Number of Panels (Average)	338,030
Inverter DC Input (MW _{DC})	5.39
DC/AC Ratio	1.52
Number of Power Conversion Units (PCU)	21
PCU Supplier	TMEIC
Inverter Type	5 x 840KW/840KVA
Inverter Rating (MVA/V)	4.05/630
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	GE Prolec
Medium Voltage Transformer Type	3-Phase, 60 Hz, 2-Windings
Medium Voltage Transformer Rating (MVA)	4.25
Number of Inverters	21
Inverter Capacity Installed (MVA)	85.05 @ 35° C
Number of Medium Voltage Transformers	21
Medium Voltage Transformer Capacity Installed (MVA)	89.25
Number of Panel Per PCU Block (Average)	16,097
PV Panel Support Mechanism	Fixed
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	241.5 kV

Specifications for FPL SolarTogether Project 4, Site 2

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 4, Site 2	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	113.24 MWDC
PV Panel Suppliers	BYD
PV Panel Technologies	144 half-cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	335
Number of Panels (Average)	338,030
Inverter DC Input (MW _{DC})	5.39
DC/AC Ratio	1.52
Number of Power Conversion Units (PCU)	21
PCU Supplier	TMEIC
Inverter Type	5 x 840KW/840KVA
Inverter Rating (MVA/V)	4.05/630
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	GE Prolec
Medium Voltage Transformer Type	3-Phase, 60 Hz, 2-Windings
Medium Voltage Transformer Rating (MVA)	4.25
Number of Inverters	21
Inverter Capacity Installed (MVA)	85.05 @ 35° C
Number of Medium Voltage Transformers	21
Medium Voltage Transformer Capacity Installed (MVA)	89.25
Number of Panel Per PCU Block (Average)	16,097
PV Panel Support Mechanism	Fixed
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	241.5 kV

Specifications for FPL SolarTogether Project 4, Site 3

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 4, Site 3	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	98.34
PV Panel Suppliers	BYD
PV Panel Technologies	144 half-cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	335 W
Number of Panels (Average)	293,552
Inverter DC Input (MW _{DC})	4.10
DC/AC Ratio	1.32
Number of Power Conversion Units (PCU)	24
PCU Supplier	Power Electronics
Inverter Type	HEM FS3430M
Inverter Rating (MVA/V)	3.430 MVA/660 V
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	ABB
Medium Voltage Transformer Type	3-Phase, 60 Hz, 3-Windings
Medium Voltage Transformer Rating (MVA)	3.510
Number of Inverters	24
Inverter Capacity Installed (MVA)	85.2 MVA @ 35°C
Number of Medium Voltage Transformers	24
Medium Voltage Transformer Capacity Installed (MVA)	84.24
Number of Panel Per PCU Block (Average)	12,231
PV Panel Support Mechanism	Fixed
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	117.5 kV

Specifications for FPL SolarTogether Project 4, Site 4

The following table sets forth the base-line specifications used to develop the estimated installed cost for the Project.

Specifications for FPL 74.5 MW_{AC} SolarTogether Project 4, Site 4	
Peak Alternating Current Output	74.5 MW _{AC}
Total Installed Direct Current Capacity	113.24 MW _{DC}
PV Panel Suppliers	BYD
PV Panel Technologies	144 half-cell, poly-crystalline
PV Panel Voltage (V)	1,500
Average PV Panel Power Ratings (W _{DC})	335
Number of Panels (Average)	338,030
Inverter DC Input (MW _{DC})	5.39
DC/AC Ratio	1.52
Number of Power Conversion Units (PCU)	21
PCU Supplier	TMEIC
Inverter Type	5 x 840KW/840KVA
Inverter Rating (MVA/V)	4.05/630
Medium Voltage Transformers Per PCU	1
Medium Voltage Transformer Supplier	GE Prolec
Medium Voltage Transformer Type	3-Phase, 60 Hz, 2-Windings
Medium Voltage Transformer Rating (MVA)	4.25
Number of Inverters	21
Inverter Capacity Installed (MVA)	85.05 @ 35 ° C
Number of Medium Voltage Transformers	21
Medium Voltage Transformer Capacity Installed (MVA)	89.25
Number of Panel Per PCU Block (Average)	16,097
PV Panel Support Mechanism	Fixed
PV Panel Support Mechanism Material	Structural Steel Shapes
Step-up Power Transformer Supplier	SMIT
Step-up Power Transformer Type	3-Phase, 60 Hz
Step-up Power Transformer Ratings	241.5 kV

Exhibit WFB-4: Construction Schedule for SolarTogether Projects

		Project 1						Project 2					
		Site 1		Site 2		Site 3		Site 1		Site 2		Site 3	
Item	Major Activities	Start	Finish	Start	Finish	Start	Finish	Start	Finish	Start	Finish	Start	Finish
1	PV panel contract	8/27/2018	2/1/2019	8/27/2018	2/1/2019	8/27/2018	2/1/2019	8/27/2018	2/1/2019	8/27/2018	2/1/2019	8/27/2018	2/1/2019
2	Power Conversion Unit contract	9/19/2018	6/14/2019	9/19/2018	6/14/2019	9/19/2018	6/14/2019	9/19/2018	6/14/2019	9/19/2018	6/14/2019	9/19/2018	6/14/2019
4	EPC contract	8/1/2018	1/22/2019	8/1/2018	1/22/2019	8/1/2018	1/22/2019	8/1/2018	2/22/2019	8/1/2018	2/22/2019	8/1/2018	2/22/2019
3	LNTP for EPC contracts	1/18/2019	1/18/2019	2/1/2019	2/1/2019	1/18/2019	1/18/2019	2/25/2019	2/25/2019	2/25/2019	2/25/2019	2/25/2019	2/25/2019
4	Contractor mobilization	5/1/2019	5/1/2019	2/1/2019	2/1/2019	4/1/2019	4/1/2019	2/1/2019	2/1/2019	5/30/2019	5/30/2019	5/1/2019	5/1/2019
5	Panel deliveries	7/5/2019	10/11/2019	7/5/2019	10/11/2019	7/5/2019	10/11/2019	5/31/2019	10/4/2019	7/12/2019	11/1/2019	5/31/2019	11/1/2019
6	Power Conversion Unit deliveries	8/23/2019	10/4/2019	8/30/2019	10/4/2019	8/23/2019	10/4/2019	8/23/2019	10/4/2019	8/23/2019	10/4/2019	8/30/2019	10/11/2019
7	Energyization, Testing & Startup	11/1/2019	2/1/2020	11/1/2019	2/1/2020	11/1/2019	2/1/2020	11/20/2019	2/1/2020	11/20/2019	2/1/2020	11/20/2019	2/1/2020
8	Commence Commercial Operations												
		2/1/2020						2/1/2020					

		Project 3						Project 4					
		Site 1		Site 2		Site 3		Site 1		Site 2		Site 3	
Item	Major Activities	Start	Finish	Start	Finish	Start	Finish	Start	Finish	Start	Finish	Start	Finish
1	PV panel contract	4/2/2019	12/31/2019	4/2/2019	12/31/2019	4/2/2019	12/31/2019	4/2/2019	12/31/2019	4/2/2019	12/31/2019	4/2/2019	12/31/2019
2	Power Conversion Unit contract	9/19/2018	6/28/2019	9/19/2018	6/28/2019	9/19/2018	6/28/2019	9/19/2018	6/28/2019	9/19/2018	6/28/2019	9/19/2018	6/28/2019
4	EPC contract	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018
3	LNTP for EPC contracts	8/1/2019	8/1/2019	8/1/2019	8/1/2019	8/1/2019	8/1/2019	8/1/2019	8/1/2019	8/1/2019	8/1/2019	8/1/2019	8/1/2019
4	Contractor mobilization	9/1/2019	9/1/2019	9/1/2019	9/1/2019	11/1/2019	11/1/2019	11/1/2019	11/1/2019	11/1/2019	11/1/2019	11/1/2019	11/1/2019
5	Panel deliveries	2/7/2020	5/29/2020	2/7/2020	5/29/2020	2/7/2020	5/29/2020	6/12/2020	10/9/2020	6/12/2020	10/9/2020	6/12/2020	10/9/2020
6	Power Conversion Unit deliveries	5/7/2020	7/5/2020	5/7/2020	7/5/2020	7/5/2020	7/5/2020	8/14/2020	9/25/2020	8/14/2020	9/25/2020	8/7/2020	9/18/2020
7	Energyization, Testing & Startup	6/5/2020	1/1/2021	6/5/2020	1/1/2021	7/15/2020	1/1/2021	8/5/2020	1/1/2021	8/5/2020	1/1/2021	9/5/2020	1/1/2021
8	Commence Commercial Operations												
		1/1/2021						1/1/2021					

		Project 5						Project 6					
		Site 1		Site 2		Site 3		Site 1		Site 2		Site 3	
Item	Major Activities	Start	Finish	Start	Finish	Start	Finish	Start	Finish	Start	Finish	Start	Finish
1	PV panel contract	4/2/2019	12/31/2019	4/2/2019	12/31/2019	4/2/2019	12/31/2019	4/2/2019	12/31/2019	4/2/2019	12/31/2019	4/2/2019	12/31/2019
2	Power Conversion Unit contract	9/19/2018	5/14/2019	9/19/2018	5/14/2019	9/19/2018	5/14/2019	9/19/2018	5/14/2019	9/19/2018	5/14/2019	9/19/2018	5/14/2019
4	EPC contract	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018	8/1/2018
3	LNTP for EPC contracts												
4	Contractor mobilization	4/1/2020	4/1/2020	4/1/2020	4/1/2020	8/1/2020	8/1/2020	4/1/2020	4/1/2020	4/1/2020	4/1/2020	4/1/2020	4/1/2020
5	Panel deliveries	7/31/2020	11/6/2020	7/31/2020	11/6/2020	10/23/2020	1/29/2021	7/31/2020	11/6/2020	7/31/2020	11/6/2020	10/23/2020	1/29/2021
6	Power Conversion Unit deliveries	8/14/2020	9/25/2020	8/7/2020	9/18/2020	12/4/2020	1/22/2021	8/14/2020	9/25/2020	8/14/2020	9/25/2020	12/11/2020	1/29/2021
7	Energyization, Testing & Startup	10/1/2020	4/1/2021	10/1/2020	4/1/2021	2/1/2021	4/1/2021	10/1/2020	4/1/2021	10/1/2020	4/1/2021	2/1/2021	4/1/2021
8	Commence Commercial Operations												
		4/1/2021						4/1/2021					

**Load Forecast
December 2018**

Year	Summer Peak MW	Winter Peak MW	Net Energy for Load MWh
2019	24,305	19,530	121,099,850
2020	24,507	19,904	122,284,248
2021	24,668	20,264	122,369,658
2022	24,837	20,255	122,330,746
2023	25,173	20,528	122,680,361
2024	25,583	20,775	123,864,043
2025	25,939	20,932	124,440,227
2026	26,380	21,150	125,429,987
2027	26,867	21,374	126,520,149
2028	27,363	21,623	127,940,788
2029	28,008	21,889	128,967,611
2030	28,691	22,153	130,367,909
2031	29,254	22,404	131,675,941
2032	29,833	22,653	133,326,250
2033	30,407	22,900	134,288,370
2034	30,974	23,145	135,498,214
2035	31,542	23,388	136,706,457
2036	32,109	23,630	138,063,532
2037	32,657	23,871	138,932,635
2038	33,228	24,110	140,133,040
2039	33,804	24,349	141,312,242
2040	34,382	24,586	142,843,906
2041	34,771	24,825	144,980,773
2042	35,161	25,063	146,449,887
2043	35,554	25,301	147,916,439
2044	35,948	25,540	149,764,613
2045	36,344	25,779	150,844,643
2046	36,741	26,018	152,304,156
2047	37,139	26,258	153,765,649
2048	37,540	26,498	155,583,773
2049	37,943	26,738	156,652,695
2050	38,347	26,978	158,122,734

**FPL Fuel Price Forecast
December 2018**

Year	FGT Firm Gas (\$/MMBTU)	Gulfstream Firm Gas (\$/MMBTU)	Sabal Trail Firm Gas (\$/MMBTU)	Residual Oil (\$/MMBTU)	Distillate Oil (\$/MMBTU)	Scherer 4 Coal Price (\$/MMBTU)
2019	3.25	3.18	3.26	10.81	13.84	2.52
2020	2.74	2.67	2.74	10.92	14.10	2.59
2021	2.71	2.64	2.72	12.27	15.61	2.65
2022	2.80	2.73	2.80	11.31	14.65	2.72
2023	3.02	2.95	3.01	10.83	14.62	2.80
2024	3.37	3.29	3.35	11.01	15.02	2.86
2025	3.68	3.60	3.65	11.64	15.54	2.93
2026	3.98	3.91	3.95	11.93	15.84	3.00
2027	4.19	4.11	4.15	12.17	16.12	3.06
2028	4.37	4.29	4.33	12.40	16.39	3.13
2029	4.54	4.46	4.49	12.65	16.71	3.19
2030	4.68	4.60	4.63	12.93	17.02	3.25
2031	4.80	4.72	4.75	13.18	17.33	3.31
2032	4.92	4.83	4.86	13.40	17.65	3.38
2033	5.02	4.94	4.97	13.64	17.98	3.45
2034	5.13	5.05	5.07	13.87	18.31	3.52
2035	5.23	5.15	5.17	14.11	18.67	3.60
2036	5.34	5.25	5.27	14.36	19.01	3.67
2037	5.44	5.35	5.37	14.62	19.35	3.75
2038	5.54	5.45	5.47	14.88	19.70	3.83
2039	5.65	5.56	5.58	15.14	20.06	3.91
2040	5.76	5.67	5.68	15.42	20.42	3.99
2041	5.82	5.73	5.75	15.49	20.45	4.08
2042	5.88	5.79	5.81	15.56	20.48	4.18
2043	5.95	5.86	5.87	15.63	20.51	4.27
2044	6.01	5.92	5.93	15.70	20.54	4.36
2045	6.08	5.99	6.00	15.78	20.57	4.46
2046	6.14	6.05	6.06	15.85	20.60	4.55
2047	6.21	6.12	6.13	15.92	20.64	4.65
2048	6.28	6.19	6.19	16.00	20.67	4.75
2049	6.35	6.26	6.26	16.07	20.70	4.85
2050	6.42	6.32	6.33	16.14	20.73	4.95

FPL Resource Plans

Year	No ST Plan	FPL SolarTogether Plan
2019	298 MW SoBRA	298 MW SoBRA
2020	300 MW 2-Hour Battery	447 MW FPL SolarTogether; 100 MW 2-Hour Battery
2021	200 MW 2-Hour Battery; 100 MW 3-Hour Battery	1,043 MW FPL SolarTogether
2022	Dania Beach Energy Center; Greenfield 704 MW CT Unit; 469 MW Manatee Battery; Manatee 1&2 retire	Dania Beach Energy Center; 469 MW Manatee Battery; Manatee 1&2 retire
2023	---	Greenfield 469 MW CT Unit
2024	Greenfield 1,886 MW CC Unit	Greenfield 1,886 MW CC Unit
2025	---	---
2026	---	---
2027	---	---
2028	Greenfield 1,886 MW CC Unit	Greenfield 1,886 MW CC Unit
2029	---	---
2030	Greenfield 704 MW CT Unit	Greenfield 704 MW CT Unit
2031	Equalizing 246 MW CC Unit	Equalizing 266 MW CC Unit

Note: MW values shown above for solar projects are nameplate AC. MW values for fossil units are based on summer MW ratings.

CPVRR - Costs and (Benefits)

Program Admin. Costs (Millions)	Solar Revenue Requirements				Non-Solar Generation Costs Avoided					System Costs Avoided			Total CPVRR (Millions)
	Generation Capital (Millions)	Transmission Interconnection (Millions)	Fixed O&M (Millions)	Land (Millions)	Generation Capital (Millions)	Fixed O&M (Millions)	Transmission Interconnection (Millions)	Capital Replacement (Millions)	Incremental Gas Transport (Millions)	System Net Fuel (Millions)	Startup + VOM (Millions)	Emission (Millions)	
\$11	\$1,417	\$178	\$96	\$146	(\$358)	(\$80)	(\$5)	(\$9)	(\$368)	(\$1,050)	(\$26)	(\$91)	(\$139)

Note: Negative () indicates savings to FPL customers

Docket No. 20190061
CPVRR – Costs and (Benefits)
Exhibit JE-4, Page 1 of 1

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 10
PARTY: FLORIDA POWER & LIGHT
COMPANY – DIRECT
DESCRIPTION: *Juan E. Enjamio JE-4

	CPVRR											Nominal Total	
(\$ millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2051
Discount Factor	1.01	0.93	0.87	0.80	0.75	0.69	0.64	0.60	0.55	0.51	0.48	0.44	
Base Revenue Requirements													
FPL SolarTogether Capital, O&M	\$3.5	\$71.8	\$207.2	\$216.4	\$205.0	\$196.0	\$188.0	\$181.7	\$176.5	\$171.8	\$166.5	\$161.5	\$2,304.2
Program Administrative Costs	2.3	2.1	1.8	1.7	1.1	0.7	0.4	0.3	0.3	0.3	0.3	0.3	8.5
Total SolarTogether Costs	5.8	73.9	209.0	218.1	206.1	196.7	188.4	182.0	176.8	172.1	166.9	161.8	2,312.8
System Impacts (Avoided Generation Capital, O&M)	-	(3.8)	(28.5)	(68.0)	(94.6)	(60.1)	(58.2)	(53.7)	(45.0)	(44.3)	(47.1)	(45.1)	(635.5)
Total Base RevReq's (fav) unfav	\$5.8	\$70.1	\$180.5	\$150.1	\$111.5	\$136.6	\$130.2	\$128.3	\$131.8	\$127.8	\$119.8	\$116.8	\$1,677.2
Clause Revenue Requirements													
System Net Fuel	\$0.0	(\$19.3)	(\$60.2)	(\$65.1)	(\$72.6)	(\$77.5)	(\$83.7)	(\$89.3)	(\$97.5)	(\$94.1)	(\$83.3)	(\$86.5)	(\$2,488.8)
Incremental Gas Transport	-	-	-	-	-	-	-	-	(59.6)	(59.2)	(58.9)	(58.6)	(1,116.0)
Emissions	-	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.7)	(1.2)	(2.2)	(2.3)	(3.5)	(503.9)
Short Term Purchases	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Clause RevReq's (fav) unfav	\$0.0	(\$19.3)	(\$60.2)	(\$65.2)	(\$72.6)	(\$77.5)	(\$83.7)	(\$90.1)	(\$158.3)	(\$155.6)	(\$144.6)	(\$148.6)	(\$4,109.7)
Net Revenue Requirements (fav) unfav	\$5.8	\$50.8	\$120.3	\$85.0	\$38.9	\$59.1	\$46.5	\$38.2	\$26.4	\$27.8	\$24.8	\$31.8	(\$2,432.5)
Participant Subscription Charge and Credit													
Subscription Charge (Revenue)	\$0.0	(\$33.2)	(\$108.8)	(\$120.9)	(\$120.9)	(\$120.9)	(\$120.9)	(\$120.9)	(\$120.9)	(\$120.9)	(\$120.9)	(\$120.9)	(\$2,396.2)
Subscription Credits	-	32.0	105.9	118.9	120.2	121.9	123.0	124.4	125.8	127.6	128.7	130.2	2,915.2
Participant Net Distribution (Payment)	\$0.0	(\$1.3)	(\$2.9)	(\$2.0)	(\$0.6)	\$1.1	\$2.1	\$3.5	\$5.0	\$6.8	\$7.9	\$9.3	\$519.0
Non-Participant Revenue Requirements													
Base													
Total Base RevReq's	\$5.8	\$70.1	\$180.5	\$150.1	\$111.5	\$136.6	\$130.2	\$128.3	\$131.8	\$127.8	\$119.8	\$116.8	\$1,677.2
Participant Subscription (Revenue)	-	(33.2)	(108.8)	(120.9)	(120.9)	(120.9)	(120.9)	(120.9)	(120.9)	(120.9)	(120.9)	(120.9)	(2,396.2)
Non-Participant Net Base RevReq's (fav) unfav	\$5.8	\$36.8	\$71.7	\$29.2	(\$9.3)	\$15.8	\$9.3	\$7.4	\$11.0	\$6.9	\$1.1	(\$4.1)	(\$719.0)
Clause													
Total Clause RevReq's (fav) unfav	-	(19.3)	(60.2)	(65.2)	(72.6)	(77.5)	(83.7)	(90.1)	(158.3)	(155.6)	(144.6)	(148.6)	(4,109.7)
Participant Credits	-	32.0	105.9	118.9	120.2	121.9	123.0	124.4	125.8	127.6	128.7	130.2	2,915.2
Non-Participant Net Clause RevReq's (fav) unfav	\$0.0	\$12.7	\$45.7	\$53.7	\$47.6	\$44.4	\$39.3	\$34.3	(\$32.4)	(\$27.9)	(\$15.8)	(\$18.4)	(\$1,194.5)
Total Non-Participant Net RevReq's (fav) unfav	\$5.8	\$49.6	\$117.4	\$83.0	\$38.3	\$60.2	\$48.6	\$41.7	(\$21.4)	(\$21.0)	(\$16.9)	(\$22.5)	(\$1,913.5)

% of Total

80.0%

% of Total

96.43%

3.57%

% of Total

94.92%

5.08%

20.0%

Florida Power & Light Company

Docket No. 20190061-EI

**FPL Forecasted Cumulative Present Value Revenue Requirement Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities
for FPL Customers as a Whole
FPL Base Case (Mid Fuel, Mid CO2)
(\$ Millions)**

<u>Year</u>	<u>Base Case</u> (1)
2019	(\$5.83)
2020	(53.30)
2021	(157.58)
2022	(225.94)
2023	(255.01)
2024	(296.00)
2025	(325.89)
2026	(348.70)
2027	(334.05)
2028	(319.77)
2029	(307.93)
2030	(293.82)
2031	(276.01)
2032	(262.50)
2033	(247.49)
2034	(229.81)
2035	(207.95)
2036	(184.54)
2037	(162.79)
2038	(143.90)
2039	(123.42)
2040	(102.20)
2041	(78.13)
2042	(51.83)
2043	(26.63)
2044	(2.36)
2045	21.59
2046	45.21
2047	69.20
2048	93.07
2049	116.12
2050	139.92
2051	138.71

Source: FPL Response to Staff Interrogatory No. 78.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 12
PARTY: OFFICE OF PUBLIC COUNSEL –
DIRECT
DESCRIPTION: James R. Dauphinais JRD-1

Florida Power & Light Company

Docket No. 20190061-EI

FPL Forecasted Cumulative Present Value Revenue Requirement Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities
for FPL Customers as a Whole
(\$ Millions)

<u>Year</u>	<u>Base Case</u>	<u>Low Fuel,</u> <u>Low CO2</u>	<u>Low Fuel,</u> <u>Mid CO2</u>	<u>Mid Fuel,</u> <u>Low CO2</u>	<u>Low Fuel,</u> <u>High CO2</u>	<u>Mid Fuel,</u> <u>High CO2</u>	<u>High Fuel,</u> <u>Low CO2</u>	<u>High Fuel,</u> <u>Mid CO2</u>	<u>High Fuel,</u> <u>High CO2</u>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2019	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)
2020	(53.30)	(55.63)	(55.63)	(53.25)	(55.63)	(53.25)	(50.06)	(50.06)	(50.06)
2021	(157.58)	(168.20)	(168.20)	(157.12)	(168.20)	(157.12)	(145.39)	(145.39)	(145.39)
2022	(225.94)	(244.77)	(244.77)	(225.15)	(244.77)	(225.15)	(205.02)	(205.02)	(205.02)
2023	(255.01)	(282.20)	(282.20)	(254.21)	(282.20)	(254.21)	(226.49)	(226.49)	(226.49)
2024	(296.00)	(331.60)	(331.60)	(295.21)	(331.60)	(295.21)	(258.80)	(258.80)	(258.80)
2025	(325.89)	(370.23)	(370.23)	(324.88)	(370.23)	(324.88)	(280.05)	(280.05)	(280.05)
2026	(348.70)	(402.32)	(401.61)	(348.14)	(402.32)	(348.14)	(294.61)	(293.91)	(294.61)
2027	(334.05)	(396.34)	(394.88)	(334.19)	(396.34)	(334.19)	(271.88)	(270.44)	(271.88)
2028	(319.77)	(390.82)	(388.17)	(321.57)	(381.86)	(312.32)	(251.65)	(249.30)	(243.36)
2029	(307.93)	(386.37)	(382.23)	(310.27)	(369.98)	(293.37)	(234.06)	(230.34)	(217.92)
2030	(293.82)	(380.15)	(374.87)	(297.64)	(356.59)	(273.64)	(214.15)	(209.08)	(191.16)
2031	(276.01)	(371.35)	(363.55)	(282.00)	(337.57)	(247.78)	(191.67)	(183.64)	(159.16)
2032	(262.50)	(367.11)	(356.52)	(271.59)	(323.89)	(227.75)	(174.72)	(163.70)	(132.43)
2033	(247.49)	(361.15)	(347.70)	(259.11)	(308.38)	(206.33)	(156.69)	(143.10)	(105.07)
2034	(229.81)	(352.76)	(336.13)	(244.91)	(290.50)	(182.78)	(136.96)	(120.14)	(75.92)
2035	(207.95)	(340.31)	(319.65)	(226.44)	(268.40)	(155.08)	(113.03)	(92.70)	(42.59)
2036	(184.54)	(325.97)	(301.48)	(207.12)	(244.54)	(125.89)	(88.05)	(64.18)	(8.37)
2037	(162.79)	(313.21)	(284.72)	(189.19)	(222.66)	(99.13)	(65.44)	(37.67)	23.55
2038	(143.90)	(302.47)	(269.97)	(173.84)	(202.73)	(74.66)	(45.08)	(13.84)	52.72
2039	(123.42)	(291.06)	(254.24)	(157.75)	(181.74)	(49.41)	(24.59)	10.52	82.54
2040	(102.20)	(278.32)	(237.32)	(140.86)	(159.75)	(23.13)	(3.46)	35.60	113.16
2041	(78.13)	(262.52)	(217.43)	(121.53)	(134.11)	6.48	20.11	63.17	146.44
2042	(51.83)	(244.26)	(195.03)	(99.97)	(105.51)	38.62	45.43	93.11	182.28
2043	(26.63)	(227.31)	(173.49)	(79.65)	(77.26)	70.23	69.30	121.68	217.28
2044	(2.36)	(211.43)	(152.26)	(60.82)	(49.41)	101.45	91.98	148.99	251.56
2045	21.59	(196.11)	(131.21)	(42.33)	(21.49)	132.61	113.82	175.88	285.59
2046	45.21	(180.52)	(110.23)	(23.63)	7.03	164.22	135.46	202.36	320.07
2047	69.20	(165.20)	(89.18)	(5.40)	35.96	195.94	156.29	228.75	354.51
2048	93.07	(150.35)	(68.40)	12.42	65.32	227.53	176.95	254.77	388.93
2049	116.12	(135.44)	(47.69)	29.52	94.61	259.23	196.66	280.11	422.90
2050	139.92	(119.35)	(26.10)	47.68	124.33	291.22	217.28	306.06	457.04
2051	138.71	(120.55)	(27.30)	46.48	123.12	290.01	216.07	304.85	455.83

Source: FPL Response to Staff Interrogatory No. 78.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 13
PARTY: OFFICE OF PUBLIC COUNSEL –
DIRECT
DESCRIPTION: James R. Dauphinais JRD-2

Florida Power & Light Company

Docket No. 20190061-EI

FPL Forecasted Cumulative Present Value Revenue Requirement Net Savings/(Cost) for SolarTogether Participants
(\$ Millions)

<u>Year</u>	<u>Base Case</u>	<u>Low Fuel, Low CO2</u>	<u>Low Fuel, Mid CO2</u>	<u>Mid Fuel, Low CO2</u>	<u>Low Fuel, High CO2</u>	<u>Mid Fuel, High CO2</u>	<u>High Fuel, Low CO2</u>	<u>High Fuel, Mid CO2</u>	<u>High Fuel, High CO2</u>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2019	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2020	(\$1.18)	(\$1.18)	(\$1.18)	(\$1.18)	(\$1.18)	(\$1.18)	(\$1.18)	(\$1.18)	(\$1.18)
2021	(\$3.69)	(\$3.69)	(\$3.69)	(\$3.69)	(\$3.69)	(\$3.69)	(\$3.69)	(\$3.69)	(\$3.69)
2022	(\$5.29)	(\$5.29)	(\$5.29)	(\$5.29)	(\$5.29)	(\$5.29)	(\$5.29)	(\$5.29)	(\$5.29)
2023	(\$5.76)	(\$5.76)	(\$5.76)	(\$5.76)	(\$5.76)	(\$5.76)	(\$5.76)	(\$5.76)	(\$5.76)
2024	(\$5.01)	(\$5.01)	(\$5.01)	(\$5.01)	(\$5.01)	(\$5.01)	(\$5.01)	(\$5.01)	(\$5.01)
2025	(\$3.64)	(\$3.64)	(\$3.64)	(\$3.64)	(\$3.64)	(\$3.64)	(\$3.64)	(\$3.64)	(\$3.64)
2026	(\$1.52)	(\$1.52)	(\$1.52)	(\$1.52)	(\$1.52)	(\$1.52)	(\$1.52)	(\$1.52)	(\$1.52)
2027	\$1.24	\$1.24	\$1.24	\$1.24	\$1.24	\$1.24	\$1.24	\$1.24	\$1.24
2028	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72
2029	\$8.48	\$8.48	\$8.48	\$8.48	\$8.48	\$8.48	\$8.48	\$8.48	\$8.48
2030	\$12.62	\$12.62	\$12.62	\$12.62	\$12.62	\$12.62	\$12.62	\$12.62	\$12.62
2031	\$17.08	\$17.08	\$17.08	\$17.08	\$17.08	\$17.08	\$17.08	\$17.08	\$17.08
2032	\$21.93	\$21.93	\$21.93	\$21.93	\$21.93	\$21.93	\$21.93	\$21.93	\$21.93
2033	\$26.85	\$26.85	\$26.85	\$26.85	\$26.85	\$26.85	\$26.85	\$26.85	\$26.85
2034	\$31.92	\$31.92	\$31.92	\$31.92	\$31.92	\$31.92	\$31.92	\$31.92	\$31.92
2035	\$37.11	\$37.11	\$37.11	\$37.11	\$37.11	\$37.11	\$37.11	\$37.11	\$37.11
2036	\$42.48	\$42.48	\$42.48	\$42.48	\$42.48	\$42.48	\$42.48	\$42.48	\$42.48
2037	\$47.78	\$47.78	\$47.78	\$47.78	\$47.78	\$47.78	\$47.78	\$47.78	\$47.78
2038	\$53.10	\$53.10	\$53.10	\$53.10	\$53.10	\$53.10	\$53.10	\$53.10	\$53.10
2039	\$58.40	\$58.40	\$58.40	\$58.40	\$58.40	\$58.40	\$58.40	\$58.40	\$58.40
2040	\$63.76	\$63.76	\$63.76	\$63.76	\$63.76	\$63.76	\$63.76	\$63.76	\$63.76
2041	\$68.98	\$68.98	\$68.98	\$68.98	\$68.98	\$68.98	\$68.98	\$68.98	\$68.98
2042	\$74.13	\$74.13	\$74.13	\$74.13	\$74.13	\$74.13	\$74.13	\$74.13	\$74.13
2043	\$79.20	\$79.20	\$79.20	\$79.20	\$79.20	\$79.20	\$79.20	\$79.20	\$79.20
2044	\$84.24	\$84.24	\$84.24	\$84.24	\$84.24	\$84.24	\$84.24	\$84.24	\$84.24
2045	\$89.11	\$89.11	\$89.11	\$89.11	\$89.11	\$89.11	\$89.11	\$89.11	\$89.11
2046	\$93.87	\$93.87	\$93.87	\$93.87	\$93.87	\$93.87	\$93.87	\$93.87	\$93.87
2047	\$98.51	\$98.51	\$98.51	\$98.51	\$98.51	\$98.51	\$98.51	\$98.51	\$98.51
2048	\$103.08	\$103.08	\$103.08	\$103.08	\$103.08	\$103.08	\$103.08	\$103.08	\$103.08
2049	\$107.47	\$107.47	\$107.47	\$107.47	\$107.47	\$107.47	\$107.47	\$107.47	\$107.47
2050	\$110.57	\$110.57	\$110.57	\$110.57	\$110.57	\$110.57	\$110.57	\$110.57	\$110.57
2051	\$110.98	\$110.98	\$110.98	\$110.98	\$110.98	\$110.98	\$110.98	\$110.98	\$110.98

Source: FPL Response to Staff Interrogatory No. 79.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 14
PARTY: OFFICE OF PUBLIC COUNSEL –
DIRECT
DESCRIPTION: James R. Dauphinais JRD-3

Florida Power & Light Company

Docket No. 20190061-EI

FPL Forecasted Cumulative Present Value Revenue Requirement Net Savings/(Cost) for Non-Participating FPL Customers

FPL Base Case (Mid Fuel, Mid CO2)

(\$ Millions)

<u>Year</u>	<u>Base Case</u> (1)
2019	(\$5.83)
2020	(\$52.12)
2021	(\$153.90)
2022	(\$220.65)
2023	(\$249.25)
2024	(\$290.99)
2025	(\$322.25)
2026	(\$347.18)
2027	(\$335.29)
2028	(\$324.49)
2029	(\$316.41)
2030	(\$306.44)
2031	(\$293.09)
2032	(\$284.44)
2033	(\$274.35)
2034	(\$261.74)
2035	(\$245.06)
2036	(\$227.02)
2037	(\$210.57)
2038	(\$196.99)
2039	(\$181.82)
2040	(\$165.96)
2041	(\$147.10)
2042	(\$125.96)
2043	(\$105.83)
2044	(\$86.60)
2045	(\$67.51)
2046	(\$48.66)
2047	(\$29.31)
2048	(\$10.00)
2049	\$8.65
2050	\$29.35
2051	\$27.73

Source: FPL Response to Staff Interrogatory No. 79.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 15
PARTY: OFFICE OF PUBLIC COUNSEL –
DIRECT
DESCRIPTION: James R. Dauphinais JRD-4

Florida Power & Light Company

Docket No. 20190061-EI

FPL Forecasted Cumulative Present Value Revenue Requirement Net Savings/(Cost) for Non-Participating FPL Customers
(\$ Millions)

<u>Year</u>	<u>Base Case</u>	<u>Low Fuel, Low CO2</u>	<u>Low Fuel, Mid CO2</u>	<u>Mid Fuel, Low CO2</u>	<u>Low Fuel, High CO2</u>	<u>Mid Fuel, High CO2</u>	<u>High Fuel, Low CO2</u>	<u>High Fuel, Mid CO2</u>	<u>High Fuel, High CO2</u>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2019	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)
2020	(\$52.12)	(\$54.45)	(\$54.45)	(\$52.07)	(\$54.45)	(\$52.07)	(\$48.88)	(\$48.88)	(\$48.88)
2021	(\$153.90)	(\$164.52)	(\$164.52)	(\$153.44)	(\$164.52)	(\$153.44)	(\$141.71)	(\$141.71)	(\$141.71)
2022	(\$220.65)	(\$239.48)	(\$239.48)	(\$219.86)	(\$239.48)	(\$219.86)	(\$199.73)	(\$199.73)	(\$199.73)
2023	(\$249.25)	(\$276.43)	(\$276.43)	(\$248.44)	(\$276.43)	(\$248.44)	(\$220.73)	(\$220.73)	(\$220.73)
2024	(\$290.99)	(\$326.58)	(\$326.58)	(\$290.20)	(\$326.58)	(\$290.20)	(\$253.79)	(\$253.79)	(\$253.79)
2025	(\$322.25)	(\$366.59)	(\$366.59)	(\$321.24)	(\$366.59)	(\$321.24)	(\$276.41)	(\$276.41)	(\$276.41)
2026	(\$347.18)	(\$400.80)	(\$400.09)	(\$346.62)	(\$400.80)	(\$346.62)	(\$293.09)	(\$292.39)	(\$293.09)
2027	(\$335.29)	(\$397.57)	(\$396.12)	(\$335.42)	(\$397.57)	(\$335.42)	(\$273.12)	(\$271.68)	(\$273.12)
2028	(\$324.49)	(\$395.53)	(\$392.88)	(\$326.29)	(\$386.58)	(\$317.03)	(\$256.37)	(\$254.02)	(\$248.08)
2029	(\$316.41)	(\$394.84)	(\$390.71)	(\$318.74)	(\$378.46)	(\$301.85)	(\$242.53)	(\$238.81)	(\$226.40)
2030	(\$306.44)	(\$392.77)	(\$387.49)	(\$310.26)	(\$369.21)	(\$286.26)	(\$226.77)	(\$221.70)	(\$203.78)
2031	(\$293.09)	(\$388.43)	(\$380.63)	(\$299.08)	(\$354.65)	(\$264.86)	(\$208.75)	(\$200.72)	(\$176.24)
2032	(\$284.44)	(\$389.05)	(\$378.46)	(\$293.52)	(\$345.82)	(\$249.69)	(\$196.65)	(\$185.64)	(\$154.36)
2033	(\$274.35)	(\$388.01)	(\$374.55)	(\$285.97)	(\$335.24)	(\$233.18)	(\$183.54)	(\$169.95)	(\$131.92)
2034	(\$261.74)	(\$384.68)	(\$368.06)	(\$276.83)	(\$322.43)	(\$214.70)	(\$168.89)	(\$152.06)	(\$107.84)
2035	(\$245.06)	(\$377.42)	(\$356.76)	(\$263.55)	(\$305.51)	(\$192.19)	(\$150.14)	(\$129.81)	(\$79.70)
2036	(\$227.02)	(\$368.45)	(\$343.96)	(\$249.60)	(\$287.02)	(\$168.37)	(\$130.53)	(\$106.66)	(\$50.85)
2037	(\$210.57)	(\$360.99)	(\$332.50)	(\$236.97)	(\$270.45)	(\$146.91)	(\$113.22)	(\$85.45)	(\$24.23)
2038	(\$196.99)	(\$355.57)	(\$323.06)	(\$226.93)	(\$255.83)	(\$127.76)	(\$98.18)	(\$66.94)	(\$0.38)
2039	(\$181.82)	(\$349.46)	(\$312.65)	(\$216.15)	(\$240.14)	(\$107.81)	(\$82.99)	(\$47.88)	\$24.13
2040	(\$165.96)	(\$342.08)	(\$301.08)	(\$204.62)	(\$223.51)	(\$86.89)	(\$67.22)	(\$28.16)	\$49.41
2041	(\$147.10)	(\$331.50)	(\$286.40)	(\$190.50)	(\$203.09)	(\$62.50)	(\$48.86)	(\$5.81)	\$77.46
2042	(\$125.96)	(\$318.39)	(\$269.16)	(\$174.10)	(\$179.64)	(\$35.51)	(\$28.69)	\$18.98	\$108.15
2043	(\$105.83)	(\$306.50)	(\$252.69)	(\$158.85)	(\$156.46)	(\$8.97)	(\$9.89)	\$42.48	\$138.08
2044	(\$86.60)	(\$295.66)	(\$236.50)	(\$145.06)	(\$133.65)	\$17.22	\$7.75	\$64.76	\$167.33
2045	(\$67.51)	(\$285.22)	(\$220.32)	(\$131.44)	(\$110.60)	\$43.50	\$24.72	\$86.77	\$196.48
2046	(\$48.66)	(\$274.38)	(\$204.09)	(\$117.49)	(\$86.84)	\$70.35	\$41.60	\$108.49	\$226.20
2047	(\$29.31)	(\$263.71)	(\$187.69)	(\$103.91)	(\$62.55)	\$97.43	\$57.79	\$130.25	\$256.00
2048	(\$10.00)	(\$253.42)	(\$171.47)	(\$90.65)	(\$37.76)	\$124.46	\$73.87	\$151.69	\$285.85
2049	\$8.65	(\$242.91)	(\$155.15)	(\$77.94)	(\$12.86)	\$151.76	\$89.19	\$172.64	\$315.44
2050	\$29.35	(\$229.91)	(\$136.66)	(\$62.88)	\$13.76	\$180.65	\$106.71	\$195.49	\$346.47
2051	\$27.73	(\$231.53)	(\$138.28)	(\$64.50)	\$12.15	\$179.03	\$105.09	\$193.88	\$344.86

Source: FPL Response to Staff Interrogatory No. 79.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 16
PARTY: OFFICE OF PUBLIC COUNSEL –
DIRECT
DESCRIPTION: James R. Dauphinais JRD-5

Florida Power & Light Company
Docket No. 20190061-EI
OPC's First Set of Interrogatories
Interrogatory No. 5
Page 1 of 2

QUESTION:

Please refer to Pet. at 8, para. 20. Please explain in detail which specific customers are projected to save an estimated \$139 million. If both SolarTogether participants and the general body of FPL customers, please explain in detail the portion of \$139 million that will go to SolarTogether participants and the portion of the \$139 million that will go to general body of FPL customers.

RESPONSE:

Both the FPL SolarTogether participants and the general body of FPL customers will share in the estimated savings of \$139 million.

The table below provides the total base and clause revenue requirements which result in total savings of \$139 million. The table, in Excel format, is provided as Attachment No. 1 to this response.

The Subscription Rate of \$6.76/kW-month results in participants contributing \$1,321.3 million, or 96.4%, of the total \$1,370.2 million in base revenue requirements while non-participants contribute \$48.9 million, or 3.6%. Likewise, the Subscription Benefit Rate of 3.42881¢/kWh, escalating at 1.45% annually, results in participants receiving \$1,432.3 million, or 94.9% of the total \$1,509.0 million in clause revenue requirement savings while non-participants receive \$76.6 million, or 5.1%.

On a CPVRR basis, participants will receive approximately \$110.0 million in benefits, or 80%, of the total program benefits. Non-participants will receive approximately \$28.0 million, or 20%, of the total program savings.

Florida Power & Light Company
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(\$ millions)

CPVRR

Base Revenue Requirements

FPL SolarTogether Capital, O&M	\$1,837.8	
Program Administrative Costs	11.5	
Total SolarTogether Costs	1,849.2	
System Impacts (Avoided Gen. Capital, O&M)	(479.0)	
Total Base RevReq's (fav) unfav	\$1,370.2	A

Clause Revenue Requirements

System Net Fuel	(\$1,050.4)	
Incremental Gas Transport	(367.9)	
Emissions	(90.6)	
Total Clause RevReq's (fav) unfav	(\$1,509.0)	B

Net Revenue Requirements (fav) unfav

(\$138.7) C = A + B

Participant Subscription Charge and Credit

% of Total

Subscription Charge (Revenue)	(\$1,321.3)	D
Subscription Credits	1,432.3	E
Participant Net Distribution (Payment)	80.0% = -(F / C)	\$111.0 F = D + E

Non-Participant Revenue Requirements

Base

Total Base RevReq's	\$1,370.2	=A
Participant Subscription (Revenue)	96.43% = -(D / A)	(1,321.3) =D
Non-Participant Net Base RevReq's (fav) unfav	3.57%	\$48.9 G = A + D

Clause

Total Clause RevReq's (fav) unfav	(1,509.0)	=B
Participant Credits	94.92% = -(E / B)	1,432.3 =E
Non-Participant Net Clause RevReq's - (fav) unfav	5.08%	(\$76.6) H = B + E

Total Non-Participant Net RevReq's (fav) unfav

20.0% = -(I / C) **(\$27.7) I = G + H**

QUESTION:

Please refer to FPL's Petition at Paragraph 13 and FPL's April 2019 Ten Year Power Plant Site Plan 2019-2028 ("Ten Year Site Plan") at pages 12 and 14. Table ES-1 on page 14 of the Ten Year Site Plan has entries for 248 MW of firm capacity from Solar PV for 2020 and 248 MW of firm capacity from Solar PV for 2021. These amounts are in addition to 165 MW of firm capacity from the proposed 2020 SoBRA PV projects that is also indicated in Table ES-1. Assuming a firm capacity to nameplate capacity percentage of approximately 55%, the 496 MW of firm capacity from non-SoBRA Solar PV for 2020 and 2021 in the Ten Year Site Plan is about 900 MW of nameplate PV Solar capacity.

- a. Please explain in detail whether the 900 MW of nameplate non-SoBRA Solar PV capacity identified for 2020 and 2021 in Table ES-1 of the Ten Year Site Plan is in addition to the 1,490 MW of nameplate SolarTogether Solar PV that FPL is proposing or is part of the 1,490 MW of nameplate SolarTogether Solar PV that FPL is proposing.
- b. Please explain in detail whether, in the event its SolarTogether proposal is not approved by the Commission, FPL would, in place of the 1,490 MW of SolarTogether solar PV projects, pursue the 900 MW of nameplate non-SoBRA Solar PV capacity identified for 2020 and 2021 in Table ES-1 of its Ten Year Site Plan.
- c. Please explain in detail whether FPL views Phase 1 of its the SolarTogether proposal as accelerating its planned investment in non-SoBRA solar PV generation capacity from 900 MW of nameplate capacity for 2020 and 2021 to 1,490 MW of nameplate capacity for 2020 and 2021.

RESPONSE:

- a. At this point, FPL is not planning to build additional solar in 2020 and 2021 above the solar capacity included in FPL SolarTogether (1,490 MW) and the 2020 SoBRA Project. FPL will, however, continue to evaluate whether additional solar may be cost-effective in 2021 over the amount shown in the FPL SolarTogether Program.
- b. FPL still plans to proceed with the construction of the 900 MW of solar capacity shown in the 2019 Ten Year Site Plan (TYSP) even if the FPL SolarTogether Program is not approved.
- c. The FPL SolarTogether solar capacity replaces the 900 MW of solar nameplate capacity shown in the 2019 TYSP Resource Plan in 2020 and 2021. In addition, it accelerates part of the solar capacity shown in the 2019 TYSP for the years 2022 to 2024.

QUESTION:

Did FPL evaluate options for purchasing solar energy, or solar energy and capacity, from solar power plants operated by any other entities? For example, did FPL consider pursuing power purchase agreements (PPAs) or similar purchase options? If so, please describe in detail each option considered and the analysis conducted.

RESPONSE:

FPL did not evaluate third party PPA options for several reasons. First, such options would not align with the program design for the SolarTogether Program, including the structure of recovery of costs for the program, i.e., fixed payment stream to a third party PPA Seller vs. FPL's collection of revenues through charges and credits to subscribed customers. Second, SolarTogether represents a significant commitment to FPL's customers, and reliance on a third party with no track record in Florida would represent an unreasonable level of risk, particularly as it relates to scale, cost, timing and performance.

QUESTION:

Please refer to the Direct Testimony of William Brannen at page 5. In this section of his direct testimony, Mr. Brannen indicates that SolarTogether "Projects 1 and 2, which consist of three centers each, are currently under construction and are expected to be placed into service by February 1, 2020."

- a. If the Commission denies FPL's proposed SolarTogether program and tariff, does FPL still intend to complete and bring into service Projects 1 and 2?
- b. If the response to a. is in the affirmative, assuming the Commission did deny FPL's proposed SolarTogether program and tariff, please explain in detail whether FPL would still seek to place Projects 1 and 2 into its rate base at the time of its next base rate proceeding.
- c. If the Commission denies FPL's proposed SolarTogether program and tariff, does FPL still intend to complete and bring into service Projects 3, 4 and 5?
- d. If the response to c. is in the affirmative, assuming the Commission did deny FPL's proposed SolarTogether program and tariff, please explain in detail whether FPL would still seek to place Projects 3, 4 and 5 into its rate base at the time of its next base rate proceeding.

RESPONSE:

See FPL's response to Staff's First Set of Interrogatories No. 100.

- a. If the Program is not approved, FPL intends to complete and bring into service the sites that comprise Projects 1-2.
- b. The revenue requirements of the facilities would be included in FPL's requested revenue recovery at the time of its next base rate proceeding.
- c. If the program is not approved by the Commission, FPL will reevaluate the amount and timing of additional solar capacity to be installed beyond Projects 1-2 as part of its late 2019/early 2020 integrated resource planning work.
- d. As stated in FPL's response to Staff's First Set of Interrogatories No. 100, FPL intends to complete and bring into service the sites that comprise Projects 1-2. The reevaluation noted in (c) above will determine the timing and amount of additional solar capacity to be installed beyond Projects 1-2, including the timing of any regulatory filings such as base rate recovery.

QUESTION:

Please refer to FPL's response to OPC's Second Request for Production of Documents, Item No. 2.

- a. Please identify each date since 2017 on which FPL personnel met by phone, web conference, or in person with personnel from the entity which authored the documents found at Bates Nos. FPL 0000013 through 0000025, and identify for each such meeting each attendee from FPL including each attendee's job title.
- b. Please provide a detailed explanation of FPL's consideration of the documents found at Bates Nos. FPL 0000013 through 0000025 including a detailed description of all analyses FPL performed of what was proposed in the documents.
- c. Please provide a detailed explanation with respect to the consideration FPL gave to the documents found at Bates Nos. FPL 0000013 through 0000025 potentially being a basis for all or a portion of its proposed SolarTogether program.

RESPONSE:

- a. Beginning in October 2017 and continuing to the present, FPL employees have had a number of face to face meetings and telephone conversations with personnel from the entity that authored the documents in Bates Nos. FPL 000013 through 000025 regarding the proposals contained in those documents.
- b. In evaluation of the proposals contained in those documents to sell power to FPL from a portfolio of solar projects as Qualifying Facilities under the Public Utility Regulatory Policy Act of 1978 ("PURPA") and applicable Florida law and regulations, FPL personnel evaluated the proposed PPA rate versus FPL's full avoided costs on both As Available and Firm Energy and Capacity bases. The proposed PPA pricing contained in the proposals was well above FPL's applicable projected As Available energy rate, as well as above the energy rate from the next planned generating unit in FPL's applicable Ten Year Site Plans. Additionally, the operating characteristics of the proposed Qualifying Facilities would likely not meet the requirements to receive capacity payments for Firm Energy and Capacity under FPL's Standard Offer Contract.
- c. The rate design of SolarTogether is complex and, combined with the structuring of certain elements to make the program appealing to potential participants (*e.g.*, timing of program effective date, net cost to participate, payback period, and impacts to general body of rate payers), FPL needed to have a high degree of certainty and control over the project criteria in order to keep the program design manageable and on target consistent with customer demand and expectations. Unexpected variations in cost structure (*e.g.*, up-front capital investment vs. over-time PPA payments), level of cost, uncertainty in annual solar production per project, or risks to the in-service date of the projects, would increase the uncertainty of the program offering and thereby greatly reduce its chance of success. As such, FPL chose from its available portfolio low-cost and cost-effective solar projects, after first selecting available projects to satisfy the SoBRA program for 2020, that provided the greatest certainty for the

design and launch of the SolarTogether program. There are other mechanisms, such as the long-standing availability of the Standard Offer Contract that are not subject to the program design features of the SolarTogether program, which are a more suitable avenue for evaluation of the proposals contained in the documents with Bates Nos. FPL 000013 through 000025.

FPL did not procure or plan a specific set of solar projects for its SolarTogether program, but rather established a general portfolio of potential solar projects based on evaluation of cost, risk, and project characteristics through its broader generation planning process. It was from this portfolio of potential projects that those most likely to meet the timing, cost, and production requirements of the SolarTogether program were chosen as the concept was developed (after first selecting available projects to satisfy the 2020 SoBRA Project). In that context, the proposals referenced in Bates Nos. FPL 000013 through 000025 were not specifically evaluated for SolarTogether. However, as described in subpart (b) above, the projects were evaluated versus FPL's avoided unit in its applicable Ten Year Site Plans consistent with state and federal law. Since the projects failed in those evaluations and did not proceed to an executed PPA, they were not considered part of the available portfolio of solar projects to be included in the SolarTogether program or otherwise as a part of FPL's resource plan. See FPL's response to OPC's Sixth Set of Interrogatories No. 29.

QUESTION:

Please provide a complete copy of all FPL's internal e-mails, memoranda and other correspondence within FPL regarding the documents found at Bates Nos. FPL 0000013 through 000025.

RESPONSE:

See FPL's objection to this request.

QUESTION:

Please provide a complete copy of all e-mails, letters, memoranda and other correspondence between FPL and the entity which authored the documents found at Bates Nos. FPL 0000013 through 000025 regarding the documents found at Bates Nos. FPL 0000013 through 000025.

RESPONSE:

See FPL's objection to this request.

QUESTION:

Please provide a complete copy of all analyses and studies prepared by, or on behalf of, FPL regarding the documents found at Bates Nos. FPL 0000013 through 000025.

RESPONSE:

See FPL's objection to this request.

QUESTION:

Please provide a complete copy of all internal presentations prepared by, or on behalf of, FPL regarding the documents found at Bates Nos. FPL 0000013 through 000025.

RESPONSE:

See FPL's objection to this request.

Florida Power & Light Company
Docket No. 20190061-EI
Staff's First Set of Interrogatories
Interrogatory No. 24
Page 1 of 1

QUESTION:

Petition at 4, Paragraph 7. Define the term cost-effective, as used in this text.

RESPONSE:

FPL defines a project or resource plan as cost-effective when it results in a lower Cumulative Present Value of Revenue Requirement (CPVRR) than the alternative. FPL compared two resource plans, one plan that includes the FPL SolarTogether projects and the alternative of not including the projects. The plan with the FPL SolarTogether showed a lower CPVRR, making that plan cost-effective for participants and the general body of FPL customers. In determining CPVRR, FPL considers the annual revenue requirements of all system costs and system benefits, including all cost associated with the project or plan.

Florida Power & Light Company
Docket No. 20190061-EI
Staff's First Set of Interrogatories
Interrogatory No. 39
Page 1 of 1

QUESTION:

Please refer to the petition, page 8, paragraph 21. It is stated that "Both plans [No ST Plan and FPL SolarTogether Plan] use the same major system assumptions, including the Company's official load, fuel price, and carbon dioxide price forecasts."

- A. Please provide FPL load forecasts used to determine the CPVRR in this proceeding in electronic format (Excel).
- B. Please provide the date(s) FPL's load forecasts were completed and approved.
- C. Please detail how FPL's load forecast is considered in the Cumulative Present Value Revenue Requirement Analysis.
- D. Did FPL consider different combinations of forecast sensitivities in the CPVRR? i.e. did FPL prepare a separate CPVRR based on "low case", "base case", and "high case" load forecast scenarios?
- E. If the answer to 1(d) is yes, please provide all such forecasts, summaries of such CPVRR results using such forecasts, and all related data output.
- F. If the answer to 1(d) is no, please explain why not?

RESPONSE:

In the economic analysis of the FPL SolarTogether Program, as described in the Petition, FPL used the same major system assumptions and methodology as used in the 2019 FPL Ten Year Site Plan and the 2020 SoBRA filing. This applies to both plans [No ST Plan and FPL SolarTogether Plan].

- A. Please see Attachment No. 1 to this response.
- B. FPL's load forecast was completed and approved in December 2018.
- C. FPL's load forecast is a key input in the development of resource plans, and in the economic dispatch of FPL's generating units which in turn determine the CPVRR for each resource plan and, as such, it is used in FPL's resource plans and production costing models.
- D. FPL did not consider different load forecast sensitivities.
- E. See response to subpart (D) above.
- F. FPL does not perform load forecast sensitivity analysis in the economic determination of resource plans. The principal concern for potential load forecast error is system reliability; FPL's reserve margin criteria is in part developed to account for such potential load forecast error.

QUESTION:

Please refer to paragraph 5 of the Petition. For the approximately 200 customers with 1,100 MW of pre-registered capacity, provide the number of customers by type (commercial, industrial, and governmental), their individual subscription capacity, and subscription level compared to annual energy usage. As part of this response, provide a copy of the pre-registration agreements and binding subscription reservation agreements.

RESPONSE:

See Attachment No. 1 to this Interrogatory for the requested data for pre-registered customers. Pre-registration was offered online only, and participants committed to the terms of the pre-registration agreement, (see Attachment No. 2 to this Interrogatory) by signing electronically, as such there are no “individual” pre-registration agreements to provide. Upon signature, customers were provided with an email and on screen confirmation including a confirmed registration number, estimated subscription, and the registration date (see Attachment No. 3).

**SolarTogether – An FPL Shared Solar Program
Pre-Registration Agreement**

Pursuant to this pre-registration agreement (“**Agreement**”), the undersigned (“**Subscriber**”) is agreeing to subscribe to a specified number of kilowatts (“**kW**”) of solar-generated electric power under SolarTogether – An FPL Shared Solar Program (“**Program**”) sponsored by Florida Power & Light Company (“**FPL**”). The Program will be filed with the Florida Public Service Commission (“**FPSC**”) in 2019, and it is anticipated that Program power will become available to FPL customers sometime in March 2020. This voluntary program allows FPL customers to subscribe to a portion of universal solar capacity built specifically for this Program, thereby sharing in the benefits of solar generation and receiving a credit for the system savings produced by the respective capacity for which such customer subscribes.

**Article I
Pre-Registration Terms**

1. **Pre-Registration Quantity.** Subscriber hereby registers for [_____] kilowatts (kW) (“**Pre-Registration Quantity**”) of Program capacity. The Pre-Registration Quantity Amount must be in whole kilowatt (kW) increments and cannot exceed Subscriber’s total kWh usage for the immediately preceding 12 months, which will be determined by dividing Subscriber’s total kWh for the preceding 12 months by 2,535 (“**Maximum Subscription Quantity**”).

2. **Reservations; Wait Listing; Reservation Quantity Increases and Decreases.**

- a) Reservations. Upon submission of this Agreement, Subscriber will receive via email a date and time stamped confirmation of its receipt (“**Timestamped Confirmation**”) by FPL. Following the pre-registration period, FPL will verify Subscriber’s FPL electric service account (“**FPL Account**”) information and, subject to then-remaining Program capacity, will reserve the Pre-Registration Quantity based on Subscriber’s Timestamped Confirmation. FPL reserves the right to apportion the available Program power to ensure that no single customer or customer group amasses all or an unreasonable share of the Program capacity. FPL will notify Subscriber in writing of Subscriber’s reserved kilowatt (kW) allocation of Program capacity (“**Reservation**”). If the Reservation reflects a reduction in the Pre-Registration Quantity by more than 10%, Subscriber will have 10 business days after its receipt of the Reservation in which to cancel the Reservation, except in the case where the reduction is made to meet the Maximum Subscription Quantity requirement.
- b) Wait Listing. Subscribers whose Agreements are received after the Program’s kW capacity is fully subscribed will be so notified by FPL and will be placed on a waiting list in the order of their Timestamped Confirmation and will be admitted into the Program as, when and to the extent that Program kW capacity thereafter becomes available.
- c) Reservation Increases. Subscriber may elect to increase the Reservation, subject to the Program’s then-available kW capacity and the Maximum Subscription Quantity, at any time prior to the opening of the Program in accordance with Section 3 of this Article I by executing and delivering to FPL a new Agreement, which would supersede this Agreement. Subscriber

may not elect to decrease its Reservation prior to Enrollment (as defined in Section 3 of this Article I). A decrease in Subscriber's Subscription Quantity (as defined in Section 3 of this Article I) may be made after Enrollment in accordance with Section 4 of Article II of this Agreement.

3. **Opening of Program and Enrollment.** When the Florida Public Service Commission approves the Program ("**FPSC Approval**"), FPL will designate the date on which the Program will open ("**Program Opening Date**"), and Subscriber hereby authorizes FPL to enroll Subscriber in the Program ("**Enrollment**") on the Program Opening Date. The Reservation will determine the total number of kW subscribed to ("**Subscription Quantity**") by Subscriber. Opening of the Program and Enrollment are conditioned upon FPSC Approval. FPL will notify all Subscribers as to whether FPSC Approval is or is not obtained, and if FPSC Approval is obtained, FPL will notify Subscribers of the Program Opening Date and their Enrollment in the Program, provided that, if the FPSC Approval provides for Monthly Subscription Charge pricing *in excess of*, or Monthly Subscription Credit pricing *less than*, the amounts set forth in Section 1 of Article II of this Agreement or other material modifications to any of the other material terms in Article II of this Agreement, FPL will so notify Subscribers, and each Subscriber will have 10 business days after the date of its receipt of such notification in which to elect to (i) cancel its Reservation and forgo Enrollment or (ii) cancel its Enrollment, if Enrollment shall have already occurred prior to the expiration of such period of 10 business days.

4. **Termination.** This Agreement shall remain in effect until the earlier of the Program Opening Date and the date on which FPSC Approval is denied. Except as provided in the last sentence of Section 3 of this Article I, Subscriber may not terminate this Agreement at any time prior to Enrollment. If Subscriber terminates this Agreement after Enrollment and before the first billing month under the Program, Subscriber's monthly FPL Account bill for the first billing month under the Program will nevertheless include the full amount of the Monthly Subscription Charge and the full amount of the Monthly Subscription Credit (as such terms are defined in Section 1 of Article II of this Agreement).

Article II FPL Proposed FPSC Program Terms

1. **Monthly Rate.** Subscriber's total monthly FPL Account bill will include a "Monthly Subscription Charge" and a "Monthly Subscription Credit," calculated as follows:

Monthly Subscription Charge = Subscription Quantity x \$6.76/kW

Monthly Subscription Credit = \$0.0308/kWh (escalating annually at 1.45%) × Subscription Quantity × Program Output (kWh)
Program Capacity (kW)

2. **Eligibility.** Any FPL customer that takes electric service under a metered rate schedule and has no delinquent FPL Account balances is eligible to participate in the Program ("**Eligible Customers**"). An Eligible Customer may elect a subscription level in whole kW increments up to such customer's total kWh usage for the immediately preceding 12 months and may elect once every year thereafter to increase the number of whole kW purchased under the Program, subject to then-available Program capacity.

3. **Billing.** Eligible Customers participating in the Program will be subject to the minimum FPL Account bill on their otherwise applicable rate schedule. The Monthly Subscription Charge and the

offsetting Monthly Subscription Credit will appear as separate line items on the monthly FPL Account bills of participating Eligible Customers during every month of their respective Enrollments and will be subject to all applicable taxes and fees.

4. **Termination and Reduction.** Program participants may terminate their participation in the Program ("**Voluntary Termination**"), or reduce the number of their respective whole kW Subscription Quantities, at any time after the Program Opening Date, and FPL may terminate any customer's participation in the Program if such customer's FPL Account becomes delinquent ("**Involuntary Termination**"), provided that, in the event of either Voluntary Termination or Involuntary Termination, (i) the customer's monthly FPL Account bill for the month in which such termination occurs will include the full amount of the Monthly Subscription Charge and the full amount of the Monthly Subscription Credit, and (ii) the customer will be prohibited from re-enrolling in the Program for a period of 12 months after any such termination, subject to then-available Program capacity.

5. **Portability.** Program participation is entirely portable within FPL's electric service territory. A Program participant may transfer Program participation to a new service address and will be deemed to have continuous, uninterrupted Enrollment for the purpose of determining the participant's Monthly Subscription Credit.

6. **Attributes.** Program participants may elect to have FPL retire on their behalf any renewable energy credits associated with their Program participation.

7. **Subscription Is Not a Security; No Guarantee of Savings.** A Program participant's subscription to purchase kW under the Program is not a security and does not represent an ownership interest in any of the Program's assets and, therefore, may not be sold, assigned, transferred or conveyed by such participant to any other person or entity or otherwise disposed of by such participant. There is no guarantee that a Program participant will realize any savings from participation in the Program.



LOG IN

PAY BILL

Registration Name: [REDACTED]
Registration Date: May 09, 2019 02:39 PM
Subscription Quantity Requested: 40,007 kW
Registration Confirmation Number: 430

FPL Shared Solar Registration Confirmation

Thank you for pre-registering for SolarTogether, an FPL Shared Solar Program.

As a future participant, we will continue to update you on the status of the program in 2019 as we near approval and launch of the program.

Please do not reply to this email. This address is not monitored.

For help, visit FPL.com

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Florida Power & Light Company
Docket No. 20190061-EI
Staff's First Set of Interrogatories
Interrogatory No. 78
Page 1 of 1

QUESTION:

Please refer to paragraphs 21 and 22 of the Petition. Complete the table below for each scenarios listed (a) through (d). Provide the annual revenue requirement of each Plan, the “No ST Plan” and “FPL SolarTogether Plan,” by category. These include SolarTogether costs for generation, transmission, and O&M, as well as FPL’s remainder of system costs for generation, transmission, fuel, fuel transportation, O&M, emissions (excluding CO2 and CO2 only). Provide a version of this table in nominal and present value dollars for each scenario.

- A. Base Case scenario
- B. Low Fuel scenario.
- C. High Fuel scenario.
- D. No CO2 Cost scenario.

[Scenario Name] – [No ST Plan / FPL SolarTogether Plan] – ([Nominal / NPV] \$ millions)														
Year	SolarTogether				Remainder of System									System Total
	Generation	Transmission	O&M	Total	Generation	Transmission	Fuel	Purchases	Fuel Transportation	O&M	Emissions (Non-carbon)	Emissions (Carbon-only)	Total	
2020														
...														
Total														

RESPONSE:

Please see Attachment No. 1 to this Interrogatory that provides the annual revenue requirement in nominal and present values dollars, as well as CPVRR, for nine natural gas and CO2 price scenarios. The CO2 price scenarios considered included a low (i.e., zero) price scenario, as well as mid and high band CO2 price scenarios.

Florida Power & Light Company
Docket No. 20190061-EI
Staff's First Set of Interrogatories
Interrogatory No. 79
Page 1 of 1

QUESTION:

Please refer to paragraphs 21 and 22 and Exhibits B and C. Complete the table below for each scenarios listed (a) through (d). Provide the annual and total value for the net system savings between the “No ST Plan” and the “FPL Solar Together Plan,” the total SolarTogether Charges, the SolarTogether Credits, and the remaining net system benefits to the general body of ratepayers. Provide a version of this table in nominal and present value dollars.

- A. Base Case scenario.
- B. Low Fuel scenario.
- C. High Fuel scenario.
- D. No CO2 Cost scenario.

System Benefits and SolarTogether Program Impacts - [Nominal \$] or [NPV \$]				
Year	Net System Savings	SolarTogether Charges	SolarTogether Credits	Remaining Net System Savings
2020				
...				
Total				

RESPONSE:

Please see Attachment No. 1 to this Interrogatory, that provides the total (tab 1) and annual (tab 2) value for the net system savings in nominal and present values dollars for the Base Case scenario (Mid Fuel and Mid CO₂), Low Fuel scenario, High Fuel scenario, and the No CO₂ Cost scenario (the Low CO₂ scenario represents No CO₂ Costs). Along with these scenarios, FPL also provided a High CO₂ scenario.

Florida Power & Light Company
Docket No. 20190016-EI
OPC's Second Request for Production of Documents
Request No. 2
Page 1 of 1

QUESTION:

Produce any and all documents related to offers for the sale of solar power energy FPL has received since January 1, 2017, including but not limited to, offers to sell to FPL

- a) solar power
- b) equipment related to the generation and/or transmission of solar power
- c) service related to the generation and/or transmission of solar power
- d) real property related to the generation and/or transmission of solar power.

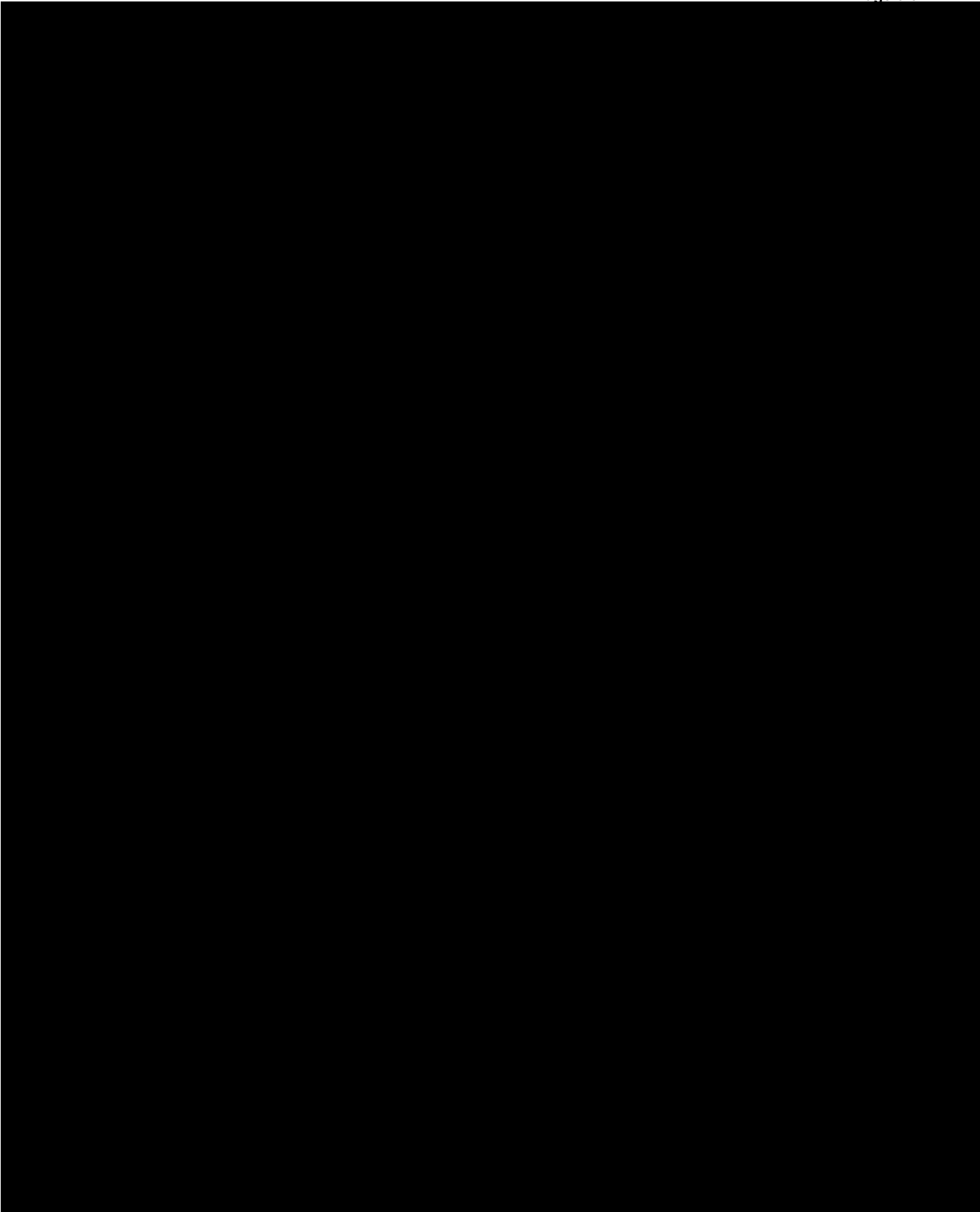
RESPONSE:

Please see documents provided with this response. We note that none of the confidential attached offers for the sale of solar power energy to FPL were presented in the context of SolarTogether.

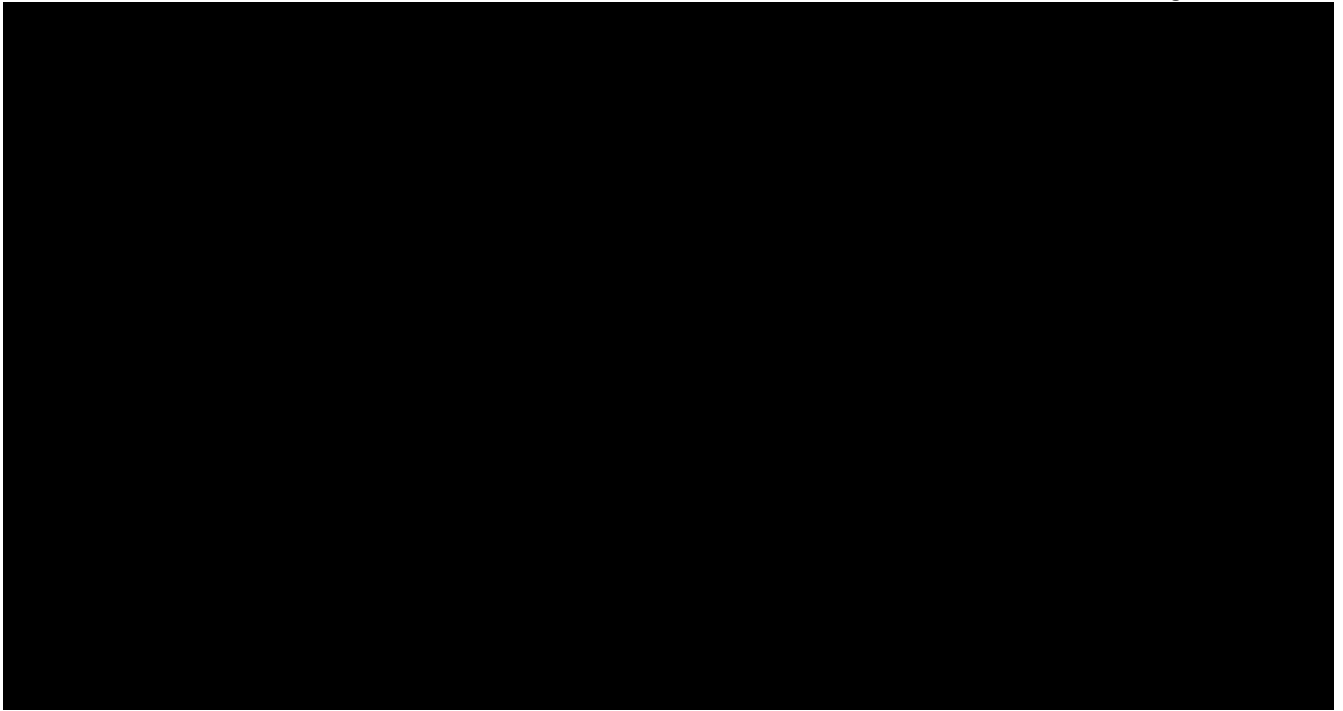
FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 18
PARTY: OFFICE OF PUBLIC COUNSEL –
DIRECT
DESCRIPTION: James R. Dauphinais JRD-7

CONFIDENTIAL

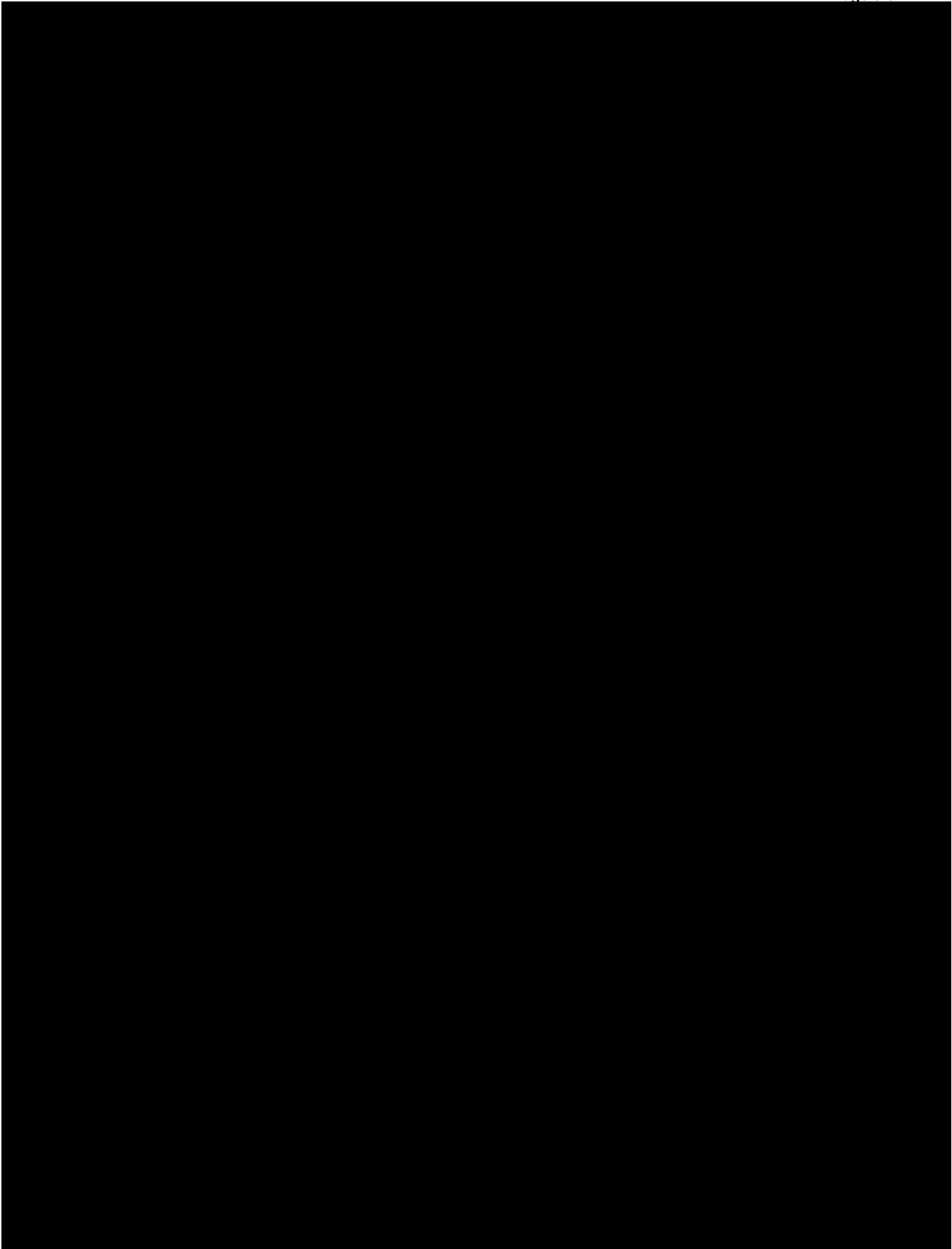




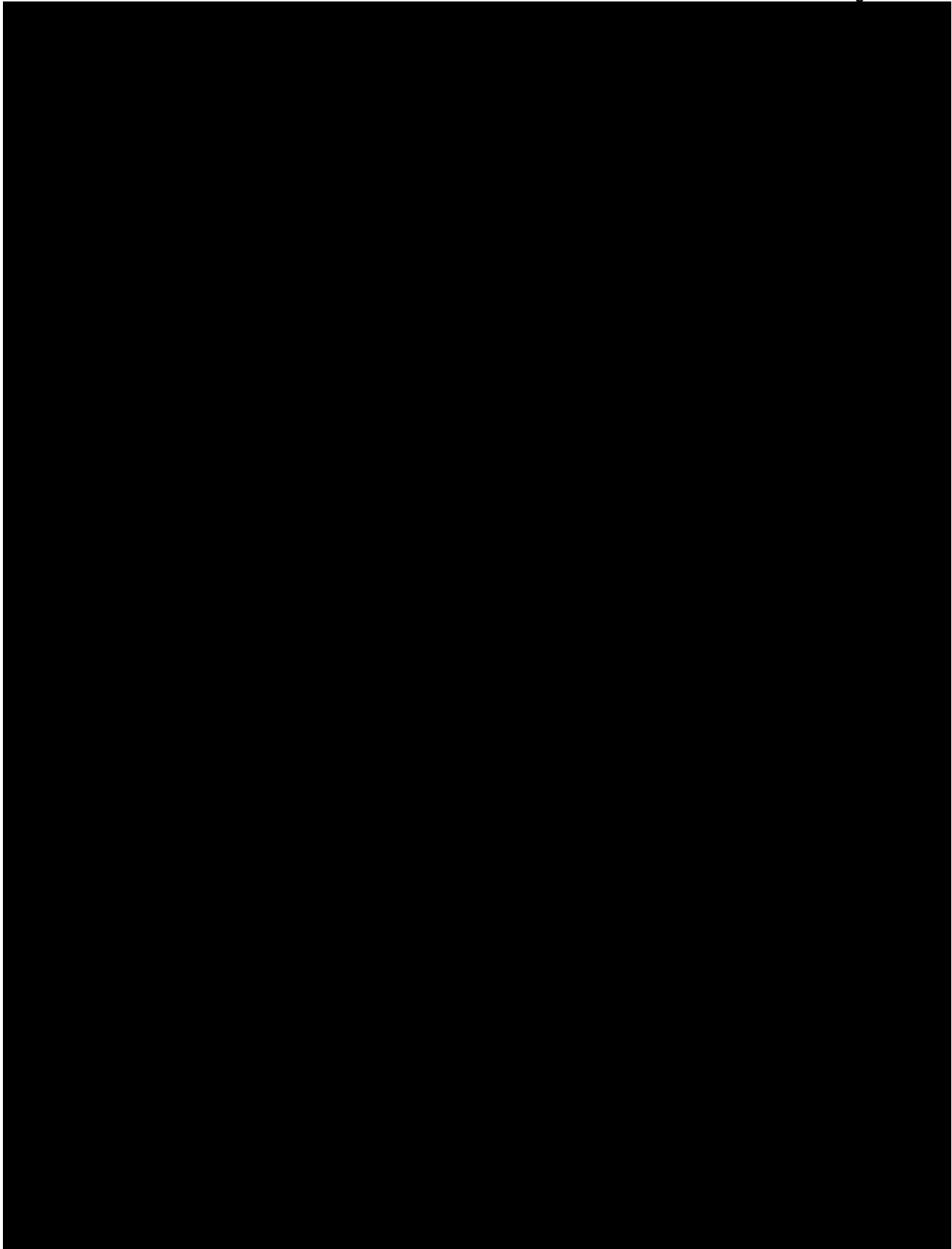
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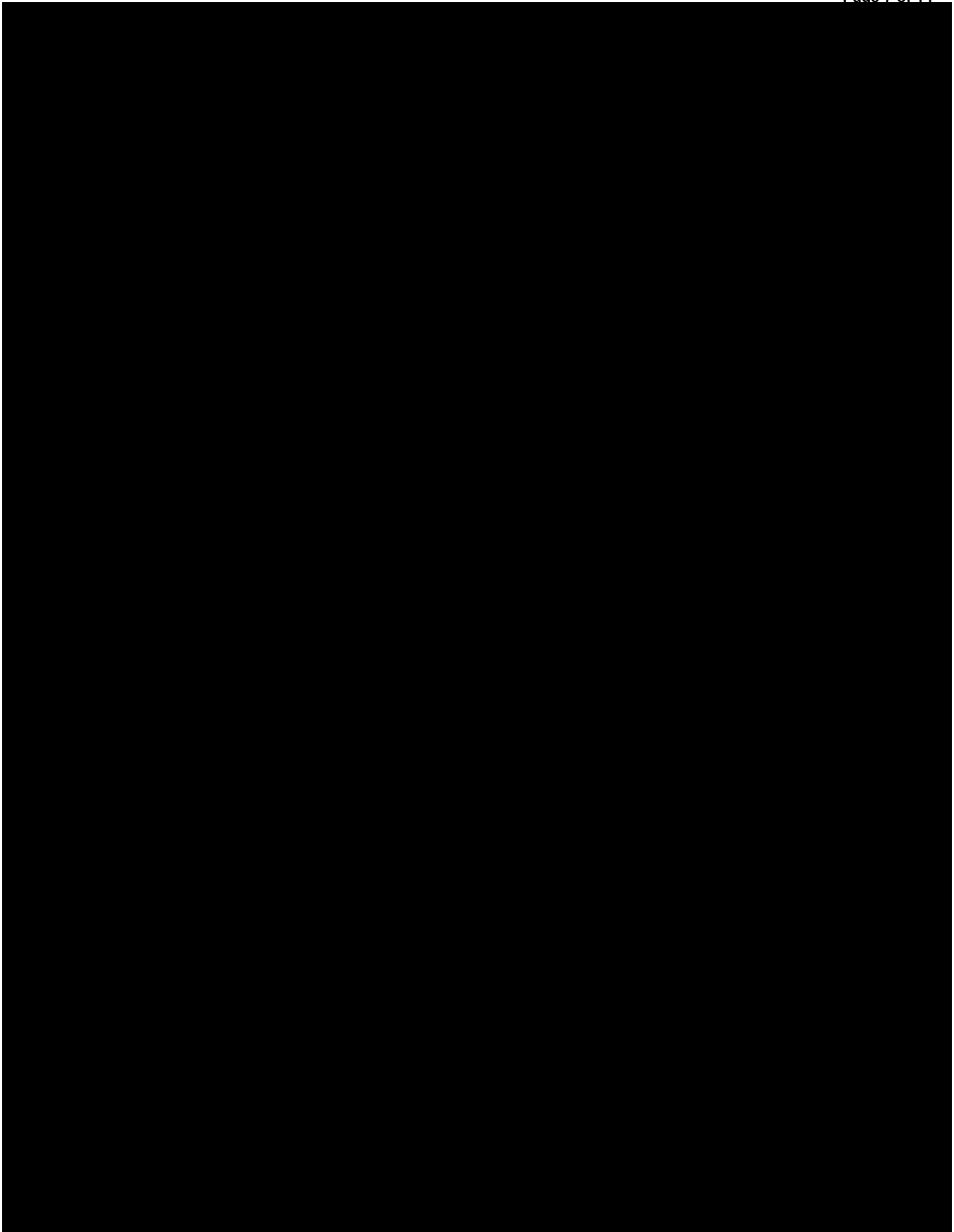
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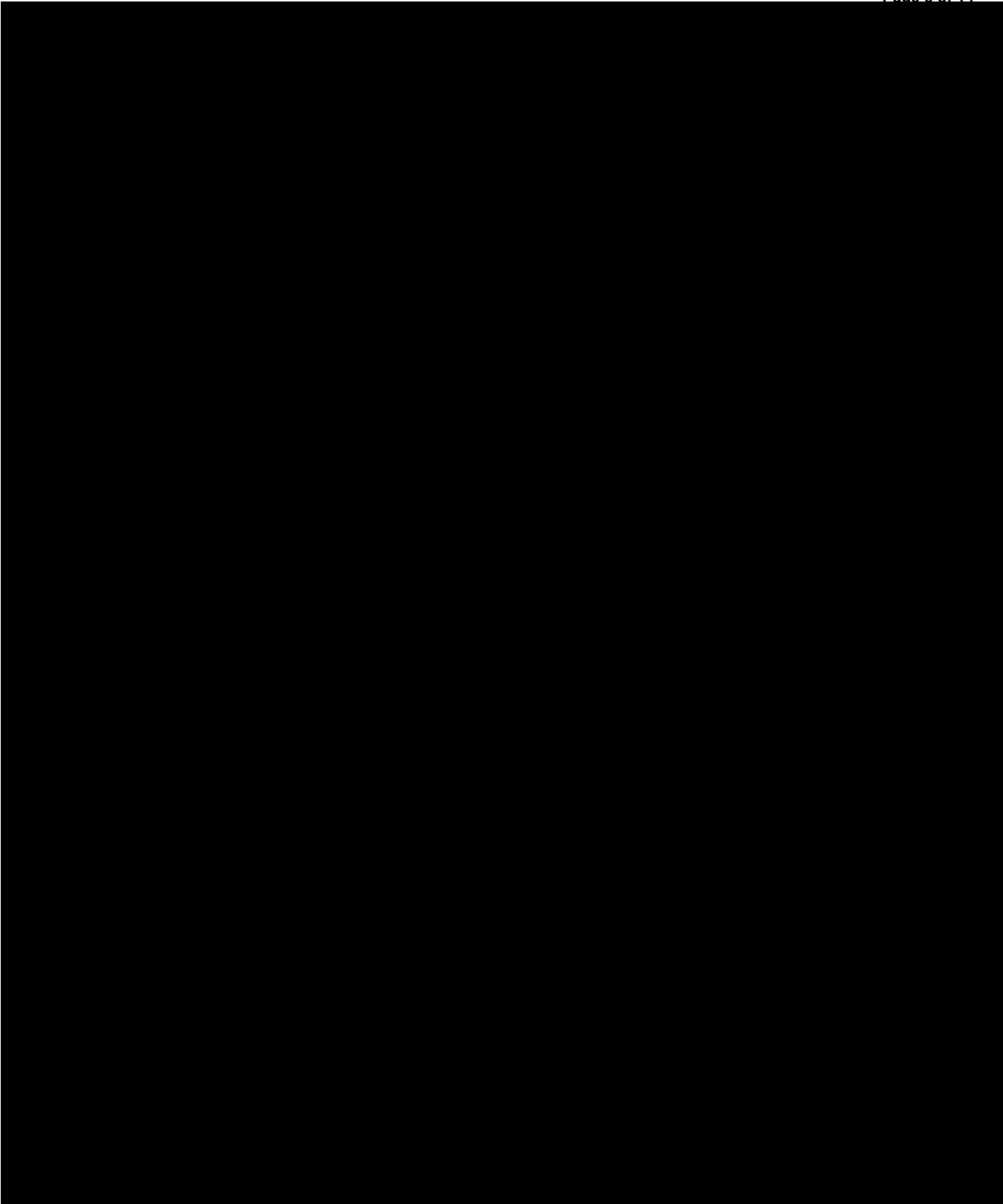
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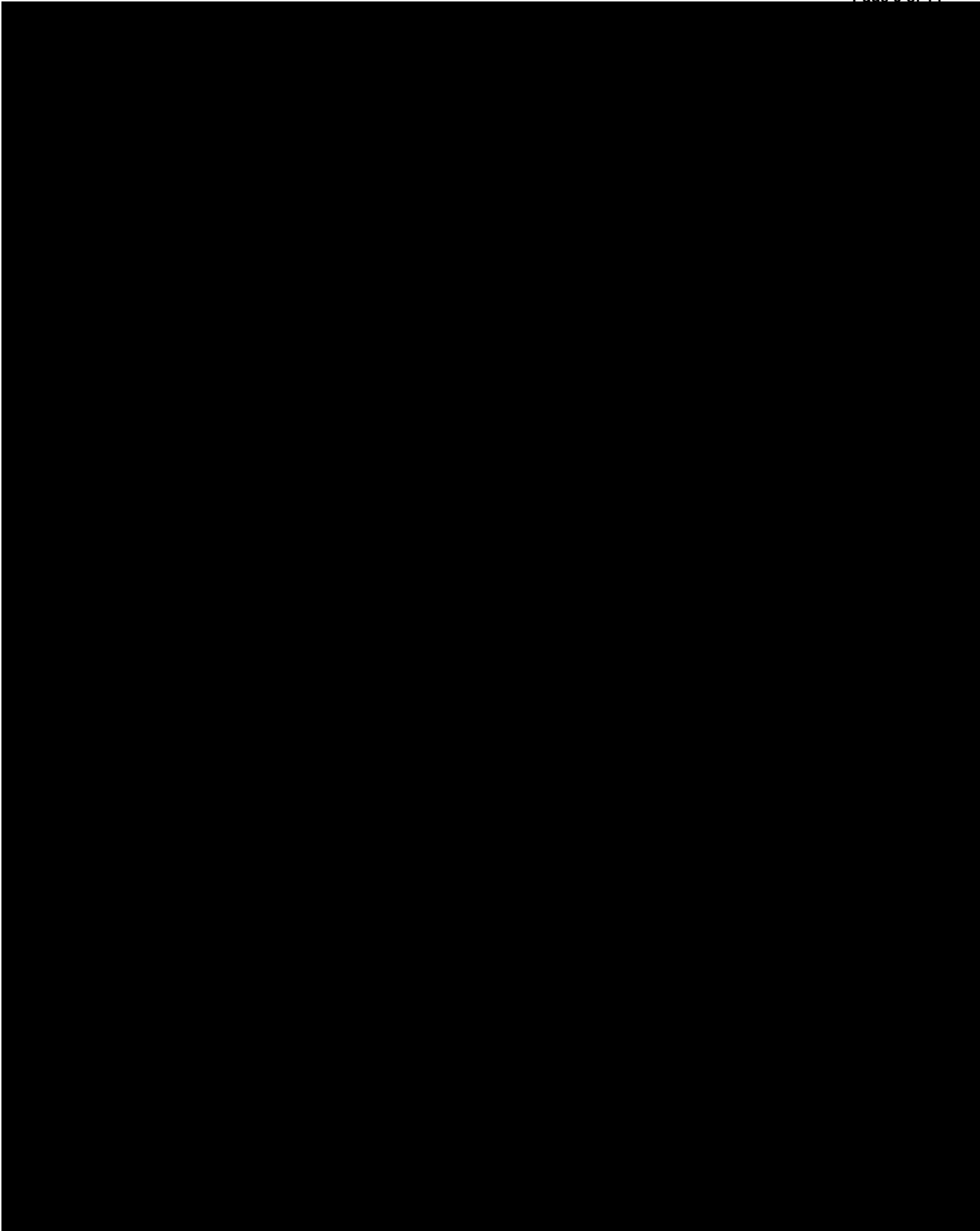
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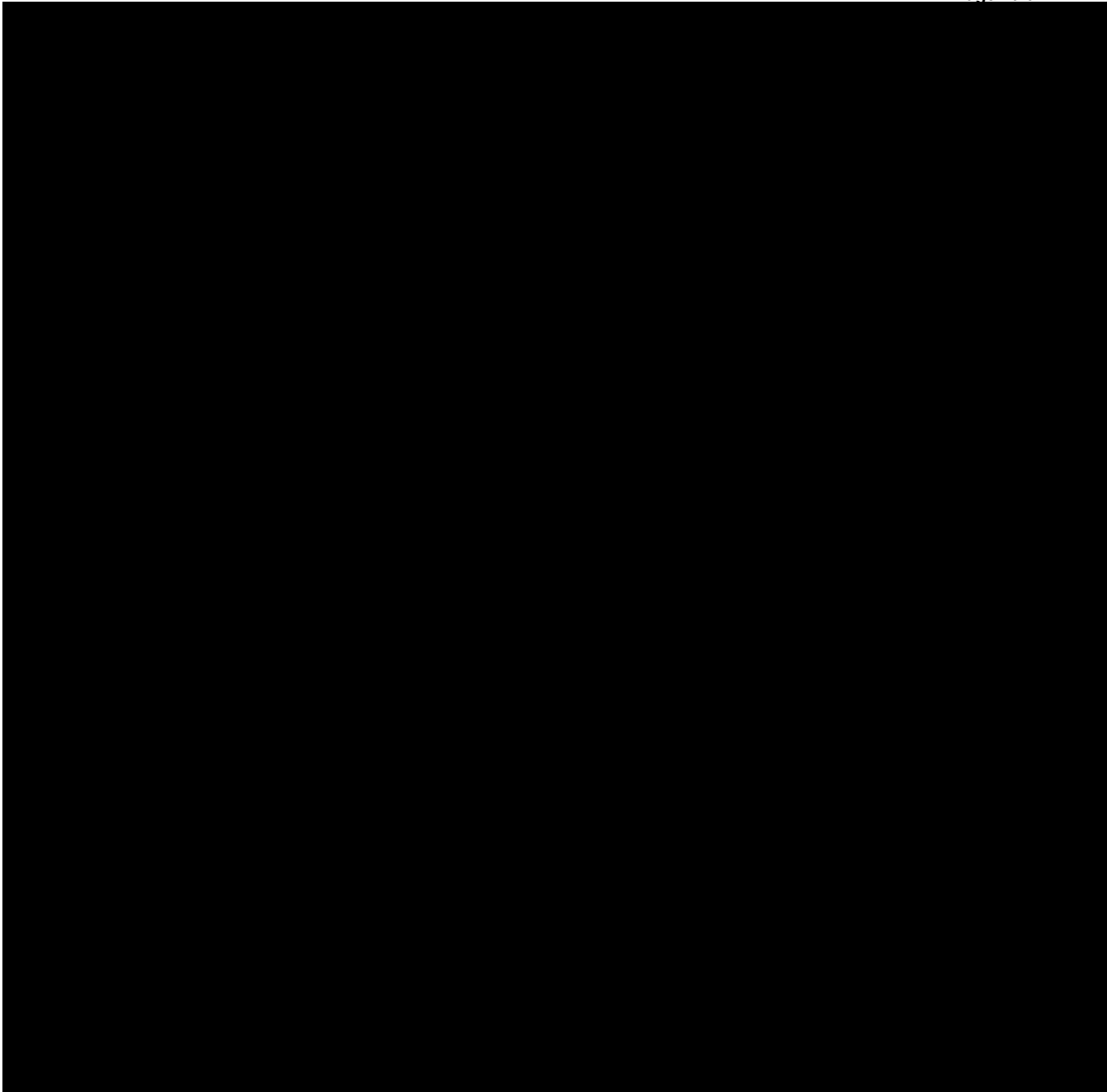
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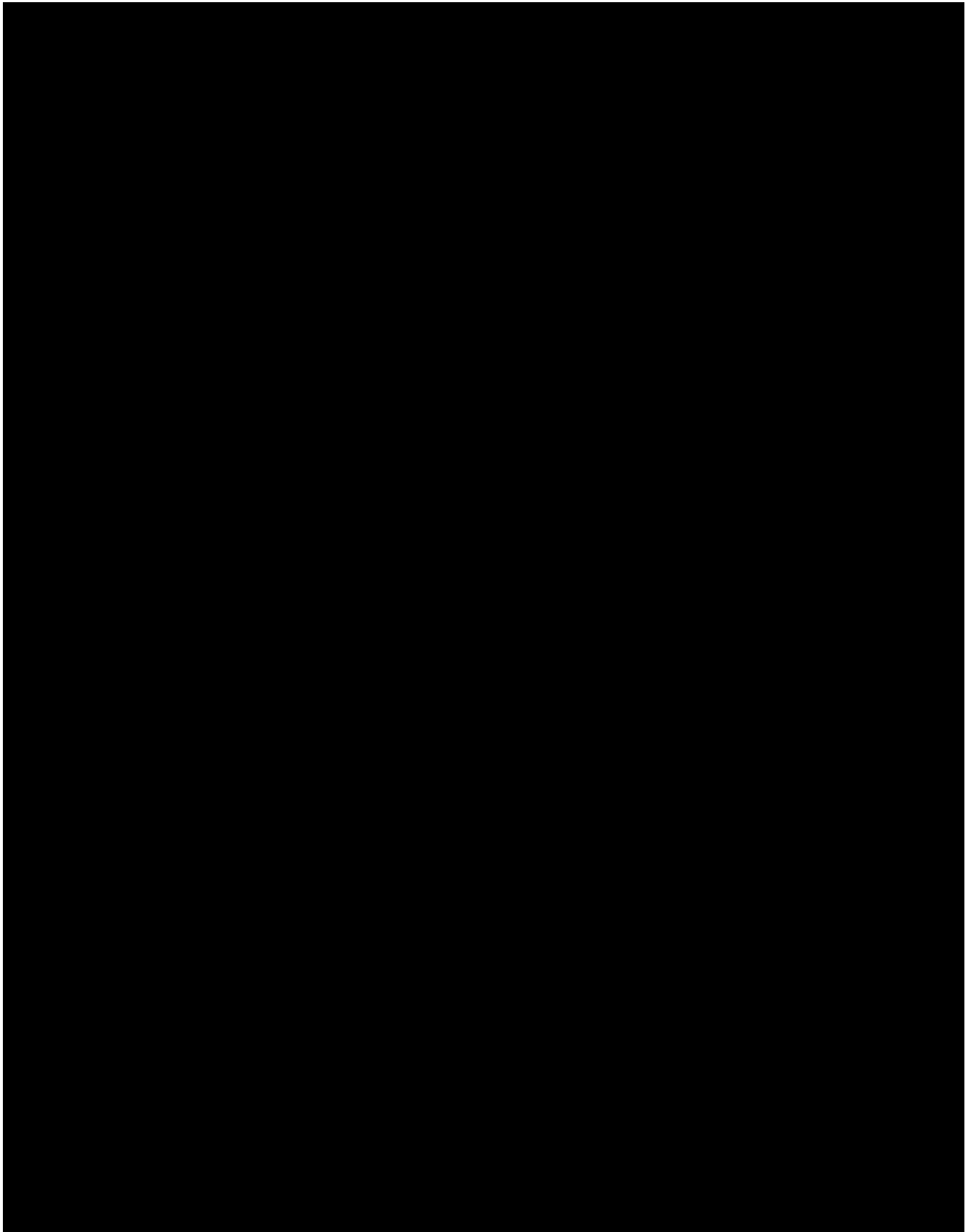
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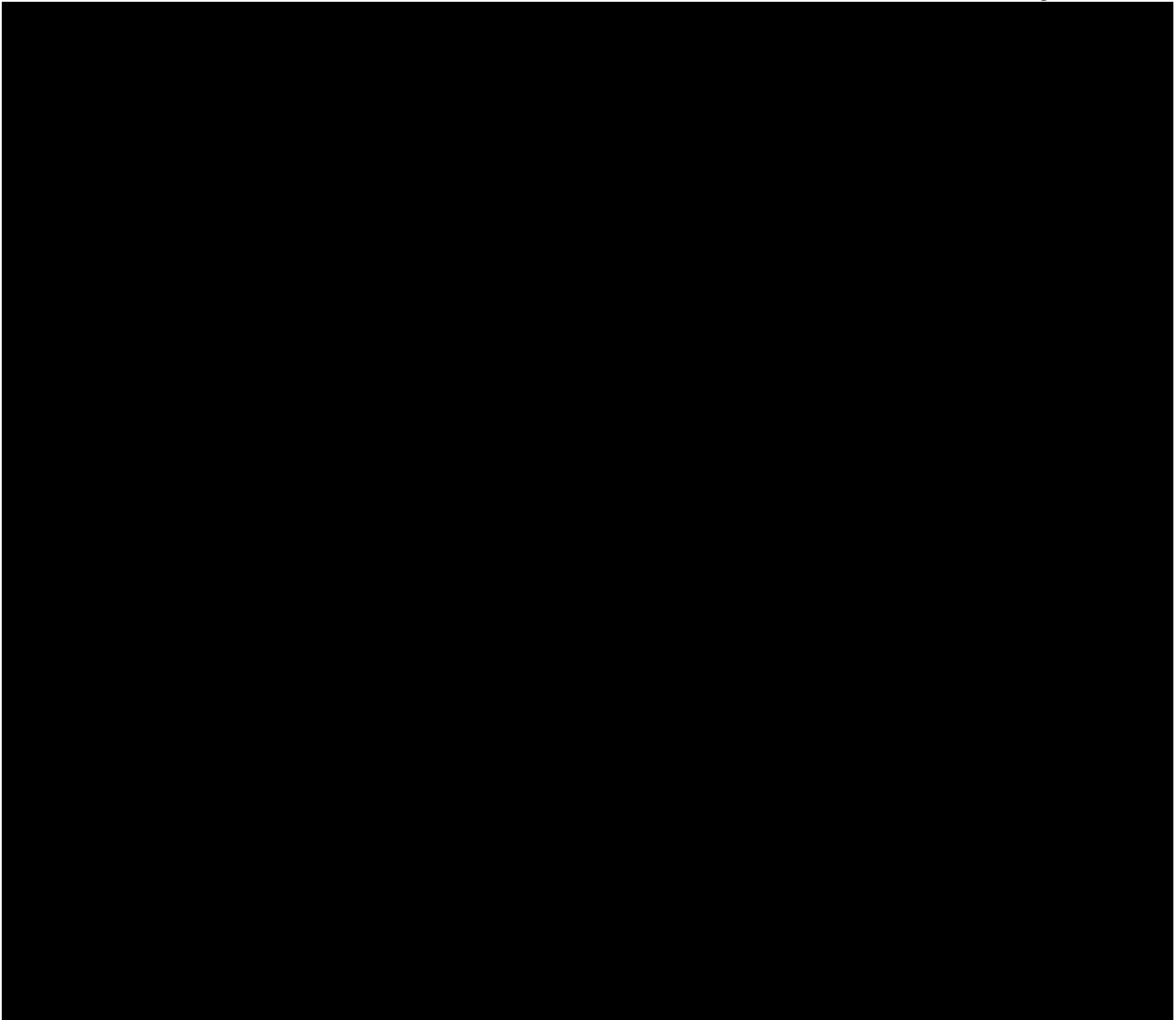
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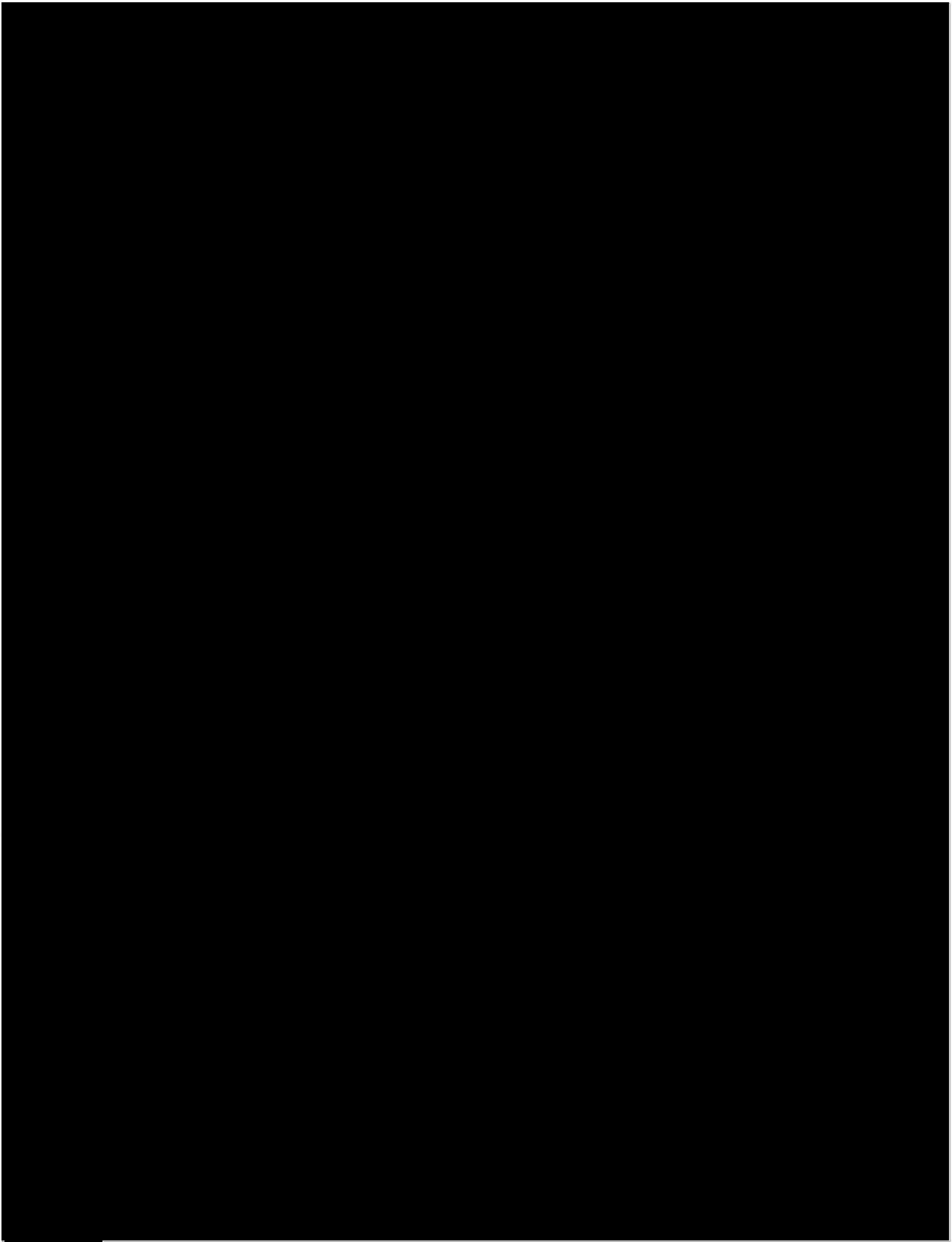
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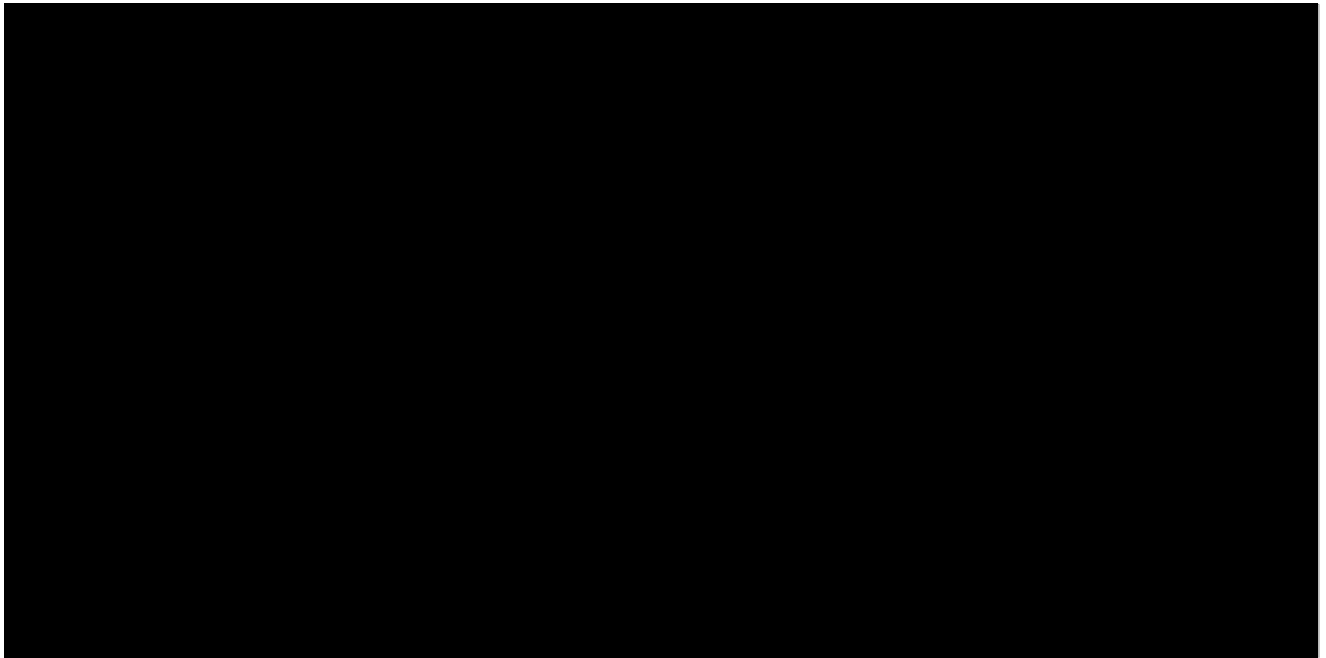
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Exhibit JRD-8

FPL Rebuttal Testimony forecasted CPVRR Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities for FPL Customers as a Whole (FPL Base Case Only)

Florida Power & Light Company

Docket No. 20190061-EI

**FPL Forecasted Cumulative Present Value Revenue Requirement Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities
for FPL Customers as a Whole**
FPL Rebuttal Testimony Base Case (Mid Fuel, Mid CO2)
(\$ Millions)

<u>Year</u>	<u>Base Case</u> (1)
2019	(\$5.83)
2020	(54.56)
2021	(166.04)
2022	(253.47)
2023	(306.07)
2024	(350.70)
2025	(384.32)
2026	(410.38)
2027	(397.96)
2028	(311.54)
2029	(264.70)
2030	(256.22)
2031	(230.10)
2032	(206.39)
2033	(184.84)
2034	(160.65)
2035	(134.39)
2036	(107.99)
2037	(82.23)
2038	(53.68)
2039	(24.75)
2040	(3.60)
2041	22.48
2042	50.00
2043	77.08
2044	102.86
2045	129.74
2046	155.78
2047	178.70
2048	203.86
2049	226.85
2050	249.80
2051	248.62

Source: FPL Response to Staff Interrogatory No. 78 Amended.

Exhibit JRD-9

FPL Rebuttal Testimony forecasted CPVRR Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities for FPL Customers as a Whole (All FPL Cases)

Florida Power & Light Company

Docket No. 20190061-EI

**FPL Forecasted Cumulative Present Value Revenue Requirement Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities
for FPL Customers as a Whole
FPL Rebuttal Testimony Base and Sensitivity Cases
(\$ Millions)**

<u>Year</u>	<u>Base Case</u> (1)	<u>Low Fuel, Low CO2</u> (2)	<u>Low Fuel, Mid CO2</u> (3)	<u>Mid Fuel, Low CO2</u> (4)	<u>Low Fuel, High CO2</u> (5)	<u>Mid Fuel, High CO2</u> (6)	<u>High Fuel, Low CO2</u> (7)	<u>High Fuel, Mid CO2</u> (8)	<u>High Fuel, High CO2</u> (9)
2019	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)
2020	(54.56)	(58.01)	(58.01)	(54.56)	(58.01)	(54.56)	(51.79)	(51.79)	(51.79)
2021	(166.04)	(177.27)	(177.27)	(166.04)	(177.27)	(166.04)	(156.11)	(156.11)	(156.11)
2022	(253.47)	(273.09)	(273.09)	(253.47)	(273.09)	(253.47)	(235.52)	(235.52)	(235.52)
2023	(306.07)	(333.87)	(333.87)	(306.07)	(333.87)	(306.07)	(279.52)	(279.52)	(279.52)
2024	(350.70)	(387.41)	(387.41)	(350.70)	(387.41)	(350.70)	(315.49)	(315.49)	(315.49)
2025	(384.32)	(429.90)	(429.90)	(384.32)	(429.90)	(384.32)	(341.05)	(341.05)	(341.05)
2026	(410.38)	(464.37)	(464.03)	(410.71)	(464.37)	(410.71)	(358.94)	(358.33)	(358.94)
2027	(397.96)	(460.75)	(460.02)	(398.78)	(460.75)	(398.78)	(338.54)	(337.20)	(338.54)
2028	(311.54)	(382.89)	(380.78)	(313.50)	(372.04)	(302.61)	(245.70)	(243.80)	(234.89)
2029	(264.70)	(344.44)	(341.05)	(267.65)	(323.90)	(247.62)	(192.90)	(189.35)	(173.28)
2030	(256.22)	(343.18)	(338.88)	(260.15)	(316.02)	(232.71)	(178.76)	(173.98)	(151.90)
2031	(230.10)	(326.36)	(319.56)	(236.42)	(289.28)	(199.33)	(148.40)	(140.95)	(112.09)
2032	(206.39)	(311.71)	(302.24)	(215.35)	(264.99)	(168.67)	(120.81)	(110.58)	(75.05)
2033	(184.84)	(298.98)	(286.64)	(196.47)	(243.41)	(140.81)	(95.93)	(82.78)	(41.38)
2034	(160.65)	(283.56)	(268.08)	(175.18)	(219.23)	(110.93)	(69.32)	(52.81)	(5.98)
2035	(134.39)	(266.33)	(247.21)	(152.13)	(192.66)	(78.78)	(40.96)	(20.67)	31.10
2036	(107.99)	(248.89)	(225.66)	(129.04)	(165.80)	(46.68)	(13.14)	11.02	68.24
2037	(82.23)	(231.42)	(204.57)	(106.53)	(139.55)	(15.28)	13.88	41.79	104.25
2038	(53.68)	(211.67)	(180.92)	(82.03)	(110.58)	18.55	43.11	74.51	142.84
2039	(24.75)	(191.11)	(156.60)	(57.14)	(80.96)	52.40	72.48	107.57	180.86
2040	(3.60)	(178.09)	(139.37)	(39.97)	(58.92)	78.80	93.71	132.74	211.47
2041	22.48	(160.30)	(117.21)	(17.75)	(31.05)	110.61	119.99	162.83	247.17
2042	50.00	(140.95)	(93.23)	4.95	(1.13)	144.27	146.41	193.68	284.12
2043	77.08	(122.62)	(69.70)	27.04	28.22	177.22	171.70	224.09	320.50
2044	102.86	(105.04)	(47.49)	47.75	56.93	209.36	195.57	253.24	355.91
2045	129.74	(86.32)	(23.39)	69.00	87.90	243.54	220.14	282.78	393.17
2046	155.78	(68.51)	(0.17)	89.48	118.38	277.05	243.48	311.69	429.21
2047	178.70	(53.82)	19.76	106.67	146.04	307.48	263.35	337.35	462.43
2048	203.86	(36.78)	42.47	126.12	176.71	340.67	285.29	365.08	498.09
2049	226.85	(22.17)	62.90	143.00	205.23	371.85	304.66	390.31	531.61
2050	249.80	(7.13)	83.45	160.17	233.44	402.57	324.19	415.39	564.53
2051	248.62	(8.31)	82.27	158.99	232.26	401.40	323.01	414.21	563.35

Source: FPL Response to Staff Interrogatory No. 78 Amended.

Exhibit JRD-10

FPL Rebuttal Testimony forecasted CPVRR Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities for Participating Customers (All FPL Cases)

Florida Power & Light Company

Docket No. 20190061-EI

FPL Rebuttal Testimony Forecasted CPVRR Net Savings/(Cost) for SolarTogether Participants
(\$ Millions)

<u>Year</u>	<u>Base Case</u>	<u>Low Fuel, Low CO2</u>	<u>Low Fuel, Mid CO2</u>	<u>Mid Fuel, Low CO2</u>	<u>Low Fuel, High CO2</u>	<u>Mid Fuel, High CO2</u>	<u>High Fuel, Low CO2</u>	<u>High Fuel, Mid CO2</u>	<u>High Fuel, High CO2</u>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2019	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2020	(\$1.37)	(\$1.37)	(\$1.37)	(\$1.37)	(\$1.37)	(\$1.37)	(\$1.37)	(\$1.37)	(\$1.37)
2021	(\$4.40)	(\$4.40)	(\$4.40)	(\$4.40)	(\$4.40)	(\$4.40)	(\$4.40)	(\$4.40)	(\$4.40)
2022	(\$6.35)	(\$6.35)	(\$6.35)	(\$6.35)	(\$6.35)	(\$6.35)	(\$6.35)	(\$6.35)	(\$6.35)
2023	(\$6.94)	(\$6.94)	(\$6.94)	(\$6.94)	(\$6.94)	(\$6.94)	(\$6.94)	(\$6.94)	(\$6.94)
2024	(\$6.09)	(\$6.09)	(\$6.09)	(\$6.09)	(\$6.09)	(\$6.09)	(\$6.09)	(\$6.09)	(\$6.09)
2025	(\$4.44)	(\$4.44)	(\$4.44)	(\$4.44)	(\$4.44)	(\$4.44)	(\$4.44)	(\$4.44)	(\$4.44)
2026	(\$1.87)	(\$1.87)	(\$1.87)	(\$1.87)	(\$1.87)	(\$1.87)	(\$1.87)	(\$1.87)	(\$1.87)
2027	\$1.47	\$1.47	\$1.47	\$1.47	\$1.47	\$1.47	\$1.47	\$1.47	\$1.47
2028	\$5.66	\$5.66	\$5.66	\$5.66	\$5.66	\$5.66	\$5.66	\$5.66	\$5.66
2029	\$10.23	\$10.23	\$10.23	\$10.23	\$10.23	\$10.23	\$10.23	\$10.23	\$10.23
2030	\$15.28	\$15.28	\$15.28	\$15.28	\$15.28	\$15.28	\$15.28	\$15.28	\$15.28
2031	\$20.72	\$20.72	\$20.72	\$20.72	\$20.72	\$20.72	\$20.72	\$20.72	\$20.72
2032	\$26.63	\$26.63	\$26.63	\$26.63	\$26.63	\$26.63	\$26.63	\$26.63	\$26.63
2033	\$32.65	\$32.65	\$32.65	\$32.65	\$32.65	\$32.65	\$32.65	\$32.65	\$32.65
2034	\$38.86	\$38.86	\$38.86	\$38.86	\$38.86	\$38.86	\$38.86	\$38.86	\$38.86
2035	\$45.23	\$45.23	\$45.23	\$45.23	\$45.23	\$45.23	\$45.23	\$45.23	\$45.23
2036	\$51.80	\$51.80	\$51.80	\$51.80	\$51.80	\$51.80	\$51.80	\$51.80	\$51.80
2037	\$58.33	\$58.33	\$58.33	\$58.33	\$58.33	\$58.33	\$58.33	\$58.33	\$58.33
2038	\$64.88	\$64.88	\$64.88	\$64.88	\$64.88	\$64.88	\$64.88	\$64.88	\$64.88
2039	\$71.42	\$71.42	\$71.42	\$71.42	\$71.42	\$71.42	\$71.42	\$71.42	\$71.42
2040	\$78.02	\$78.02	\$78.02	\$78.02	\$78.02	\$78.02	\$78.02	\$78.02	\$78.02
2041	\$84.48	\$84.48	\$84.48	\$84.48	\$84.48	\$84.48	\$84.48	\$84.48	\$84.48
2042	\$90.86	\$90.86	\$90.86	\$90.86	\$90.86	\$90.86	\$90.86	\$90.86	\$90.86
2043	\$97.15	\$97.15	\$97.15	\$97.15	\$97.15	\$97.15	\$97.15	\$97.15	\$97.15
2044	\$103.40	\$103.40	\$103.40	\$103.40	\$103.40	\$103.40	\$103.40	\$103.40	\$103.40
2045	\$109.46	\$109.46	\$109.46	\$109.46	\$109.46	\$109.46	\$109.46	\$109.46	\$109.46
2046	\$115.39	\$115.39	\$115.39	\$115.39	\$115.39	\$115.39	\$115.39	\$115.39	\$115.39
2047	\$121.18	\$121.18	\$121.18	\$121.18	\$121.18	\$121.18	\$121.18	\$121.18	\$121.18
2048	\$126.87	\$126.87	\$126.87	\$126.87	\$126.87	\$126.87	\$126.87	\$126.87	\$126.87
2049	\$132.36	\$132.36	\$132.36	\$132.36	\$132.36	\$132.36	\$132.36	\$132.36	\$132.36
2050	\$136.24	\$136.24	\$136.24	\$136.24	\$136.24	\$136.24	\$136.24	\$136.24	\$136.24
2051	\$136.75	\$136.75	\$136.75	\$136.75	\$136.75	\$136.75	\$136.75	\$136.75	\$136.75

Source: FPL Response to Staff Interrogatory No. 79 Amended.

Exhibit JRD-11

FPL Rebuttal Testimony forecasted CPVRR Net Savings/(Cost) for Phase 1 SolarTogether Generation Facilities for Non- Participating Customers (All FPL Cases)

Florida Power & Light Company

Docket No. 20190061-EI

FPL Rebuttal Forecasted CPVRR Net Savings/(Cost) for Non-Participating FPL Customers
(\$ Millions)

<u>Year</u>	<u>Base Case</u>	<u>Low Fuel, Low CO2</u>	<u>Low Fuel, Mid CO2</u>	<u>Mid Fuel, Low CO2</u>	<u>Low Fuel, High CO2</u>	<u>Mid Fuel, High CO2</u>	<u>High Fuel, Low CO2</u>	<u>High Fuel, Mid CO2</u>	<u>High Fuel, High CO2</u>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2019	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)	(\$5.83)
2020	(\$53.19)	(\$56.63)	(\$56.63)	(\$53.19)	(\$56.63)	(\$53.19)	(\$50.41)	(\$50.41)	(\$50.41)
2021	(\$161.64)	(\$172.87)	(\$172.87)	(\$161.64)	(\$172.87)	(\$161.64)	(\$151.71)	(\$151.71)	(\$151.71)
2022	(\$247.11)	(\$266.74)	(\$266.74)	(\$247.11)	(\$266.74)	(\$247.11)	(\$229.16)	(\$229.16)	(\$229.16)
2023	(\$299.14)	(\$326.94)	(\$326.94)	(\$299.14)	(\$326.94)	(\$299.14)	(\$272.58)	(\$272.58)	(\$272.58)
2024	(\$344.60)	(\$381.31)	(\$381.31)	(\$344.60)	(\$381.31)	(\$344.60)	(\$309.40)	(\$309.40)	(\$309.40)
2025	(\$379.89)	(\$425.47)	(\$425.47)	(\$379.89)	(\$425.47)	(\$379.89)	(\$336.62)	(\$336.62)	(\$336.62)
2026	(\$408.50)	(\$462.49)	(\$462.16)	(\$408.83)	(\$462.49)	(\$408.83)	(\$357.07)	(\$356.46)	(\$357.07)
2027	(\$399.42)	(\$462.22)	(\$461.49)	(\$400.25)	(\$462.22)	(\$400.25)	(\$340.00)	(\$338.67)	(\$340.00)
2028	(\$317.20)	(\$388.54)	(\$386.44)	(\$319.16)	(\$377.69)	(\$308.27)	(\$251.35)	(\$249.45)	(\$240.55)
2029	(\$274.93)	(\$354.68)	(\$351.28)	(\$277.89)	(\$334.13)	(\$257.85)	(\$203.13)	(\$199.59)	(\$183.51)
2030	(\$271.51)	(\$358.46)	(\$354.16)	(\$275.43)	(\$331.31)	(\$247.99)	(\$194.04)	(\$189.26)	(\$167.18)
2031	(\$250.82)	(\$347.08)	(\$340.28)	(\$257.15)	(\$310.00)	(\$220.06)	(\$169.13)	(\$161.67)	(\$132.81)
2032	(\$233.02)	(\$338.34)	(\$328.87)	(\$241.98)	(\$291.61)	(\$195.30)	(\$147.44)	(\$137.21)	(\$101.68)
2033	(\$217.48)	(\$331.63)	(\$319.29)	(\$229.12)	(\$276.06)	(\$173.46)	(\$128.58)	(\$115.43)	(\$74.03)
2034	(\$199.51)	(\$322.43)	(\$306.94)	(\$214.04)	(\$258.09)	(\$149.79)	(\$108.18)	(\$91.67)	(\$44.84)
2035	(\$179.62)	(\$311.56)	(\$292.44)	(\$197.36)	(\$237.89)	(\$124.00)	(\$86.19)	(\$65.90)	(\$14.13)
2036	(\$159.79)	(\$300.69)	(\$277.46)	(\$180.84)	(\$217.60)	(\$98.48)	(\$64.94)	(\$40.78)	\$16.44
2037	(\$140.56)	(\$289.74)	(\$262.90)	(\$164.85)	(\$197.87)	(\$73.61)	(\$44.45)	(\$16.54)	\$45.93
2038	(\$118.56)	(\$276.55)	(\$245.80)	(\$146.91)	(\$175.46)	(\$46.33)	(\$21.77)	\$9.64	\$77.96
2039	(\$96.18)	(\$262.53)	(\$228.02)	(\$128.57)	(\$152.38)	(\$19.03)	\$1.05	\$36.15	\$109.43
2040	(\$81.62)	(\$256.11)	(\$217.39)	(\$117.99)	(\$136.94)	\$0.78	\$15.69	\$54.71	\$133.44
2041	(\$62.01)	(\$244.78)	(\$201.69)	(\$102.23)	(\$115.53)	\$26.13	\$35.51	\$78.35	\$162.69
2042	(\$40.86)	(\$231.81)	(\$184.10)	(\$85.91)	(\$91.99)	\$53.41	\$55.54	\$102.82	\$193.26
2043	(\$20.08)	(\$219.77)	(\$166.85)	(\$70.11)	(\$68.93)	\$80.07	\$74.54	\$126.93	\$223.34
2044	(\$0.54)	(\$208.44)	(\$150.89)	(\$55.65)	(\$46.47)	\$105.96	\$92.17	\$149.84	\$252.51
2045	\$20.28	(\$195.78)	(\$132.85)	(\$40.46)	(\$21.56)	\$134.08	\$110.68	\$173.32	\$283.71
2046	\$40.39	(\$183.90)	(\$115.56)	(\$25.91)	\$3.00	\$161.67	\$128.09	\$196.30	\$313.82
2047	\$57.52	(\$175.00)	(\$101.41)	(\$14.51)	\$24.86	\$186.31	\$142.17	\$216.17	\$341.25
2048	\$76.99	(\$163.65)	(\$84.40)	(\$0.75)	\$49.83	\$213.80	\$158.42	\$238.21	\$371.22
2049	\$94.48	(\$154.53)	(\$69.46)	\$10.63	\$72.86	\$239.49	\$172.30	\$257.95	\$399.24
2050	\$113.56	(\$143.37)	(\$52.78)	\$23.93	\$97.20	\$266.34	\$187.95	\$279.15	\$428.29
2051	\$111.87	(\$145.06)	(\$54.48)	\$22.24	\$95.51	\$264.64	\$186.26	\$277.46	\$426.60

Source: FPL Response to Staff Interrogatory No. 79 Amended.

Exhibit JRD-12

Discovery Responses Cited to by Mr. Dauphinais in his Supplemental Testimony

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 23
PARTY: OFFICE OF PUBLIC COUNSEL –
DIRECT
DESCRIPTION: James R. Dauphinais JRD-12

Florida Power & Light Company
Docket No. 20190061-EI
Staff's First Set of Interrogatories
Interrogatory No. 100-Amended
Page 1 of 1

QUESTION:

If the SolarTogether petition is not approved, would FPL still construct the SolarTogether solar project sites? If not, please explain why not and provide a resource plan for that scenario. As part of your response, identify unit additions, retirements, and changes for each year.

RESPONSE:

See FPL's response to OPC's Second Set of Interrogatories No. 8. If the FPL SolarTogether Program is not approved, FPL will continue with the construction of Project 1 and Project 2 described in its Petition. FPL will reevaluate the amount and timing of additional solar capacity to be installed beyond these three projects as part of its late 2019/early 2020 integrated resource planning work. The results of those analyses will be accounted for in FPL's 2020 Ten-Year Site Plan filing.

Florida Power & Light Company
Docket No. 20190061-EI
OPC's Second Set of Interrogatories
Interrogatory No. 8
Page 1 of 1

QUESTION:

Please refer to FPL's Petition at Paragraph 13 and FPL's April 2019 Ten Year Power Plant Site Plan 2019-2028 ("Ten Year Site Plan") at pages 12 and 14. Table ES-1 on page 14 of the Ten Year Site Plan has entries for 248 MW of firm capacity from Solar PV for 2020 and 248 MW of firm capacity from Solar PV for 2021. These amounts are in addition to 165 MW of firm capacity from the proposed 2020 SoBRA PV projects that is also indicated in Table ES-1. Assuming a firm capacity to nameplate capacity percentage of approximately 55%, the 496 MW of firm capacity from non-SoBRA Solar PV for 2020 and 2021 in the Ten Year Site Plan is about 900 MW of nameplate PV Solar capacity.

- a. Please explain in detail whether the 900 MW of nameplate non-SoBRA Solar PV capacity identified for 2020 and 2021 in Table ES-1 of the Ten Year Site Plan is in addition to the 1,490 MW of nameplate SolarTogether Solar PV that FPL is proposing or is part of the 1,490 MW of nameplate SolarTogether Solar PV that FPL is proposing.
- b. Please explain in detail whether, in the event its SolarTogether proposal is not approved by the Commission, FPL would, in place of the 1,490 MW of SolarTogether solar PV projects, pursue the 900 MW of nameplate non-SoBRA Solar PV capacity identified for 2020 and 2021 in Table ES-1 of its Ten Year Site Plan.
- c. Please explain in detail whether FPL views Phase 1 of its the SolarTogether proposal as accelerating its planned investment in non-SoBRA solar PV generation capacity from 900 MW of nameplate capacity for 2020 and 2021 to 1,490 MW of nameplate capacity for 2020 and 2021.

RESPONSE:

- a. At this point, FPL is not planning to build additional solar in 2020 and 2021 above the solar capacity included in FPL SolarTogether (1,490 MW) and the 2020 SoBRA Project. FPL will, however, continue to evaluate whether additional solar may be cost-effective in 2021 over the amount shown in the FPL SolarTogether Program.
- b. FPL still plans to proceed with the construction of the 900 MW of solar capacity shown in the 2019 Ten Year Site Plan (TYSP) even if the FPL SolarTogether Program is not approved.
- c. The FPL SolarTogether solar capacity replaces the 900 MW of solar nameplate capacity shown in the 2019 TYSP Resource Plan in 2020 and 2021. In addition, it accelerates part of the solar capacity shown in the 2019 TYSP for the years 2022 to 2024.

Florida Power & Light Company
Docket No. 20190061-EI
Staff's Second Set of Interrogatories
Interrogatory No. 190-Amended
Page 1 of 2

QUESTION:

Please develop revised versions of the SolarTogether Plan and No ST Plan resource plans including the company's proposed demand-side management (DSM) goals from Docket No. 20190015-EG, additional incremental DSM after the end of the goals period. Also, include the 2020 SoBRA Project in both cases as a committed project. Please also answer the following questions using these revised plans, providing electronic copies (in Excel format) of tables or charts:

- Please provide the resource plans for each of the Plans discussed. As part of this response, please provide annual reserve margin data similar to Schedule 7 of the Ten-Year Site Plan, and for each unit identified in the resource plans please provide information similar to Schedule 9 of the Ten-Year Site Plan.
- Please complete the table below for each scenario for each sensitivity, and the difference between them. Provide the annual revenue requirement of each plan by category. Provide a version of this table in nominal and present value dollars for each scenario.

[Scenario Name] – ([Nominal / NPV] \$ millions)														
Year	SolarTogether				Remainder of System									System Total
	Generation	Transmission	O&M	Total	Generation	Transmission	Fuel	Purchases	Fuel	Transportation	O&M	Emissions (Non-carbon)	Emissions (Carbon-only)	Total
2020														
...														
Total														

- Complete the table below for each scenario for each sensitivity. Provide the annual and total value for the net system savings between the Plans, the total SolarTogether Charges, the SolarTogether Credits, and the remaining net system benefits to the general body of ratepayers. Provide a version of this table in nominal and present value dollars.

Net Impacts - [Scenario Name] – ([Nominal / NPV] \$ millions)				
Year	Net System Savings	SolarTogether Charges	SolarTogether Credits	Remaining Net System Savings
2020				
...				
Total				

**Florida Power & Light Company
Docket No. 20190061-EI
Staff's Second Set of Interrogatories
Interrogatory No. 190-Amended
Page 2 of 2**

- d. For each plan, please provide an estimate of annual customer bills for a non-participating residential customer using 1,000 kWh/mo (in nominal and real values) excluding the proposed SolarTogether Charges and Credits.
- e. For each plan, please provide an estimate of annual customer bills for a non-participating residential customer using 1,000 kWh/mo (in nominal and real values) including the proposed SolarTogether Charges and Credits.

RESPONSE:

- a. See Attachment Nos. 1, 2 and 3 to this amended interrogatory response.
- b. See Attachment No. 4 to this amended interrogatory response.
- c. See Attachment No. 5 to this amended interrogatory response.
- d. See Attachment No. 6 to this amended interrogatory response.
- e. See Attachment No. 7 to this amended interrogatory response.

Florida Power & Light Company
Docket No. 20190061-EI
Staff's First Set of Interrogatories
Interrogatory No. 78-Amended
Page 1 of 1

QUESTION:

Please refer to paragraphs 21 and 22 of the Petition. Complete the table below for each scenarios listed (a) through (d). Provide the annual revenue requirement of each Plan, the “No ST Plan” and “FPL SolarTogether Plan,” by category. These include SolarTogether costs for generation, transmission, and O&M, as well as FPL’s remainder of system costs for generation, transmission, fuel, fuel transportation, O&M, emissions (excluding CO2 and CO2 only). Provide a version of this table in nominal and present value dollars for each scenario.

- A. Base Case scenario
- B. Low Fuel scenario.
- C. High Fuel scenario.
- D. No CO2 Cost scenario.

[Scenario Name] – [No ST Plan / FPL SolarTogether Plan] – ([Nominal / NPV] \$ millions)														
Year	SolarTogether				Remainder of System									System Total
	Generation	Transmission	O&M	Total	Generation	Transmission	Fuel	Purchases	Fuel Transportation	O&M	Emissions (Non-carbon)	Emissions (Carbon-only)	Total	
2020														
...														
Total														

RESPONSE:

Please see Attachment No. 1 to this amended response that provides the annual revenue requirement in nominal and present values dollars, as well as CPVRR, for nine natural gas and CO2 price scenarios. The CO2 price scenarios considered included a low (i.e., zero) price scenario, as well as mid and high band CO2 price scenarios.

**Florida Power & Light Company
Docket No. 20190061-EI
Staff's First Set of Interrogatories
Interrogatory No. 79-Amended
Page 1 of 1**

QUESTION:

Please refer to paragraphs 21 and 22 and Exhibits B and C. Complete the table below for each scenarios listed (a) through (d). Provide the annual and total value for the net system savings between the “No ST Plan” and the “FPL Solar Together Plan,” the total SolarTogether Charges, the SolarTogether Credits, and the remaining net system benefits to the general body of ratepayers. Provide a version of this table in nominal and present value dollars.

- A. Base Case scenario.
- B. Low Fuel scenario.
- C. High Fuel scenario.
- D. No CO2 Cost scenario.

System Benefits and SolarTogether Program Impacts - [Nominal \$] or [NPV \$]				
Year	Net System Savings	SolarTogether Charges	SolarTogether Credits	Remaining Net System Savings
2020				
...				
Total				

RESPONSE:

Please see Attachment No. 1 to this amended response, that provides the total (tab 1) and annual (tab 2) value for the net system savings in nominal and present values dollars for the Base Case scenario (Mid Fuel and Mid CO₂), Low Fuel scenario, High Fuel scenario, and the No CO₂ Cost scenario (the Low CO₂ scenario represents No CO₂ Costs). Along with these scenarios, FPL also provided a High CO₂ scenario.

Florida Power & Light Company
Docket No. 20190061-EI
OPC's Thirteenth Set of Interrogatories
Interrogatory No. 57
Page 1 of 2

QUESTION:

Please refer to the October 9, 2019 Joint Motion to Approve Settlement (including exhibits and attachments) filed by FPL, SACE, Walmart and Vote Solar.

a. Please confirm the SolarTogether proposal contained in Exhibit A is identical to FPL's SolarTogether proposal contained in its Rebuttal Testimony, except for the low income customer provisions outlined in paragraphs 4 and 5 of Exhibit A as implemented pursuant to the SolarTogether Rider tariff sheets contained in Attachment I to Exhibit A. If not unconditionally confirmed, please provide a detailed explanation of each additional change that is being proposed in Exhibit A to the SolarTogether program contained in FPL's Rebuttal testimony.

b. Please confirm that the additional net cost for the low income customer provisions of Exhibit A will be solely borne by FPL customers participating in the SolarTogether Program and none of that additional net cost will be assigned to FPL customers not participating in the SolarTogether Program. If not unconditionally confirmed, please provide a detailed explanation of why this is not the case.

c. Please confirm that under the SolarTogether proposal in Exhibit A, FPL continues to assign \$137 million of the projected total \$249 million net CPVRR savings under its mid-level fuel price and mid-level emission price assumptions to FPL's customers not participating in the SolarTogether Program. If not unconditionally confirmed, please provide a detailed explanation of why this is not the case.

d. Please confirm that under the SolarTogether proposal in Exhibit A, the actual net CPVRR savings received by FPL's customers not participating in the SolarTogether Program continues to be a function of the actual SolarTogether credits and charges paid to and collected from customers participating in the SolarTogether Program and the actual fuel, purchased power and emission cost savings realized from the Phase 1 SolarTogether generation facilities. If not unconditionally confirmed, please provide a detailed explanation of why this is not the case.

RESPONSE:

- a. Yes, confirmed. Attachment I to Exhibit A, represents the modified SolarTogether Rider incorporating the low income program defined in the settlement agreement paragraph 4 subpart (a) these changes are as follows:
- i. SolarTogether Rider, Sheet 8.932, Section "Monthly Subscription" has been expanded to show both "Participant" and "Low Income Participant" with references to the tariff sheet pages.
 - ii. SolarTogether Rider, Sheet 8.932, Section "Limitation of Service" includes a new sentence that reads: "Customers at or below the 200% of the poverty level are eligible for participation at the low income pricing provided by this tariff."

Florida Power & Light Company
Docket No. 20190061-EI
OPC's Thirteenth Set of Interrogatories
Interrogatory No. 57
Page 2 of 2

- iii. SolarTogether Rider, Sheet 8.934, Section "Monthly Subscription" table has been expanded to show the subscription charge and subscription credit for both "Participant" and "Low Income Participant"
 - i. Where the Participant Subscription Charge is \$6.76 per kW-Month vs. \$6.73 per kW-Month as presented in the rebuttal testimony.
 - ii. Where the Participant Subscription Credit begins at 3.40468 cents per kWh escalating at 1.7% annually vs. 3.39101 cents per kWh escalating at 1.7% annually as presented in the rebuttal testimony.
 - iii. Where the Low Income Participant Subscription charge is fixed at \$5.57 per kW-Month.
 - iv. Where the Low Income Participant Subscription Credit is fixed at \$6.27 per kW-Month.
- b. FPL interprets the "additional net cost for the low income customer provisions" statement presented here to refer to the \$0.70 differential between the low income customers' Subscription Credit of \$6.27 per kW-Month and the Subscription Charge of \$5.57 per kW-Month. In which case, yes it is confirmed that the net cost will be borne by the FPL customers who elect to participate in the program.
- c. The assignment of the projected \$249 million net CPVRR savings remains unchanged, where \$137 million will be assigned to the program participants and \$112 million will be assigned to the general body. See also, Table 1 on page 13 of Witness Valle's rebuttal testimony and Exhibit A, page 4, item 3 subpart g.
- d. Yes, confirmed. The \$112 million in net CPVRR savings received by FPL's customers not participating in the Program are a function of both base and clause savings. The base savings of \$56 million result from participants contributing 104.5% of program costs via the Subscription Charges. The clause savings of \$56 million are a function of fuel and emissions savings net of credits paid to participants.

Florida Power & Light Company
Docket No. 20190061-EI
OPC's Eighth Set of Interrogatories
Interrogatory No. 37
Page 1 of 1

QUESTION:

Please refer to the Rebuttal Testimony of Mr. Valle at page 9, lines 6-21.

- a. Please identify whether in the past five years the Company has performed, or had performed on its behalf, any analyses or studies regarding the expected growth of private customer-owned solar system on its system either with or without approval of the Company's proposed SolarTogether program. If so, please provide a complete copy of each such analysis or study.
- b. Please provide a detailed explanation with respect to how the Company estimated the general body of customers is paying cross-subsidies of \$13 million annually as a result of customer-owned private solar installations.

RESPONSE:

- a. See Attachment Nos. 1-4 of this response. These forecasts were used for the TYSP and do not contemplate FPL SolarTogether.
- b. See FPL's response to OPC's Seventh Request for Production of Documents No. 19, Attachment No. 1.

Florida Power & Light Company
Docket No. 20190061-EI
OPC's Tenth Request for Production of Documents
Request No. 43
Page 1 of 1

QUESTION:

Please refer to Mr. Deason's Rebuttal Testimony at page 23, lines 1-6. Please provide a complete copy of all analyses or studies the Company has performed, or had performed on its behalf, within the past five years examining or estimating the ability of any community solar program, including but not limited to, the proposed SolarTogether program, to retain the load of its customers and/or the contribution of those customers toward the fixed costs of the Company.

RESPONSE:

FPL has not performed nor had performed on its behalf any such studies.

Matt Cox, PhD
mcox@thegreenlinkgroup.com
www.thegreenlinkgroup.com



SUMMARY

Co-founder and Chief Executive Officer of The Greenlink Group Inc., an analysis and consulting firm, built upon its award-winning modeling tools, Greenlink provides the evidence and expert analysis needed to evaluate the most pressing issues of policy, environmental economics, and climate change.

Matt is an energy and climate policy expert with Master's and Doctoral degrees in public policy. Matt is the primary designer of several energy policy and technology software models. Author of over sixty scientific articles on energy efficiency and renewable energy, his research has informed energy efficiency policy adoption and design at the local, state, national, and international levels, with policy recommendations adopted by several cities and states, the U.S. government, and 12 other nations. Matt has also been the primary architect and implementer of energy efficiency policies.

Areas of Expertise include:

Energy Policy
Energy efficiency
Renewable energy
Economic development
Sustainability

EDUCATION

Georgia Institute of Technology , <i>Ph.D. in Public Policy, Energy and Environment</i> , Atlanta, GA	2014
<i>Minor in Sustainable Development; Dissertation on the effectiveness of climate and energy policies in US metropolitan areas</i>	
Georgia Institute of Technology , <i>M.S. Public Policy, Energy and Environment</i> , Atlanta, GA,	2009
<i>Minor in Economic Development</i>	
University of Dayton , <i>B.S. Environmental Biology</i> , Dayton, OH,	2008
<i>Minor in Philosophy</i>	

PRESENT ACTIVITIES

Creator of energy and water systems modeling software designed specifically to inform policy discussions of energy resources
Lead consultant on transitioning cities towards achieving clean energy targets
Project leader on energy policy analysis in cities and states across the United States
Consultant on energy efficiency opportunities for government and industrial facilities
Consultant on energy efficiency and renewable energy policy options at the state and local level
Expert witness to state legislatures and utility commissions on energy policy
Member of several policy and standard working groups, including the NIST Smart Cities Energy SuperCluster (policy leadership team), ASHRAE 211 Standard for Commercial Building Energy Audits, the National Building Labeling Working Group, the National Water Audits and Assessments Group, and the Livable Buckhead Sustainability Committee.

FLORIDA PUBLIC SERVICE COMMISSION DOCKET: 20190061-EI EXHIBIT: 24 PARTY: VOTE SOLAR – DIRECT DESCRIPTION: Matt Cox MC-1
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RELATED PAST EXPERIENCE

City of Atlanta

08/2014 – 09/2015

Buildings Energy Efficiency Project Manager/Senior Advisor, City Energy Project

Researched, drafted, led stakeholder engagement, and crafted the implementation plan for the City of Atlanta's commercial energy efficiency policy, which positioned Atlanta as the 5th city nationally with a comprehensive energy program and the 1st with comprehensive water efficiency policy.

Chaired the City Advisor's Network of the City Energy Project, disseminating research results, best implementation practices, and providing a forum for idea sharing.

Assisted in crafting the energy services performance contract for the City of Atlanta, to benchmark, audit, and retrocommission 200 municipal buildings.

Assessed, modeled, and supported the development of a \$500 million clean energy financing program.

Georgia Institute of Technology

05/2009 – 08/2014

National Science Foundation IGERT Fellow/Researcher

Researched engineering and policy opportunities for innovative energy technologies and developed an engineering and economics model to forecast sustainable energy pathways for the State of Georgia.

Founding member of the Climate and Energy Policy Laboratory at the Georgia Institute of Technology.

Developed policy options to address non-technical barriers to commercial- and industrial-sector energy efficiency for the U.S. Department of Energy Climate Change Policy and Technology program with Oak Ridge National Laboratory.

RESEARCH AND PUBLICATIONS*

**The majority of analyses and consulting work conducted by The Greenlink Group is done under a non-disclosure agreement and therefore is not public.*

- Brown, MA, A Soni, MV Lapsa, KA Southworth, M Cox. (2019). "Low-Income Energy Affordability in an Era of Energy Abundance," *Progress in Energy*, Vol 1. <https://dx.doi.org/10.1088/2516-1083/ab250b>
- Cox, Matt. 2018. "How Information Can Drive Efficiency in Large Buildings: A Case Study of Impacts for Reno. (2019 updated for new legislative action)" Prepared for the City of Reno City Manager's Office.
- The Institute for Market Transformation. 2019. "Water Audit Guidance for Commercial Buildings." (credited as a guide developer).
- Robinson, Marriele, and Seth Mullendore. 2019. "Resilient Southeast: Exploring Opportunities for Solar+Storage in Five Cities". (Technical and analytical support provided by Matt Cox and Xiaojing Sun).
- Cox, William Matthew, and Karl R. Rabago. *Testimony of Dr. William M. Cox, PhD and Karl Rabago, Presented as Panel on behalf of the Georgia Solar Energy Association, Inc, and the Georgia Solar Energy Industries Association, Inc.* April 25, 2019. *Before the Georgia Public Service Commission.*
- Cox, William Matthew. *Direct Testimony of William M. Cox, PhD on Behalf of Georgia Interfaith Power and Light, Partnership for Southern Equity, Southface Energy Institute, and Vote Solar.* Dockets 42310 and 42311. April 25, 2019. *Before the Georgia Public Service Commission.*

- Cox, Matt and Samantha McDonald. June 2019. "Miami-Dade Energy and Water Efficiency Policy Opportunities." Prepared for Miami-Dade County.
- Cox, Matt. 2019. "A review of issues regarding the 2019 TVA IRP." Prepared for the Southern Environmental Law Center.
- Cox, Matt. 2019. "San Antonio Clean Energy/Climate Action Economic Development Impact Study." Prepared for the Natural Resources Defense Council.
- Cox, Matt and Samantha McDonald. 2018. "Identifying Commercial Energy Efficiency Opportunities: A Data-Driven Approach for New Orleans." Prepared for the City of New Orleans.
- Cox, William Matthew. 2018. *Direct Testimony of William Matthew Cox, PhD, on Behalf of Environmental Respondents*. Case No. PUR-2017-00157. June 19, 2018. *Before the Virginia State Corporation Commission*.
- Cox, et al. 2018. "Leveraging Energy Efficiency in Atlanta's 100% Clean Energy Plan." 2018 ACEEE Summer Study on Energy Efficiency in Buildings.
- City of Atlanta. "Clean Energy Atlanta: A Vision for a 100% Clean Energy Future." 2018. *Key contributing author*
- Nagpal, Shreshth, Hong, Tianzhen, Cox, Matt, and New, Joshua R. (Seminar Chair) (2018). "Seminar 16 - Urban-Scale Energy Modeling, Part 8." In Proceedings of the ASHRAE Conference, Houston, TX, June 23, 2018.
- Cox, Matt and Samantha McDonald. 2018. "Data Driven Efficiency Policy: A Case Study of Des Moines." Prepared for the City of Des Moines, Iowa.
- Rudd, et al. 2018. "Climate Research Priorities for policymakers, practitioners, and scientists in Georgia, USA." *Environmental Management*. <https://doi.org/10.1007/s00267-018-1051-4>
- Cox, Matt. 2018. "How Information Can Drive Efficiency in Large Buildings: A Case Study of Impacts for Reno." Prepared for the City of Reno City Manager's Office.
- Cox, William Matthew. 2017. *Direct Testimony of William Matthew Cox, PhD, on Behalf of Georgia Interfaith Power and Light and the Partnership for Southern Equity*. Docket 29849. December 1, 2017. *Before the Georgia Public Service Commission*.
- Sun, Xiaojing, and Matt Cox. 2017. "A Pathway to a Cleaner Energy Future in North Carolina." Prepared for the Sierra Club, North Carolina Chapter.
- Cox, Matt and Caroline Golin. 2017. "The Economic Opportunities of Electric Vehicles in Georgia." Prepared for Plug In America and the Southern Alliance for Clean Energy.
- Cox, Matt and Xiaojing Sun. 2017. "Decision Points: Is New Nuclear Needed?" Prepared for the Southern Environmental Law Center, Georgia Office and VoteSolar.
- Cox, Matt. 2017. "Clean Energy Has Arrived: Tapping Regional Resources to Avoid Locking In Higher Cost Natural Gas." Prepared for the Southern Environmental Law Center, North Carolina Office. Filed as comment with the Federal Energy Regulatory Commission.
- Sun, Xiaojing, Caroline Golin, and Matt Cox. 2017. "North Carolina's Electricity Future." Prepared for the Sierra Club, North Carolina Chapter.
- Cox, Matt and Xiaojing Sun. 2017. "Advancing a Clean Energy Economy in North Carolina." Prepared for the Southern Environmental Law Center, North Carolina Office.
- Cox, Matt. 2017. "Cutting Emissions from Office Buildings with LEED." Prepared for the US Green Buildings Council.
- Cox, Matt, Xiaojing Sun, John Seryak, and Jordan Nader. 2016. "Grounds for Optimism: Options for Empowering Ohio's Energy Market". Prepared for The Nature Conservancy and The Environmental Defense Fund.
- Golin, Caroline, Xiaojing Sun, and Matt Cox. 2016. "The Potential for Demand-Side Resources in the District of Columbia." Prepared for the Department of Energy and Environment.
- Cox, Matt, Caroline Golin, Xiaojing Sun, Shan Arora, Ruthie Norton, and Megan O'Neil. 2016. "Working to Pick Up the PACE". Regional Studies Association 2nd North America Conference.
- Golin, Caroline, Matt Cox, and Xiaojing Sun. 2016. "Joining the Revolution: City Networks as Change Agents". Regional Studies Association 2nd North America Conference.
- Sun, Xiaojing, Caroline Golin, and Matt Cox. 2016. "Water in the Wires: Electricity, Water, and the Value of Distributed Resources in Atlanta". Regional Studies Association 2nd North America Conference.

- Matt Cox. 2016. *Direct Testimony of William M. Cox, PhD, on Behalf of Georgia Interfaith Power and Light and the Southface Energy Institute*. Docket Nos 40161, 40162. May 3, 2016. *Before the Georgia Public Service Commission*.
- Brown, Marilyn A., Matt Cox, Ben Staver, Paul Baer. 2016. "Modeling climate-driven changes in US buildings energy demand". *Climatic Change* 134, 29-44.
- Golin, Caroline, Matt Cox, Marilyn A. Brown, and Valerie Thomas. "The Water Efficiency Gap". 2016. *Sustainable Water Resources Management* 1, Issue 4, 315-324.
- Brown, Marilyn and Matt Cox. 2015. "PROGRESS IN ENERGY AND CARBON MANAGEMENT IN LARGE U.S. METROPOLITAN AREAS". *Energy Procedia* 75, 2957–2962.
- Cox, Matt and Caroline Golin. 2016. *Analyzing Orlando's Building Energy Benchmarking & Reporting Draft Proposed Ordinance*. Prepared for the Institute of Market Transformation.
- Cox, Matt and Caroline Golin. 2015. *Analyzing Kansas City's Building Energy Benchmarking & Reporting Draft Proposed Ordinance*. Prepared for the Institute for Market Transformation.
- Sun, Xiaojing, Marilyn A. Brown, Matt Cox, and Roderick Jackson. 2015. *Mandating Better Buildings: A Global Review of Building Codes and Prospects for Improvement in the United States*, Wiley Interdisciplinary Reviews (WIREs): Energy and Environment.
- Golin, Caroline and Matt Cox. 2015. *Determining the Value of Solar in Georgia*. Prepared for the Southern Environmental Law Center.
- Cox, Matt and Caroline Golin. 2015. *Analyzing Atlanta's Building Energy Benchmarking and Reporting Draft Proposed Ordinance*. Prepared for the City of Atlanta Mayor's Office of Sustainability.
- Matt Cox and Caroline Golin. 2014. *The Impacts of Net Metering in South Carolina*. Presented as supporting evidence for Direct Testimony in Docket 2014-246-E-December 10, 2014
- Golin, Caroline and Matt Cox. 2014. "ForeSEE: Resilience, sustainability and improved social outcomes." The Clean Energy Education and Empowerment Awards.
- Brown, Marilyn, and Matt Cox. 2014. "Pathways to Urban Sustainability: Energy and Climate Drivers." Presentation given at the 2014 American Planning Association National Planning Conference.
- Cox, Matt and Marilyn Brown. 2014. "Sustaining the City: Trends in Energy and Carbon Management in Large US Metros." 2014 ACEEE Summer Study on Energy Efficiency in Buildings.
- Sun, Xiaojing, Matt Cox, and Marilyn Brown. 2014. "Energy Benchmarking of Commercial Buildings: A Low-Cost Pathway toward Urban Sustainability." 2014 ACEEE Summer Study on Energy Efficiency in Buildings.
- Brown, Marilyn, Paul Baer, Matt Cox, Yu Wang, Xiaojing Sun, and Alex Smith. 2014. "Climate Change and Energy Demand in Buildings." 2014 ACEEE Summer Study on Energy Efficiency in Buildings.
- Cox, Matt. 2014. "Sustaining the City: Understanding the Role of Energy and Carbon Dioxide Emissions in Sustainable Development in Major Metropolitan Areas." Doctoral Dissertation, Georgia Institute of Technology.
- Cox, Matt, and Marilyn Brown. 2014. "Too Rich To Care? Following Carbon Emissions in 100 US Metropolitan Areas." 2014 Georgia Tech Research and Innovation Conference.
- Brown, Marilyn, Paul Baer, Matt Cox, and Yeong-Jae Kim. 2014. "Incorporating Risk in an Evaluation of Energy Policy Options." *Energy Efficiency* 7, 1-22.
- Cox, Matt, Rachel Muhlbauer, and Adam Vitale. 2013. "The Sun Will Come Out Tomorrow, But Will It Matter? A Technological Review and Policy Analysis of Solar Power and Net Metering in Georgia." 2013 Southeast Regional Energy Symposium.
- Cox, Matt, Marilyn Brown, and Xiaojing Sun. 2013. "Energy Benchmarking of Commercial Buildings: A Low-Cost Pathway for Urban Sustainability." *Environmental Research Letters* 8, 1-12.
- Cox, Matt. 2013. "Better Outcomes through Better Public Procedures? Studying the Pursuit of the Public Interest in Urban Environmental Sustainability Policy." Proceedings of the 9th Transatlantic Dialogue.
- Sun, Xiaojing, Matt Cox, and Marilyn Brown. 2013. "We Can (Re)Build It Better: Designing and Evaluating A National Aggressive Commercial Building Energy Code." 2013 Georgia Tech Research and Innovation Conference.
- Brown, Marilyn, Matt Cox, and Paul Baer. 2013. "Reviving Manufacturing with a Federal Cogeneration Policy." *Energy Policy* 52, January. P 264-276.

- Cox, Matt. 2012. "SUSTAINING THE CITY: A COMPREHENSIVE ANALYSIS OF THE CO₂ EMISSIONS AND ENERGY CONSUMPTION OF NEW YORK CITY AND ATLANTA". 2012 World Energy Engineering Conference.
- Cox, Matt, Marilyn Brown, and Xiaojing Sun. 2012. "The Distributive Impact of Carbon Pricing on Commercial Buildings." 2012 ACEEE Summer Study on Energy Efficiency in Buildings.
- Cox, Matt. 2012. "Filling Policy Gaps for Deploying Organic PV." From Transit Hubs to Combat Zones: Serving the Government Customer with Lightweight Materials.
- Cox, Matt. 2011. "Sustainable Transitions: Adaptive Management Approaches to Energy and Climate Change in the United States." NSF Climate Ethics Works-In-Progress Conference.
- Cox, Matt, Marilyn Brown, and Roderick Jackson. 2011. "Regulatory Reform to Promote Clean Energy: The Potential of Output-Based Emissions Standards." 2011 ACEEE Summer Study on Energy Efficiency in Industry.
- Jackson, Roderick, Marilyn Brown, and Matt Cox. 2011. "Policy Analysis of Incentives to Encourage Adoption of the Superior Energy Performance Program." 2011 ACEEE Summer Study on Energy Efficiency in Industry.
- Brown, Marilyn, Matt Cox, and Roderick Jackson. 2011. "Expanding the Pool of Federal Policy Options to Promote Industrial Energy Efficiency." 2011 ACEEE Summer Study on Energy Efficiency in Industry.
- Brown, Marilyn A, et al. 2011. "Making Industry Part of the Climate Solution: Policy Options to Promote Energy Efficiency." Available at: info.ornl.gov/sites/publications/Files/Pub23821.pdf
- Brown, Marilyn A, Matt Cox, and Rodrigo Cortes. 2011. "Reinventing Industrial Energy Use in a Resource Constrained World." Chapter 12 in *Energy, Sustainability, and the Environment: Technology, Incentives, Behavior*, Fereidoon Sioshansi, ed.
- Brown, Marilyn A, Matt Cox, and Rodrigo Cortes. 2010. "Transforming Industrial Energy Efficiency," The Bridge (Washington, DC: National Academy of Engineering), Fall, pp. 22-30. Available at <http://www.nae.edu/File.aspx?id=24518>
- Brown, Marilyn, et al. "Appendix G: State Profiles." *Energy Efficiency in the South*. Southeast Energy Efficiency Alliance, 12 Apr. 2010. Available at <http://www.seealliance.org/programs/se-efficiency-study.php>
- Raison, Bryan, and Matt Cox. 2009. "Buying Local Foods and other products!" The Power of Your Change: How Your Everyday Purchases Change the World. 3rd Annual Global Solidarity Conference. University of Dayton.
- Raison, Bryan, and Matt Cox. 2008. "Local Foods: Idea Sharing for Community and Economical Development Practice Roundtable." Galaxy III Conference for Extension Professionals. Indianapolis, Indiana.
- Cox, Matt. 2008. "Rain Gardens: Use and Application on Campus and in Dayton." Stander Symposium, University of Dayton.
- Cox, Matt. 2008. "Sustainable Renovation of Facilities and Grounds at UD: Greening the Campus by Blending Academics with Nature and Lifestyle." Stander Symposium, University of Dayton.
- Cox, Matt. 2008. "Composting at the University of Dayton: A Feasibility Study." Stander Symposium, University of Dayton.
- Cox, Matt, et al. 2007. "Dorothy Stang Memorial Sustainable Building Design." Stander Symposium, University of Dayton.
- Cox, Matt. 2007. "Addressing Human and Environmental Health through Cleaning Chemicals." Beta Beta Beta Undergraduate Research Forum, University of Dayton.

RELEVANT INVITED LECTURES AND TALKS

- Invited speaker, *City Commitments to Clean Energy*, Florida League of Cities Annual Meeting, August 16, 2019, Orlando, Florida
- Invited speaker, *Sustainable Urban Infrastructure*, National Science Foundation, August 15, 2019, Atlanta, Georgia
- Invited speaker, *Clean Cities Renewable Power Procurement*, July 25-25, 2019, Denver, Colorado
- Invited speaker, *Careers in Sustainability*, June 27, 2019, Georgia Institute of Technology

- Invited lecture, *Energy Equity and Clean Energy Analysis in the US South*, June 15, 2019, for the Partnership for Southern Equity
- Invited speaker, *Orlando: Renewable and Resilient*, June 6, 2019, for the Solar Energy Innovation Network, hosted by the National Renewable Energy Laboratory
- Invited speaker, *Energy Equity Mapping*, June 3, 2019, for the Urban Sustainability Directors Network and the Institute for Market Transformation
- Invited speaker, *The Economic Case for Resilient Solar+Storage in the Southeast*, May 16, 2019, with the Clean Energy Group
- Invited speaker, *Introduction to Climate Change and Greenhouse Impact Modeling*, for the American Cities Climate Challenge
- Invited speaker, *Third Convening*, for the American Cities Climate Challenge
- Invited speaker, Rate-making “Shark Tank”/Georgia Ratemaking Workshop #6, Southface Energy Institute
- Invited speaker, Choose your Climate Adventure, 2019 Atlanta Science Festival
- Invited lecture, Addressing Climate Change in Atlanta, PACE Academy, 2019
- Invited speaker, Assessing Utility Planning with ATHENIA, Southeast Energy Efficiency Alliance, 2018
- Invited speaker, *Second Convening*, for the American Cities Climate Challenge
- Invited lecture, Designing Future Policy Pathways. Institute for Georgia Environmental Leadership, November 2018
- Invited speaker, Clean Energy Impacts that Matter. The Funder’s Network GREEN Funder’s Conference, November 2018
- Invited lecture, Leveraging 100%: How Cities are Leading the Clean Energy Revolution. Georgia Tech Industrial and Systems Engineering.
- Invited lecture, Leveraging 100%: How Cities are Leading the Clean Energy Revolution. Georgia Tech School of City and Regional Planning Invited Speaker Series.
- Invited speaker, *Clean Energy Costs and Benefits in Ohio’s Renewable Policy Efforts*, Georgia Solar Energy Association’s 2018 Georgia Solar Summit
- Invited speaker, *Bringing Analytics to the Energy Burden Conversation*, US Green Buildings Council 2018 Regenerative Design Summit
- Invited speaker, *First Convening of the Core Partners* for the American Cities Climate Challenge
- Invited speaker, *Energy Burden in the South Summit Panel* and *Atlanta’s 100% Clean Energy Plan* at the 2018 Just Energy Summit in Atlanta, GA at Morehouse College.
- Invited speaker, “Smart City 2.0; the Impact of Electric Vehicles” Presented by Georgia PSC Commissioner Tim Echols.
- Invited speaker, “Clean Energy in Atlanta.” Georgia Tech Association of Environmental Engineers and Scientists’ 2018 Annual Panel Discussion.
- Invited speaker, “Leveraging Energy Efficiency in Atlanta’s 100% Clean Energy Plan.” 2018 ACEEE Summer Study on Energy Efficiency in Buildings, Asilomar, August 13, 2018.
- Invited speaker, “Stepping Outside the Door: Using Building Energy Modeling to Understand the Impact of Energy Choices.” 2018 ASHRAE Annual Conference, Houston, June 24, 2018.
- Invited speaker, High Performance Buildings, Climate and Energy Efficiency, for Atlanta’s Youth Sustainability Ambassadors. June 12, 2018.
- Invited speaker, Atlanta’s 100% Clean Energy Plan for International Facilities Management Association. April 27th, 2018.
- Invited lecture, Breathing Easier – How Building Performance affects Public Health for GBES. April 19th, 2018.
- Invited speaker, Georgia Tech 5th Annual Energy Expo on clean energy transitions. April 12th, 2018.
- Invited speaker, Tulane’s Energy Benchmarking Symposium. March 14th, 2018.
- Invited lecture on 100% Clean Energy Plans in urban settings, for Georgia Tech PUBP/ISYE 8803, Energy Technology and Policy, Spring 2018.
- Invited speaker, *Sustainable Atlanta Roundtable on Atlanta’s 100% Clean Energy Plan*. December 8th, 2017.
- Invited speaker, *Ex Parte Briefing to the South Carolina Public Service Commission on SCE&G’s Generating Capacity Options*. November 28, 2017.

- Invited speaker, The Renewable Energy/Energy Efficiency Nexus, 2017 Vanderbilt Renewable Energy Conference, October 2017.
 - Invited speaker, Energy Efficiency, Current and Future (focus on energy data availability, both in use and in policy), at Transform, the 2017 Southeast Energy Efficiency Alliance Conference, October 2017.
 - Invited lecture, Sustainable Cities and Entrepreneurship, for CEE 4803F, Sustainable Cities, October 2017.
 - Invited speaker, Impacts of Energy Codes, for ASHRAE, May 15, 2017.
 - Invited lecture, Electricity Supply and Demand and its Effects, for ISYE/PUBP 8833, Utility Regulation and Policy, September 2017.
 - Expert leader, Partnerships for Big Impact on Energy Efficiency, Greenbuild International Conference and Expo, November 2015.
 - Invited speaker, Infrastructure and Workforce, 2nd Annual Energy Expo at Georgia Tech, April 2015.
 - Invited speaker, State and Local Dialogue, Accelerate Energy Productivity 2030, February 2015.
 - Invited speaker, Commercial Buildings and Progress in Atlanta, USGBC Emerging Professionals, February 2015.
 - Invited speaker, Impacts of Georgia's Solar Development Initiatives, at the Southern Solar Summit, September 2013.
 - Invited lecture on Georgia's solar energy programs and their social impacts, for CHBE 8801, Seminar on Nanostructured Materials and Energy, Fall 2013.
 - Invited lecture on urban sustainability and democratic participation, for PUBP 6604, Urban and Regional Policy Analysis and Planning, Fall 2013.
 - Invited lecture on quantitative environmental policy analysis using Monte Carlo simulation techniques and benefit-cost analysis, for PUBP 6201, Policy Analysis, Fall 2013.
 - Invited lecture on discount rates and the energy efficiency gap, for PUBP/ISYE 8803, Energy Technology and Policy, Spring 2013.
 - Invited lecture on policy research work and careers at the University of Dayton, March 2012.
 - Invited lecture on microeconomic deadweight loss and macroeconomic net benefits of subsidized combined heat and power deployment, for PUBP 6201, Fall 2011.
 - Invited lecture on policies for promoting renewable energy and the social cost of carbon, for PUBP/ISYE 8803, Energy Technology and Policy, Spring 2011.
-

Electricity Burden in FPL Territory

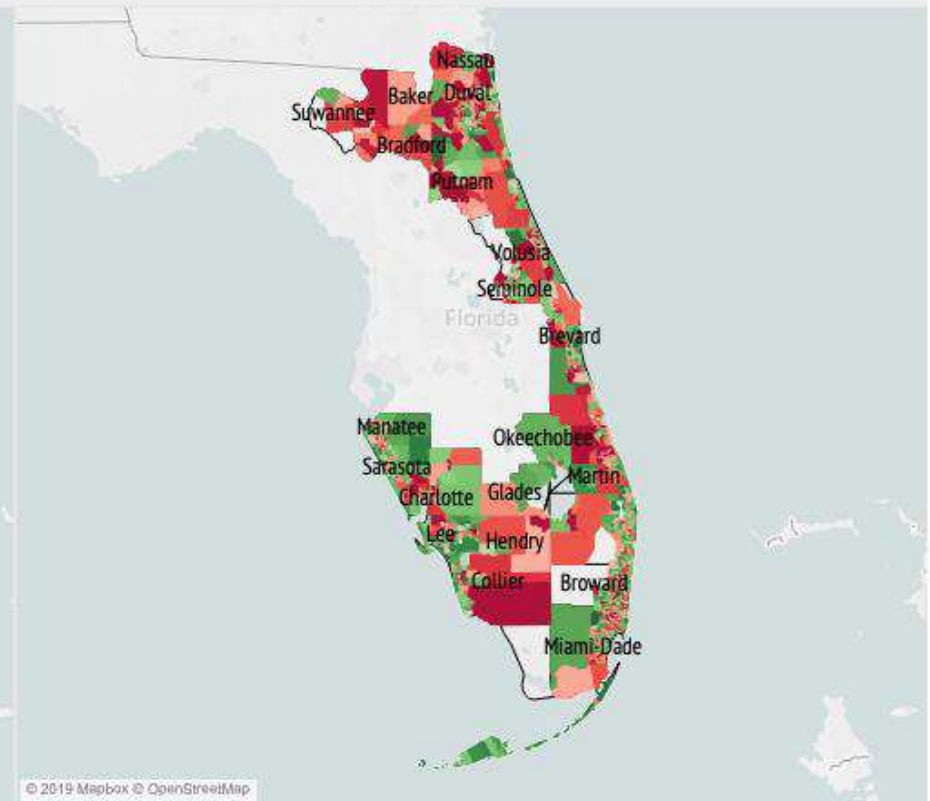
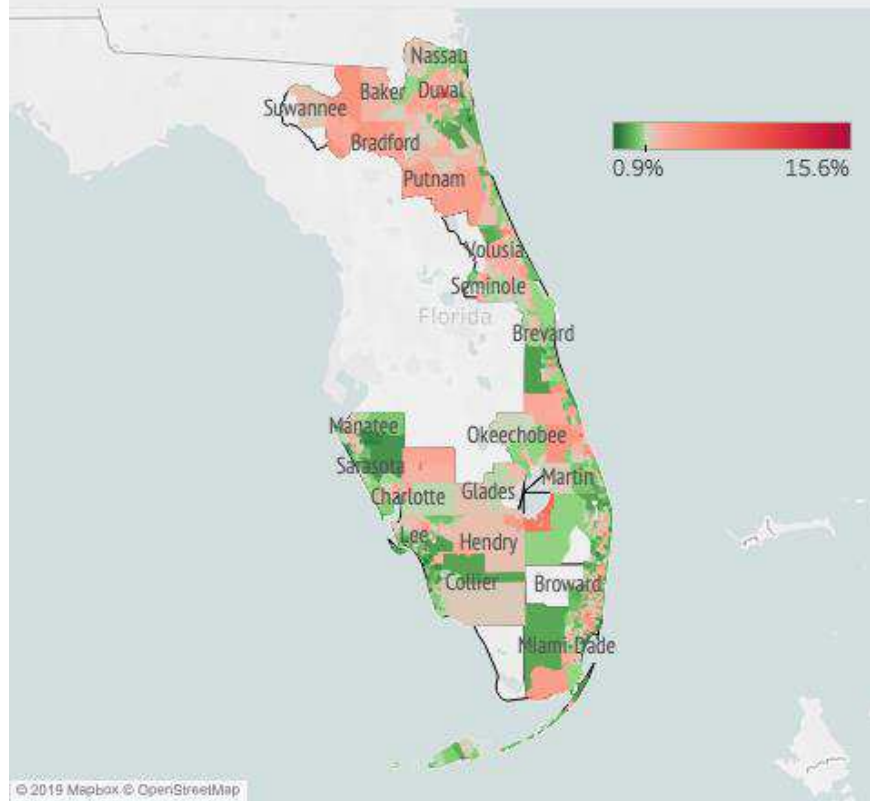
A household's electricity burden is defined as the proportion of income used to pay for a household's annual electricity bill. Below are two maps showing FPL's territory. The map on the left displays the average electricity burden for all census tracts, while the map on the right demonstrates the number of households that are living above a certain burden threshold.

The average electricity burden for the entire state of Florida is **3.86%**, while the average electricity burden for FPL's territory is **3.20%**.

Comparing this to the national average of **2.56%**, FPL's territory experiences a electricity burden that is **1.25x higher** than the national average.

Households living above a 6.00% burden:

1,360,259



Steve W. Chriss

Walmart Inc.

Business Address: 2001 SE 10th Street, Bentonville, AR, 72716-0550

EXPERIENCE

July 2007 – Present

Walmart Inc., Bentonville, AR

Director, Energy Services (October 2018 – Present)

Director, Energy and Strategy Analysis (October 2016 – October 2018)

Senior Manager, Energy Regulatory Analysis (June 2011 – October 2016)

Manager, State Rate Proceedings (July 2007 – June 2011)

June 2003 – July 2007

Public Utility Commission of Oregon, Salem, OR

Senior Utility Analyst (February 2006 – July 2007)

Economist (June 2003 – February 2006)

January 2003 - May 2003

North Harris College, Houston, TX

Adjunct Instructor, Microeconomics

June 2001 - March 2003

Econ One Research, Inc., Houston, TX

Senior Analyst (October 2002 – March 2003)

Analyst (June 2001 – October 2002)

EDUCATION

2001

Louisiana State University

M.S., Agricultural Economics

1997-1998

University of Florida

Graduate Coursework, Agricultural Education and Communication

1997

Texas A&M University

B.S., Agricultural Development

B.S., Horticulture

PRESENT MEMBERSHIPS

Arizona Independent Scheduling Administrators Association, Board

Arizonans for Electric Choice & Competition, Chairman

Edison Electric Institute National Key Accounts Program, Customer Advisory Group

Renewable Energy Buyers Alliance, Advisory Board

PAST MEMBERSHIPS

Southwest Power Pool, Corporate Governance Committee, 2019

TESTIMONY BEFORE REGULATORY COMMISSIONS

2019

Wisconsin Docket No. 6690-UR-126: Application of Wisconsin Public Service Corporation for Authority to Adjust Electric and Natural Gas Rates – Test Year 2020.

Wisconsin Docket No. 5-UR-109: Joint Application of Wisconsin Electric Power Company and Wisconsin Gas LLC for Authority to Adjust Electric, Natural Gas, and Steam Rates – Test Year 2020.

New Mexico Case No. 19-00158-UT: In the Matter of the Application of Public Service Company of New Mexico for Approval of PNM Solar Direct Voluntary Renewable Energy Program, Power Purchase Agreement, and Advice Notice Nos. 560 and 561.

Indiana Cause No. 45235: Petition of Indiana Michigan Power Company, and Indiana Corporation, for Authority to Increase its Rates and Charges for Electric Utility Service through a Phase In Rate Adjustment; and for Approval of Related Relief Including: (1) Revised Depreciation Rates; (2) Accounting Relief; (3) Inclusion in Rate Base of Qualified Pollution Control Property and Clean Energy Project; (4) Enhancements to the Dry Sorbent Injection System; (5) Advanced Metering Infrastructure; (6) Rate Adjustment Mechanism Proposals; and (7) New Schedules of Rates, Rules and Regulations.

Iowa Docket No. RPU-2019-0001: In Re: Interstate Power and Light Company.

Texas Docket No. 49494: Application of AEP Texas Inc. for Authority to Change Rates.

Arkansas Docket No. 19-008-U: In the Matter of the Application of Southwestern Electric Power Company for Approval of a General Change in Rates and Tariffs.

Virginia Case No. PUR-2019-00050: Application of Virginia Electric and Power Company for Determination of the Fair Rate of Return on Common Equity Pursuant to § 56-585.1:1 of the Code of Virginia.

Indiana Docket No. 45159: Petition of Northern Indiana Public Service Company LLC Pursuant to Indiana Code §§ 8-1-2-42.7, 8-1-2-61 and Indiana Code §§ 1-2.5-6 for (1) Authority to Modify its Rates and Charges for Electric Utility Service Through a Phase In of Rates; (2) Approval of New Schedules of Rates and Charges, General Rules and Regulations, and Riders; (3) Approval of Revised Common and Electric Depreciation Rates Applicable to its Electric Plant in Service; (4) Approval of Necessary and Appropriate Accounting Relief; and (5) Approval of a New Service Structure for Industrial Rates.

Texas Docket No. 49421: Application of Centerpoint Energy Houston Electric, LLC for Authority to Change Rates.

Nevada Docket No. 18-11015: Re: Application of Nevada Power Company d/b/a NV Energy, Filed Under Advice No. 491, to Implement NV Greenenergy 2.0 Rider Schedule No. NGR 2.0 to Allow Eligible Commercial Bundled Service Customers to Voluntarily Contract with the Utility to Increase Their Use of Reliance on Renewable Energy at Current Market-Based Fixed Prices.

Nevada Docket No. 18-11016: Re: Application of Sierra Pacific Power Company d/b/a NV Energy, Filed Under Advice No. 614-E, to Implement NV Greenenergy 2.0 Rider Schedule No. NGR 2.0 to Allow Eligible Commercial Bundled Service Customers to Voluntarily Contract with the Utility to Increase Their Use of Reliance on Renewable Energy at Current Market-Based Fixed Prices.

Georgia Docket No. 42310: In Re: Georgia Power Company's 2019 Integrated Resource Plan and Application for Certification of Capacity From Plant Scherer Unit 3 and Plant Goat Rock Units 9-12 and Application for Decertification of Plant Hammond Units 1-4, Plant McIntosh Unit 1, Plant Langdale Units 5-6, Plant Riverview Units 1-2, and Plant Estatoah Unit 1.

Wyoming Docket Nos. 20003-177-ET-18: In the Matter of the Application of Cheyenne Light, Fuel and Power Company D/B/A Black Hills Energy For Approval to Implement a Renewable Ready Service Tariff.

South Carolina Docket No. 2018-318-E: In the Matter of the Application of Duke Energy Progress, LLC For Adjustments in Electric Rate Schedules and Tariffs.

Montana Docket No. D2018.2.12: Application for Authority to Increase Retail Electric Utility Service Rates and for Approval of Electric Service Schedules and Rules and Allocated Cost of Service and Rate Design.

Louisiana Docket No. U-35019: In Re: Application of Entergy Louisiana, LLC for Authorization to Make Available Experimental Renewable Option and Rate Schedule ERO.

Arkansas Docket No. 18-037-TF: In the Matter of the Petition of Entergy Arkansas, Inc. For Its Solar Energy Purchase Option.

2018

South Carolina Docket No. 2017-370-E: Joint Application and Petition of South Carolina Electric & Gas Company and Dominion Energy, Inc., for Review and Approval of a Proposed Business Combination Between SCANA Corporation and Dominion Energy, Inc., as may be Required, and for a Prudency Determination Regarding the Abandonment of the V.C. Summer Units 2 & 3 Project and Associated Customer Benefits and Cost Recovery Plans.

Kansas Docket No. 18-KCPE-480-RTS: In the Matter of the Application of Kansas City Power & Light Company to Make Certain Changes in its Charges for Electric Service.

Virginia Case No. PUR-2017-00173: Petition of Wal-Mart Stores East, LP and Sam's East, Inc. for Permission to Aggregate or Combine Demands of Two or More Individual Nonresidential Retail Customers of Electric Energy Pursuant to § 56-577 A 4 of the Code of Virginia.

Virginia Case No. PUR-2017-00174: Petition of Wal-Mart Stores East, LP and Sam's East, Inc. for Permission to Aggregate or Combine Demands of Two or More Individual Nonresidential Retail Customers of Electric Energy Pursuant to § 56-577 A 4 of the Code of Virginia.

Oregon Docket No. UM 1953: In the Matter of Portland General Electric Company, Investigation into Proposed Green Tariff.

Virginia Case No. PUR-2017-00179: Application of Appalachian Power Company for Approval of an 100% Renewable Energy Rider Pursuant to § 56-577.A.5 of the Code of Virginia.

Missouri Docket No. ER-2018-0145: In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service.

Missouri Docket No. ER-2018-0146: In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service.

Kansas Docket No. 18-WSEE-328-RTS: In the Matter of the Joint Application of Westar Energy, Inc. and Kansas Gas and Electric Company for Approval to Make Certain Changes in their Charges for Electric Service.

Oregon Docket No. UE 335: In the Matter of Portland General Electric Company, Request for a General Rate Revision.

North Dakota Case No. PU-17-398: In the Matter of the Application of Otter Tail Power Company for Authority to Increase Rates for Electric Utility Service in North Dakota.

Virginia Case No. PUR-2017-00179: Application of Appalachian Power Company for Approval of an 100 Percent Renewable Energy Rider Pursuant to § 56-577 A 5 of the Code of Virginia.

Missouri Case No. ET-2018-0063: In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of 2017 Green Tariff.

New Mexico Case No. 17-00255-UT: In the Matter of Southwestern Public Service Company's Application for Revision of its Retail Rates Under Advice Notice No. 272.

Virginia Case No. PUR-2017-00157: Application of Virginia Electric and Power Company for Approval of 100 Percent Renewable Energy Tariffs for Residential and Non-Residential Customers.

Kansas Docket No. 18-KCPE-095-MER: In the Matter of the Application of Great Plains Energy Incorporated, Kansas City Power & Light Company, and Westar Energy, Inc. for Approval of the Merger of Westar Energy, Inc. and Great Plains Energy Incorporated.

North Carolina Docket No. E-7, Sub 1146: In the Matter of the Application of Duke Energy Carolinas, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina.

Louisiana Docket No. U-34619: In Re: Application for Expedited Certification and Approval of the Acquisition of Certain Renewable Resources and the Construction of a Generation Tie Pursuant to the 1983 and/or/1994 General Orders.

Missouri Case No. EM-2018-0012: In the Matter of the Application of Great Plains Energy Incorporated for Approval of its Merger with Westar Energy, Inc.

2017

Arkansas Docket No. 17-038-U: In the Matter of the Application of Southwestern Electric Power Company for Approval to Acquire a Wind Generating Facility and to Construct a Dedicated Generation Tie Line.

Texas Docket No. 47461: Application of Southwestern Electric Power Company for Certificate of Convenience and Necessity Authorization and Related Relief for the Wind Catcher Energy Connection Project.

Oklahoma Cause No. PUD 201700267: Application of Public Service Company of Oklahoma for Approval of the Cost Recovery of the Wind Catcher Energy Connection Project; A Determination There is Need for the Project; Approval for Future Inclusion in Base Rates Cost Recovery of Prudent Costs Incurred by PSO for the Project; Approval of a Temporary Cost Recovery Rider; Approval of Certain Accounting Procedures Regarding Federal Production Tax Credits; Waiver of OAC 165:35-38-5(E); And Such Other Relief the Commission Deems PSO is Entitled.

Nevada Docket No. 17-06003: In the Matter of the Application of Nevada Power Company, d/b/a NV Energy, Filed Pursuant to NRS 704.110(3) and (4), Addressing Its Annual Revenue Requirement for General Rates Charged to All Classes of Customers.

North Carolina Docket No. E-2, Sub 1142: In the Matter of the Application of Duke Energy Progress, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina.

Oklahoma Cause No. PUD 201700151: Application of Public Service Company of Oklahoma, an Oklahoma Corporation, for an Adjustment in its Rates and Charges and the Electric Service Rules, Regulations and Conditions of Service for Electric Service in the State of Oklahoma.

Kentucky Case No. 2017-00179: Electronic Application of Kentucky Power Company for (1) a General Adjustment of its Rates for Electric Service; (2) an Order Approving its 2017 Environmental Compliance Plan; (3) an Order Approving its Tariffs and Riders; (4) an Order Approving Accounting Practices to Establish Regulatory Assets and Liabilities; and (5) an Order Granting All Other Requested Relief.

New York Case No. 17-E-0238: Proceeding on Motion of the Commission as to the Rates, Charges, Rules, and Regulations of Niagara Mohawk Power Corporation for Electric and Gas Service.

Virginia Case No. PUR-2017-00060: Application of Virginia Electric and Power Company for Approval of 100 Percent Renewable Energy Tariffs Pursuant to §§ 56-577 A 5 and 56-234 of the Code of Virginia.

New Jersey Docket No. ER17030308: In the Matter of the Petition of Atlantic City Electric Company for Approval of Amendments to its Tariff to Provide for an Increase in Rates and Charges for Electric Service Pursuant to N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1, for Approval of a Grid Resiliency Initiative and Cost Recovery Related Thereto, and for Other Appropriate Relief.

Texas Docket No. 46831: Application of El Paso Electric Company to Change Rates.

Oregon Docket No. UE 319: In the Matter of Portland General Electric Company, Request for a General Rate Revision.

New Mexico Case No. 16-00276-UT: In the Matter of the Application of Public Service Company of New Mexico for Revision of its Retail Electric Rates Pursuant to Advice No. 533.

Minnesota Docket No. E015/GR-16-664: In the Matter of the Application of Minnesota Power for Authority to Increase Rates for Electric Service in Minnesota.

Ohio Case No. 16-1852-EL-SSO: In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to §4928.143, Ohio Rev. Code, In the Form of an Electric Security Plan.

Texas Docket No. 46449: Application of Southwestern Electric Power Company for Authority to Change Rates.

Arkansas Docket No. 16-052-U: In the Matter of the Application of Oklahoma Gas and Electric Company for Approval of a General Change in Rates, Charges, and Tariffs.

Missouri Case No. EA-2016-0358: In the Matter of the Application of Grain Belt Express Clean Line LLC for a Certificate of Convenience and Necessity Authorizing it to Construct, Own, Operate, Control, Manage and Maintain a High Voltage, Direct Current Transmission Line and an Associated Converter Station Providing an Interconnection on the Maywood-Montgomery 345 kV Transmission Line.

Florida Docket No. 160186-Ei: In Re: Petition for Increase in Rates by Gulf Power Company.

2016

Missouri Case No. ER-2016-0179: In the Matter of Union Electric Company d/b/a Ameren Missouri Tariffs to Increase its Revenues for Electric Service.

Kansas Docket No. 16-KCPE-593-ACQ: In the Matter of the Joint Application of Great Plains Energy Incorporated, Kansas City Power & Light Company, and Westar Energy, Inc. for Approval of the Acquisition of Westar Energy, Inc. by Great Plains Energy Incorporated.

Missouri Case No. EA-2016-0208: In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Permission and Approval and a Certificate of Public Convenience and Necessity Authorizing it to Offer a Pilot Distributed Solar Program and File Associated Tariff.

Utah Docket No. 16-035-T09: In the Matter of Rocky Mountain Power's Proposed Electric Service Schedule No. 34, Renewable Energy Tariff.

Pennsylvania Public Utility Commission Docket No. R-2016-2537359: Pennsylvania Public Utility Commission v. West Penn Power Company.

Pennsylvania Public Utility Commission Docket No. R-2016-2537352: Pennsylvania Public Utility Commission v. Pennsylvania Electric Company.

Pennsylvania Public Utility Commission Docket No. R-2016-2537355: Pennsylvania Public Utility Commission v. Pennsylvania Power Company.

Pennsylvania Public Utility Commission Docket No. R-2016-2537349: Pennsylvania Public Utility Commission v. Metropolitan Edison Company.

Michigan Case No. U-17990: In the Matter of the Application of Consumers Energy Company for Authority to Increase its Rates for the Generation and Distribution of Electricity and for Other Relief.

Florida Docket No. 160021-EI: In Re: Petition for Rate Increase by Florida Power & Light Company.

Minnesota Docket No. E-002/GR-15-816: In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota.

Colorado Public Utilities Commission Docket No. 16AL-0048E: Re: In the Matter of Advice Letter No. 1712-Electric Filed by Public Service Company of Colorado to Replace Colorado PUC No.7-Electric Tariff with Colorado PUC No. 8-Electric Tariff.

Colorado Public Utilities Commission Docket No. 16A-0055E: Re: In the Matter of the Application of Public Service Company of Colorado for Approval of its Solar*Connect Program.

Missouri Public Service Commission Case No. ER-2016-0023: In the Matter of the Empire District Electric Company of Joplin, Missouri for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Missouri Service Area of the Company.

Georgia Public Service Commission Docket No. 40161: In Re: Georgia Power Company's 2016 Integrated Resource Plan and Application for Decertification of Plant Mitchell Units 3, 4A and 4B, Plant Kraft Unit 1 CT, and Intercession City CT.

Oklahoma Corporation Commission Cause No. PUD 201500273: In the Matter of Oklahoma Gas and Electric Company for an Order of the Commission Authorizing Applicant to Modify its Rates, Charges, and Tariffs for Retail Electric Service in Oklahoma.

New Mexico Case No. 15-00261-UT: In the Matter of the Application of Public Service Company of New Mexico for Revision of its Retail Electric Rates Pursuant to Advice Notice No. 513.

2015

Indiana Utility Regulatory Commission Cause No. 44688: Petition of Northern Indiana Public Service Company for Authority to Modify its Rates and Charges for Electric Utility Service and for Approval of: (1) Changes to its Electric Service Tariff Including a New Schedule of Rates and Charges and Changes to the General Rules and Regulations and Certain Riders; (2) Revised Depreciation Accrual Rates; (3) Inclusion in its Basic Rates and Charges of the Costs Associated with Certain Previously Approved Qualified Pollution Control Property, Clean Coal Technology, Clean Energy Projects and Federally Mandated Compliance Projects; and (4) Accounting Relief to Allow NIPSCO to Defer, as a Regulatory Asset or Liability, Certain Costs for Recovery in a Future Proceeding.

Public Utility Commission of Texas Docket No. 44941: Application of El Paso Electric Company to Change Rates.

Arizona Corporation Commission Docket No. E-04204A-15-0142: In the matter of the Application of UNS Electric, Inc. for the Establishment of Just and Reasonable Rates and Charges Designed to Realized a Reasonable Rate of Return on the Fair Value of the Properties of UNS Electric, Inc. Devoted to its Operations Throughout the State of Arizona, and for Related Approvals.

Rhode Island Public Utilities Commission Docket No. 4568: In Re: National Grid's Rate Design Plan.

Oklahoma Corporation Commission Cause No. PUD 201500208: Application of Public Service Company of Oklahoma, an Oklahoma Corporation, for an Adjustment in its Rates and Charges and the Electric Service Rules, Regulations and Conditions of Service for Electric Service in the State of Oklahoma.

Public Service Commission of Wisconsin Docket No. 4220-UR-121: Application of Northern States Power Company, A Wisconsin Corporation, for Authority to Adjust Electric and Natural Gas Rates.

Arkansas Public Service Commission Docket No. 15-015-U: In the Matter of the Application of Entergy Arkansas, Inc. for Approval of Changes in Rates for Retail Electric Service.

New York Public Service Commission Case No. 15-E-0283: Proceeding on Motion of the Commission as to the Rates, Charges, Rules, and Regulations of New York State Electric & Gas Corporation for Electric Service.

New York Public Service Commission Case No. 15-G-0284: Proceeding on Motion of the Commission as to the Rates, Charges, Rules, and Regulations of New York State Electric & Gas Corporation for Gas Service.

New York Public Service Commission Case No. 15-E-0285: Proceeding on Motion of the Commission as to the Rates, Charges, Rules, and Regulations of Rochester Gas & Electric Corporation for Electric Service.

New York Public Service Commission Case No. 15-G-0286: Proceeding on Motion of the Commission as to the Rates, Charges, Rules, and Regulations of Rochester Gas & Electric Corporation for Gas Service.

Public Utilities Commission of Ohio Case No. 14-1693-EL-RDR: In the Matter of the Application Seeking Approval of Ohio Power Company's Proposal to Enter Into an Affiliate Power Purchase Agreement for Inclusion in the Power Purchase Agreement Rider.

Public Service Commission of Wisconsin Docket No. 6690-UR-124: Application of Wisconsin Public Service Corporation for Authority to Adjust Electric and Natural Gas Rates.

Arkansas Public Service Commission Docket No. 15-034-U: In the Matter of an Interim Rate Schedule of Oklahoma Gas and Electric Company Imposing a Surcharge to Recover All Investments and Expenses Incurred Through Compliance with Legislative or Administrative Rules, Regulations, or Requirements Relating to the Public Health, Safety or the Environment Under the Federal Clean Air Act for Certain of its Existing Generation Facilities.

Kansas Corporation Commission Docket No. 15-WSEE-115-RTS: In the Matter of the Application of Westar Energy, Inc. and Kansas Gas and Electric Company to Make Certain Changes in their Charges for Electric Service.

Michigan Public Service Commission Case No. U-17767: In the Matter of the Application of DTE Electric Company for Authority to Increase its Rates, Amend its Rate Schedules and Rules Governing the Distribution and Supply of Electric Energy, and for Miscellaneous Accounting Authority.

Public Utility Commission of Texas Docket No. 43695: Application of Southwestern Public Service Company for Authority to Change Rates.

Kansas Corporation Commission Docket No. 15-KCPE-116-RTS: In the Matter of the Application of Kansas City Power & Light Company to Make Certain Changes in its Charges for Electric Service.

Michigan Case No. U-17735: In the Matter of the Application of the Consumers Energy Company for Authority to Increase its Rates for the Generation and Distribution of Electricity and for Other Relief.

Kentucky Public Service Commission Case No. 2014-00396: Application of Kentucky Power Company for a General Adjustment of its Rates for Electric Service; (2) an Order Approving its 2014 Environmental Compliance Plan; (3) an Order Approving its Tariffs and Riders; and (4) an Order Granting All Other Required Approvals and Relief.

Kentucky Public Service Commission Case No. 2014-00371: In the Matter of the Application of Kentucky Utilities Company for an Adjustment of its Electric Rates.

Kentucky Public Service Commission Case No. 2014-00372: In the Matter of the Application of Louisville Gas and Electric Company for an Adjustment of its Electric and Gas Rates.

2014

Ohio Public Utilities Commission Case No. 14-1297-EL-SSO: In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company and the Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. 4928.143 in the Form of an Electric Security Plan.

West Virginia Case No. 14-1152-E-42T: Appalachian Power Company and Wheeling Power Company, Both d/b/a American Electric Power, Joint Application for Rate Increases and Changes in Tariff Provisions.

Oklahoma Corporation Commission Cause No. PUD 201400229: In the Matter of the Application of Oklahoma Gas and Electric Company for Commission Authorization of a Plan to Comply with the Federal Clean Air Act and Cost Recovery; and for Approval of the Mustang Modernization Plan.

Missouri Public Service Commission Case No. ER-2014-0258: In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariff to Increase its Revenues for Electric Service.

Pennsylvania Public Utility Commission Docket No. R-2014-2428742: Pennsylvania Public Utility Commission v. West Penn Power Company.

Pennsylvania Public Utility Commission Docket No. R-2014-2428743: Pennsylvania Public Utility Commission v. Pennsylvania Electric Company.

Pennsylvania Public Utility Commission Docket No. R-2014-2428744: Pennsylvania Public Utility Commission v. Pennsylvania Power Company.

Pennsylvania Public Utility Commission Docket No. R-2014-2428745: Pennsylvania Public Utility Commission v. Metropolitan Edison Company.

Washington Utilities and Transportation Commission Docket No. UE-141368: In the Matter of the Petition of Puget Sound Energy to Update Methodologies Used to Allocate Electric Cost of Service and For Electric Rate Design Purposes.

Washington Utilities and Transportation Commission Docket No. UE-140762: 2014 Pacific Power & Light Company General Rate Case.

West Virginia Public Service Commission Case No. 14-0702-E-42T: Monongahela Power Company and the Potomac Edison Company Rule 42T Tariff Filing to Increase Rates and Charges.

Ohio Public Utilities Commission Case No. 14-841-EL-SSO: In the Matter of the Application of Duke Energy Ohio for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form of Case No. 14-841-EL-SSO an Electric Security Plan, Accounting Modifications and Tariffs for Generation Service.

Colorado Public Utilities Commission Docket No. 14AL-0660E: Re: In the Matter of the Advice Letter No. 1672-Electric Filed by Public Service Company of Colorado to Revise its Colorado PUC No. 7-Electric Tariff to Implement a General Rate Schedule Adjustment and Other Rate Changes Effective July 18, 2014.

Maryland Case No. 9355: In the Matter of the Application of Baltimore Gas and Electric Company for Authority to Increase Existing Rates and Charges for Electric and Gas Service.

Mississippi Public Service Commission Docket No. 2014-UN-132: In Re: Notice of Intent of Entergy Mississippi, Inc. to Modernize Rates to Support Economic Development, Power Procurement, and Continued Investment.

Nevada Public Utilities Commission Docket No. 14-05004: Application of Nevada Power Company d/b/a NV Energy for Authority to Increase its Annual Revenue Requirement for General Rates Charged to All Classes of Electric Customers and for Relief Properly Related Thereto.

Utah Public Service Commission Docket No. 14-035-T02: In the Matter of Rocky Mountain Power's Proposed Electric Service Schedule No. 32, Service From Renewable Energy Facilities.

Florida Public Service Commission Docket No. 140002-EG: In Re: Energy Conservation Cost Recovery Clause.

Public Service Commission of Wisconsin Docket No. 6690-UR-123: Application of Wisconsin Public Service Corporation for Authority to Adjust Electric and Natural Gas Rates.

Connecticut Docket No. 14-05-06: Application of the Connecticut Light and Power Company to Amend its Rate Schedules.

Virginia Corporation Commission Case No. PUE-2014-00026: Application of Appalachian Power Company for a 2014 Biennial Review for the Provision of Generation, Distribution and Transmission Services Pursuant to § 56-585.1 A of the Code of Virginia.

Virginia Corporation Commission Case No. PUE-2014-00033: Application of Virginia Electric and Power Company to Revise its Fuel Factor Pursuant to Va. Code § 56-249.6.

Arizona Corporation Commission Docket No. E-01345A-11-0224 (Four Corners Phase): In the Matter of Arizona Public Service Company for a Hearing to Determine the Fair Value of Utility Property of the Company for Ratemaking Purposes, to Fix and Just and Reasonable Rate of Return Thereon, to Approve Rate Schedules Designed to Develop Such Return.

Minnesota Public Utilities Commission Docket No. E-002/GR-13-868: In the Matter of the Application of Northern States Power Company, for Authority to Increase Rates for Electric Service in Minnesota.

Utah Public Service Commission Docket No. 13-035-184: In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations.

Missouri Public Service Commission Case No. EC-2014-0224: In the Matter of Noranda Aluminum, Inc.'s Request for Revisions to Union Electric Company d/b/a Ameren Missouri's Large Transmission Service Tariff to Decrease its Rate for Electric Service.

Oklahoma Corporation Commission Cause No. PUD 201300217: Application of Public Service Company of Oklahoma to be in Compliance with Order No. 591185 Issued in Cause No. PUD 201100106 Which Requires a Base Rate Case to be Filed by PSO and the Resulting Adjustment in its Rates and Charges and Terms and Conditions of Service for Electric Service in the State of Oklahoma.

Public Utilities Commission of Ohio Case No. 13-2386-EL-SSO: In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to §4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan.

2013

Oklahoma Corporation Commission Cause No. PUD 201300201: Application of Public Service Company of Oklahoma for Commission Authorization of a Standby and Supplemental Service Rate Schedule.

Georgia Public Service Commission Docket No. 36989: Georgia Power's 2013 Rate Case.

Florida Public Service Commission Docket No. 130140-EI: Petition for Rate Increase by Gulf Power Company.

Public Utility Commission of Oregon Docket No. UE 267: In the Matter of PACIFICORP, dba PACIFIC POWER, Transition Adjustment, Five-Year Cost of Service Opt-Out.

Illinois Commerce Commission Docket No. 13-0387: Commonwealth Edison Company Tariff Filing to Present the Illinois Commerce Commission with an Opportunity to Consider Revenue Neutral Tariff Changes Related to Rate Design Authorized by Subsection 16-108.5 of the Public Utilities Act.

Iowa Utilities Board Docket No. RPU-2013-0004: In Re: MidAmerican Energy Company.

South Dakota Public Utilities Commission Docket No. EL12-061: In the Matter of the Application of Black Hills Power, Inc. for Authority to Increase its Electric Rates. (filed with confidential stipulation)

Kansas Corporation Commission Docket No. 13-WSEE-629-RTS: In the Matter of the Applications of Westar Energy, Inc. and Kansas Gas and Electric Company for Approval to Make Certain Changes in their Charges for Electric Service.

Public Utility Commission of Oregon Docket No. UE 263: In the Matter of PACIFICORP, dba PACIFIC POWER, Request for a General Rate Revision.

Arkansas Public Service Commission Docket No. 13-028-U: In the Matter of the Application of Entergy Arkansas, Inc. for Approval of Changes in Rates for Retail Electric Service.

Virginia State Corporation Commission Docket No. PUE-2013-00020: Application of Virginia Electric and Power Company for a 2013 Biennial Review of the Rates, Terms, and Conditions for the Provision of Generation, Distribution, and Transmission Services Pursuant to § 56-585.1 A of the Code of Virginia.

Florida Public Service Commission Docket No. 130040-EI: Petition for Rate Increase by Tampa Electric Company.

South Carolina Public Service Commission Docket No. 2013-59-E: Application of Duke Energy Carolinas, LLC, for Authority to Adjust and Increase Its Electric Rates and Charges.

Public Utility Commission of Oregon Docket No. UE 262: In the Matter of PORTLAND GENERAL ELECTRIC COMPANY, Request for a General Rate Revision.

New Jersey Board of Public Utilities Docket No. ER12111052: In the Matter of the Verified Petition of Jersey Central Power & Light Company For Review and Approval of Increases in and Other Adjustments to Its Rates and Charges For Electric Service, and For Approval of Other Proposed Tariff Revisions in Connection Therewith; and for Approval of an Accelerated Reliability Enhancement Program ("2012 Base Rate Filing")

North Carolina Utilities Commission Docket No. E-7, Sub 1026: In the Matter of the Application of Duke Energy Carolinas, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina.

Public Utility Commission of Oregon Docket No. UE 264: PACIFICORP, dba PACIFIC POWER, 2014 Transition Adjustment Mechanism.

Public Utilities Commission of California Docket No. 12-12-002: Application of Pacific Gas and Electric Company for 2013 Rate Design Window Proceeding.

Public Utilities Commission of Ohio Docket Nos. 12-426-EL-SSO, 12-427-EL-ATA, 12-428-EL-AAM, 12-429-EL-WVR, and 12-672-EL-RDR: In the Matter of the Application of the Dayton Power and Light Company Approval of its Market Offer.

Minnesota Public Utilities Commission Docket No. E-002/GR-12-961: In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in Minnesota.

North Carolina Utilities Commission Docket E-2, Sub 1023: In the Matter of Application of Progress Energy Carolinas, Inc. For Adjustment of Rates and Charges Applicable to Electric Service in North Carolina.

2012

Public Utility Commission of Texas Docket No. 40443: Application of Southwestern Electric Power Company for Authority to Change Rates and Reconcile Fuel Costs.

South Carolina Public Service Commission Docket No. 2012-218-E: Application of South Carolina Electric & Gas Company for Increases and Adjustments in Electric Rate Schedules and Tariffs and Request for Mid-Period Reduction in Base Rates for Fuel.

Kansas Corporation Commission Docket No. 12-KCPE-764-RTS: In the Matter of the Application of Kansas City Power & Light Company to Make Certain Changes in its Charges for Electric Service.

Kansas Corporation Commission Docket No. 12-GIMX-337-GIV: In the Matter of a General Investigation of Energy-Efficiency Policies for Utility Sponsored Energy Efficiency Programs.

Florida Public Service Commission Docket No. 120015-EI: In Re: Petition for Rate Increase by Florida Power & Light Company.

California Public Utilities Commission Docket No. A.11-10-002: Application of San Diego Gas & Electric Company (U 902 E) for Authority to Update Marginal Costs, Cost Allocation, and Electric Rate Design.

Utah Public Service Commission Docket No. 11-035-200: In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations.

Virginia State Corporation Commission Case No. PUE-2012-00051: Application of Appalachian Power Company to Revise its Fuel Factor Pursuant to § 56-249.6 of the Code of Virginia.

Public Utilities Commission of Ohio Case Nos. 11-346-EL-SSO, 11-348-EL-SSO, 11-349-EL-AAM, and 11-350-EL-AAM: In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form on an Electric Security Plan and In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Approval of Certain Accounting Authority.

New Jersey Board of Public Utilities Docket No. ER11080469: In the Matter of the Petition of Atlantic City Electric for Approval of Amendments to Its Tariff to Provide for an Increase in Rates and Charges for Electric Service Pursuant to N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1 and For Other Appropriate Relief.

Public Utility Commission of Texas Docket No. 39896: Application of Entergy Texas, Inc. for Authority to Change Rates and Reconcile Fuel Costs.

Missouri Public Service Commission Case No. EO-2012-0009: In the Matter of KCP&L Greater Missouri Operations Notice of Intent to File an Application for Authority to Establish a Demand-Side Programs Investment Mechanism.

Colorado Public Utilities Commission Docket No. 11AL-947E: In the Matter of Advice Letter No. 1597-Electric Filed by Public Service Company of Colorado to Revise its Colorado PUC No. 7-Electric Tariff to Implement a General Rate Schedule Adjustment and Other Changes Effective December 23, 2011.

Illinois Commerce Commission Docket No. 11-0721: Commonwealth Edison Company Tariffs and Charges Submitted Pursuant to Section 16-108.5 of the Public Utilities Act.

Public Utility Commission of Texas Docket No. 38951: Application of Entergy Texas, Inc. for Approval of Competitive Generation Service tariff (Issues Severed from Docket No. 37744).

California Public Utilities Commission Docket No. A.11-06-007: Southern California Edison's General Rate Case, Phase 2.

2011

Arizona Corporation Commission Docket No. E-01345A-11-0224: In the Matter of Arizona Public Service Company for a Hearing to Determine the Fair Value of Utility Property of the Company for Ratemaking Purposes, to Fix and Just and Reasonable Rate of Return Thereon, to Approve Rate Schedules Designed to Develop Such Return.

Oklahoma Corporation Commission Cause No. PUD 201100087: In the Matter of the Application of Oklahoma Gas and Electric Company for an Order of the Commission Authorizing Applicant to Modify its Rates, Charges, and Tariffs for Retail Electric Service in Oklahoma.

South Carolina Public Service Commission Docket No. 2011-271-E: Application of Duke Energy Carolinas, LLC for Authority to Adjust and Increase its Electric Rates and Charges.

Pennsylvania Public Utility Commission Docket No. P-2011-2256365: Petition of PPL Electric Utilities Corporation for Approval to Implement Reconciliation Rider for Default Supply Service.

North Carolina Utilities Commission Docket No. E-7, Sub 989: In the Matter of Application of Duke Energy Carolinas, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina.

Florida Public Service Commission Docket No. 110138: In Re: Petition for Increase in Rates by Gulf Power Company.

Public Utilities Commission of Nevada Docket No. 11-06006: In the Matter of the Application of Nevada Power Company, filed pursuant to NRS 704.110(3) for authority to increase its annual revenue requirement for general rates charged to all classes of customers to recover the costs of constructing the Harry Allen Combined Cycle plant and other generating, transmission, and distribution plant additions, to reflect changes in the cost of capital, depreciation rates and cost of service, and for relief properly related thereto.

North Carolina Utilities Commission Docket Nos. E-2, Sub 998 and E-7, Sub 986: In the Matter of the Application of Duke Energy Corporation and Progress Energy, Inc., to Engage in a Business Combination Transaction and to Address Regulatory Conditions and Codes of Conduct.

Public Utilities Commission of Ohio Case Nos. 11-346-EL-SSO, 11-348-EL-SSO, 11-349-EL-AAM, and 11-350-EL-AAM: In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form on an Electric Security Plan and In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Approval of Certain Accounting Authority.

Virginia State Corporation Commission Case No. PUE-2011-00037: In the Matter of Appalachian Power Company for a 2011 Biennial Review of the Rates, Terms, and Conditions for the Provision of Generation, Distribution, and Transmission Services Pursuant to § 56-585.1 A of the Code of Virginia.

Illinois Commerce Commission Docket No. 11-0279 and 11-0282 (cons.): Ameren Illinois Company Proposed General Increase in Electric Delivery Service and Ameren Illinois Company Proposed General Increase in Gas Delivery Service.

Virginia State Corporation Commission Case No. PUE-2011-00045: Application of Virginia Electric and Power Company to Revise its Fuel Factor Pursuant to § 56-249.6 of the Code of Virginia.

Utah Public Service Commission Docket No. 10-035-124: In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations.

Maryland Public Utilities Commission Case No. 9249: In the Matter of the Application of Delmarva Power & Light for an Increase in its Retail Rates for the Distribution of Electric Energy.

Minnesota Public Utilities Commission Docket No. E002/GR-10-971: In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Authority to Increase Rates for Electric Service in Minnesota.

Michigan Public Service Commission Case No. U-16472: In the Matter of the Detroit Edison Company for Authority to Increase its Rates, Amend its Rate Schedules and Rules Governing the Distribution and Supply of Electric Energy, and for Miscellaneous Accounting Authority.

2010

Public Utilities Commission of Ohio Docket No. 10-2586-EL-SSO: In the Matter of the Application of Duke Energy Ohio for Approval of a Market Rate Offer to Conduct a Competitive Bidding Process for Standard Service Offer Electric Generation Supply, Accounting Modifications, and Tariffs for Generation Service.

Colorado Public Utilities Commission Docket No. 10A-554EG: In the Matter of the Application of Public Service Company of Colorado for Approval of a Number of Strategic Issues Relating to its DSM Plan, Including Long-Term Electric Energy Savings Goals, and Incentives.

Public Service Commission of West Virginia Case No. 10-0699-E-42T: Appalachian Power Company and Wheeling Power Company Rule 42T Application to Increase Electric Rates.

Oklahoma Corporation Commission Cause No. PUD 201000050: Application of Public Service Company of Oklahoma, an Oklahoma Corporation, for an Adjustment in its Rates and Charges and Terms and Conditions of Service for Electric Service in the State of Oklahoma.

Georgia Public Service Commission Docket No. 31958-U: In Re: Georgia Power Company's 2010 Rate Case.

Washington Utilities and Transportation Commission Docket No. UE-100749: 2010 Pacific Power & Light Company General Rate Case.

Colorado Public Utilities Commission Docket No. 10M-254E: In the Matter of Commission Consideration of Black Hills Energy's Plan in Compliance with House Bill 10-1365, "Clean Air-Clean Jobs Act."

Colorado Public Utilities Commission Docket No. 10M-245E: In the Matter of Commission Consideration of Public Service Company of Colorado Plan in Compliance with House Bill 10-1365, "Clean Air-Clean Jobs Act."

Public Service Commission of Utah Docket No. 09-035-15 *Phase II*: In the Matter of the Application of Rocky Mountain Power for Approval of its Proposed Energy Cost Adjustment Mechanism.

Public Utility Commission of Oregon Docket No. UE 217: In the Matter of PACIFICORP, dba PACIFIC POWER Request for a General Rate Revision.

Mississippi Public Service Commission Docket No. 2010-AD-57: In Re: Proposal of the Mississippi Public Service Commission to Possibly Amend Certain Rules of Practice and Procedure.

Indiana Utility Regulatory Commission Cause No. 43374: Verified Petition of Duke Energy Indiana, Inc. Requesting the Indiana Utility Regulatory Commission to Approve an Alternative Regulatory Plan Pursuant to Ind. Code § 8-1-2.5-1, *ET SEQ.*, for the Offering of Energy Efficiency Conservation, Demand Response, and Demand-Side Management Programs and Associated Rate Treatment Including Incentives Pursuant to a Revised Standard Contract Rider No. 66 in Accordance with Ind. Code §§ 8-1-2.5-1 *ET SEQ.* and 8-1-2-42 (a); Authority to Defer Program Costs Associated with its Energy Efficiency Portfolio of Programs; Authority to Implement New and Enhanced Energy Efficiency Programs, Including the Powershare® Program in its Energy Efficiency Portfolio of Programs; and Approval of a Modification of the Fuel Adjustment Clause Earnings and Expense Tests.

Public Utility Commission of Texas Docket No. 37744: Application of Entergy Texas, Inc. for Authority to Change Rates and to Reconcile Fuel Costs.

South Carolina Public Service Commission Docket No. 2009-489-E: Application of South Carolina Electric & Gas Company for Adjustments and Increases in Electric Rate Schedules and Tariffs.

Kentucky Public Service Commission Case No. 2009-00459: In the Matter of General Adjustments in Electric Rates of Kentucky Power Company.

Virginia State Corporation Commission Case No. PUE-2009-00125: For acquisition of natural gas facilities Pursuant to § 56-265.4:5 B of the Virginia Code.

Arkansas Public Service Commission Docket No. 10-010-U: In the Matter of a Notice of Inquiry Into Energy Efficiency.

Connecticut Department of Public Utility Control Docket No. 09-12-05: Application of the Connecticut Light and Power Company to Amend its Rate Schedules.

Arkansas Public Service Commission Docket No. 09-084-U: In the Matter of the Application of Entergy Arkansas, Inc. For Approval of Changes in Rates for Retail Electric Service.

Missouri Public Service Commission Docket No. ER-2010-0036: In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area.

Public Service Commission of Delaware Docket No. 09-414: In the Matter of the Application of Delmarva Power & Light Company for an Increase in Electric Base Rates and Miscellaneous Tariff Charges.

2009

Virginia State Corporation Commission Case No. PUE-2009-00030: In the Matter of Appalachian Power Company for a Statutory Review of the Rates, Terms, and Conditions for the Provision of Generation, Distribution, and Transmission Services Pursuant to § 56-585.1 A of the Code of Virginia.

Public Service Commission of Utah Docket No. 09-035-15 *Phase I*: In the Matter of the Application of Rocky Mountain Power for Approval of its Proposed Energy Cost Adjustment Mechanism.

Public Service Commission of Utah Docket No. 09-035-23: In the Matter of the Application of Rocky Mountain Power for Authority To Increase its Retail Electric Utility Service Rates in Utah and for Approval of Its Proposed Electric Service Schedules and Electric Service Regulations.

Colorado Public Utilities Commission Docket No. 09AL-299E: Re: The Tariff Sheets Filed by Public Service Company of Colorado with Advice Letter No. 1535 – Electric.

Arkansas Public Service Commission Docket No. 09-008-U: In the Matter of the Application of Southwestern Electric Power Company for Approval of a General Change in Rates and Tariffs.

Oklahoma Corporation Commission Docket No. PUD 200800398: In the Matter of the Application of Oklahoma Gas and Electric Company for an Order of the Commission Authorizing Applicant to Modify its Rates, Charges, and Tariffs for Retail Electric Service in Oklahoma.

Public Utilities Commission of Nevada Docket No. 08-12002: In the Matter of the Application by Nevada Power Company d/b/a NV Energy, filed pursuant to NRS §704.110(3) and NRS §704.110(4) for authority to increase its annual revenue requirement for general rates charged to all classes of customers, begin to recover the costs of acquiring the Bighorn Power Plant, constructing the Clark Peak, Environmental Retrofits and other generating, transmission and distribution plant additions, to reflect changes in cost of service and for relief properly related thereto.

New Mexico Public Regulation Commission Case No. 08-00024-UT: In the Matter of a Rulemaking to Revise NMPRC Rule 17.7.2 NMAC to Implement the Efficient Use of Energy Act.

Indiana Utility Regulatory Commission Cause No. 43580: Investigation by the Indiana Utility Regulatory Commission, of Smart Grid Investments and Smart Grid Information Issues Contained in 111(d) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. § 2621(d)), as Amended by the Energy Independence and Security Act of 2007.

Louisiana Public Service Commission Docket No. U-30192 *Phase II (February 2009)*: Ex Parte, Application of Entergy Louisiana, LLC for Approval to Repower Little Gypsy Unit 3 Electric Generating Facility and for Authority to Commence Construction and for Certain Cost Protection and Cost Recovery.

South Carolina Public Service Commission Docket No. 2008-251-E: In the Matter of Progress Energy Carolinas, Inc.'s Application For the Establishment of Procedures to Encourage Investment in Energy Efficient Technologies; Energy Conservation Programs; And Incentives and Cost Recovery for Such Programs.

2008

Colorado Public Utilities Commission Docket No. 08A-366EG: In the Matter of the Application of Public Service Company of Colorado for approval of its electric and natural gas demand-side management (DSM) plan for calendar years 2009 and 2010 and to change its electric and gas DSM cost adjustment rates effective January 1, 2009, and for related waivers and authorizations.

Public Service Commission of Utah Docket No. 07-035-93: In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations, Consisting of a General Rate Increase of Approximately \$161.2 Million Per Year, and for Approval of a New Large Load Surcharge.

Indiana Utility Regulatory Commission Cause No. 43374: Petition of Duke Energy Indiana, Inc. Requesting the Indiana Utility Regulatory Commission Approve an Alternative Regulatory Plan for the Offering of Energy Efficiency, Conservation, Demand Response, and Demand-Side Management.

Public Utilities Commission of Nevada Docket No. 07-12001: In the Matter of the Application of Sierra Pacific Power Company for authority to increase its general rates charged to all classes of electric customers to reflect an increase in annual revenue requirement and for relief properly related thereto.

Louisiana Public Service Commission Docket No. U-30192 *Phase II*: Ex Parte, Application of Entergy Louisiana, LLC for Approval to Repower Little Gypsy Unit 3 Electric Generating Facility and for Authority to Commence Construction and for Certain Cost Protection and Cost Recovery.

Colorado Public Utilities Commission Docket No. 07A-420E: In the Matter of the Application of Public Service Company of Colorado For Authority to Implement and Enhanced Demand Side Management Cost Adjustment Mechanism to Include Current Cost Recovery and Incentives.

2007

Louisiana Public Service Commission Docket No. U-30192: Ex Parte, Application of Entergy Louisiana, LLC for Approval to Repower Little Gypsy Unit 3 Electric Generating Facility and for Authority to Commence Construction and for Certain Cost Protection and Cost Recovery.

Public Utility Commission of Oregon Docket No. UG 173: In the Matter of PUBLIC UTILITY COMMISSION OF OREGON Staff Request to Open an Investigation into the Earnings of Cascade Natural Gas.

2006

Public Utility Commission of Oregon Docket No. UE 180/UE 181/UE 184: In the Matter of PORTLAND GENERAL ELECTRIC COMPANY Request for a General Rate Revision.

Public Utility Commission of Oregon Docket No. UE 179: In the Matter of PACIFICORP, dba PACIFIC POWER AND LIGHT COMPANY Request for a general rate increase in the company's Oregon annual revenues.

Public Utility Commission of Oregon Docket No. UM 1129 *Phase II*: Investigation Related to Electric Utility Purchases From Qualifying Facilities.

2005

Public Utility Commission of Oregon Docket No. UM 1129 *Phase I Compliance*: Investigation Related to Electric Utility Purchases From Qualifying Facilities.

Public Utility Commission of Oregon Docket No. UX 29: In the Matter of QWEST CORPORATION Petition to Exempt from Regulation Qwest's Switched Business Services.

2004

Public Utility Commission of Oregon Docket No. UM 1129 *Phase I*: Investigation Related to Electric Utility Purchases From Qualifying Facilities.

TESTIMONY BEFORE LEGISLATIVE BODIES

2019

Regarding North Carolina Senate Bill 559: Written testimony submitted to the North Carolina Committee on Agriculture/Environment/Natural Resources, April 17, 2019.

Regarding Missouri Senate Joint Resolution 25: Written testimony submitted to the Missouri Senate Committee on Judiciary, March 28, 2019.

Regarding South Carolina House Bill 3659: Written testimony submitted to the South Carolina Senate Committee on Judiciary, March 14, 2019.

Regarding Kansas Senate Bill 69: Written testimony submitted to the Kansas Committee on Utilities, February 19, 2019.

2018

Regarding Missouri Senate Bill 564: Testimony before the Missouri Senate Committee on Commerce, Consumer Protection, Energy and the Environment, January 10, 2018.

2017

Regarding Missouri Senate Bill 190: Testimony before the Missouri Senate Committee on Commerce, Consumer Protection, Energy and the Environment, January 25, 2017.

2016

Regarding Missouri House Bill 1726: Testimony before the Missouri House Energy and Environment Committee, April 26, 2016.

2014

Regarding Kansas House Bill 2460: Testimony Before the Kansas House Standing Committee on Utilities and Telecommunications, February 12, 2014.

2012

Regarding Missouri House Bill 1488: Testimony Before the Missouri House Committee on Utilities, February 7, 2012.

2011

Regarding Missouri Senate Bills 50, 321, 359, and 406: Testimony Before the Missouri Senate Veterans' Affairs, Emerging Issues, Pensions, and Urban Affairs Committee, March 9, 2011.

AFFIDAVITS

2015

Supreme Court of Illinois, Docket No. 118129, Commonwealth Edison Company et al., respondents, v. Illinois Commerce Commission et al. (Illinois Competitive Energy Association et al., petitioners). Leave to appeal, Appellate Court, First District.

2011

Colorado Public Utilities Commission Docket No. 11M-951E: In the Matter of the Petition of Public Service Company of Colorado Pursuant to C.R.S. § 40-6-111(1)(d) for Interim Rate Relief Effective on or before January 21, 2012.

ENERGY INDUSTRY PUBLICATIONS AND PRESENTATIONS

Panelist, From the Consumer Perspective, Mid-American Regulatory Conference 2019 Annual Meeting, Des Moines, Iowa, August 13, 2019.

Panelist, Redefining Resiliency: Emerging Technologies Benefiting Customers and the Grid, EPRI 2019 Summer Seminar, Chicago, Illinois, August 12, 2019.

Panelist, Energy Policies for Economic Growth, 2019 Energy Policy Summit, NCSL Legislative Summit, Nashville, Tennessee, August 5, 2019.

Panelist, Gateway to Energy Empowerment for Customers, Illumination Energy Summit, Columbus, Ohio, May 15, 2019.

Panelist, Advancing Clean Energy Solutions Through Stakeholder Collaborations, 2019 State Energy Conference of North Carolina, Raleigh, North Carolina, May 1, 2019.

Panelist, Fleet Electrification: Getting Ready for the Transition, Edison Electric Institute Spring National Key Accounts Workshop, Seattle, Washington, April 8, 2019.

Panelist, Where the Fleet Meets the Pavement, Which Way to Electrification of the U.S. Transportation System?, Washington, D.C., April 4, 2019.

Panelist, Improving Renewable Energy Offerings: What Have We Learned?, Advanced Energy Economy Webinar, March 26, 2019.

Speaker, National Governors Association Southeast Regional Transportation Electrification Workshop, Nashville, Tennessee, March 11, 2019.

Speaker, Walmart Spotlight: A Day in the Life of a National Energy Manager, Touchstone Energy Cooperatives Net Conference 2019, San Diego, California, February 12, 2019.

Panelist, National Accounts: The Struggle is Real, American Public Power Association Customer Connections Conference, Orlando, Florida, November 6, 2018.

Panelist, Getting in Front of Customers Getting Behind the Meter Solutions, American Public Power Association Customer Connections Conference, Orlando, Florida, November 6, 2018.

Panelist, Sustainable Fleets: The Road Ahead for Electrifying Fleet Operations, EEI National Key Accounts 2018 Fall Workshop, San Antonio, Texas, October 23, 2018.

Panelist, Meeting Corporate Clean Energy Requirements in Virginia, Renewable Energy Buyers Alliance Summit, Oakland, California, October 15, 2018.

Panelist, What Are the Anticipated Impacts on Pricing and Reliability in the Changing Markets?, Southwest Energy Conference, Phoenix, Arizona, September 21, 2018.

Speaker, Walmart's Project Gigaton – Driving Renewable Energy Sourcing in the Supply Chain, Smart Energy Decisions Webcast Series, July 11, 2018.

Panelist, Customizing Energy Solutions, Edison Electric Institute Annual Convention, San Diego, California, June 7, 2018.

Powering Ohio Report Release, Columbus, Ohio, May 29, 2018.

Panelist, The Past, Present, and Future of Renewable Energy: What Role Will PURPA, Mandates, and Collaboration Play as Renewables Become a Larger Part of Our Energy Mix?, 36th National Regulatory Conference, Williamsburg, Virginia, May 17, 2018.

Panelist, Sustainability Milestone Deep Dive Session, Walmart Global Sustainability Leaders Summit, Bentonville, Arkansas, April 18, 2018.

Panelist, The Customer's Voice, Tennessee Valley Authority Distribution Marketplace Forum, Murfreesboro, Tennessee, April 3, 2018.

Panelist, Getting to Yes with Large Customers to Meet Sustainability Goals, The Edison Foundation Institute for Electric Innovation Powering the People, March 7, 2018.

Panelist, The Corporate Quest for Renewables, 2018 NARUC Winter Policy Summit, Washington, D.C., February 13, 2018.

Panelist, Solar and Renewables, Touchstone Energy Cooperatives NET Conference 2018, St. Petersburg, Florida, February 6, 2018.

Panelist, Missouri Public Service Commission November 20, 2017 Workshop in File No. EW-2017-0245.

Panelist, Energy and Climate Change, 2017-18 Arkansas Law Review Symposium: Environmental Sustainability and Private Governance, Fayetteville, Arkansas, October 27, 2017.

Panelist, Customer – Electric Company – Regulator Panel, Edison Electric Institute Fall National Key Accounts Workshop, National Harbor, Maryland, October 12, 2017.

Panelist, What Do C&I Buyers Want, Solar Power International, Las Vegas, Nevada, September 12, 2017.

Panelist, Partnerships for a Sustainable Future, American Public Power Association National Conference, Orlando, Florida, June 20, 2017.

Panelist, Corporate Renewable Energy Buyers in the Southeast, SEARUC 2017, Greensboro, Georgia, June 12, 2017.

Panelist, Transitioning Away from Traditional Utilities, Utah Association of Energy Users Annual Conference, Salt Lake City, Utah, May 18, 2017.

Panelist, Regulatory Approaches for Integrating and Facilitating DERs, New Mexico State University Center for Public Utilities Advisory Council Current Issues 2017, Santa Fe, New Mexico, April 25, 2017.

Presenter, Advancing Renewables in the Midwest, Columbia, Missouri, April 24, 2017.

Panelist, Leveraging New Energy Technologies to Improve Service and Reliability, Edison Electric Institute Spring National Key Accounts Workshop, Phoenix, Arizona, April 11, 2017.

Panelist, Private Sector Demand for Renewable Power, Vanderbilt Law School, Nashville, Tennessee, April 4, 2017.

Panelist, Expanding Solar Market Opportunities, 2017 Solar Power Colorado, Denver, Colorado, March 15, 2017.

Panelist, Renewables: Are Business Models Keeping Up?, Touchstone Energy Cooperatives NET Conference 2017, San Diego, California, January 30, 2017.

Panelist, The Business Case for Clean Energy, Minnesota Conservative Energy Forum, St. Paul, Minnesota, October 26, 2016.

Panelist, M-RETS Stakeholder Summit, Minneapolis, Minnesota, October 5, 2016.

Panelist, 40th Governor's Conference on Energy & the Environment, Kentucky Energy and Environment Cabinet, Lexington, Kentucky, September 21, 2016.

Panelist, Trends in Customer Expectations, Wisconsin Public Utility Institute, Madison, Wisconsin, September 6, 2016.

Panelist, The Governor's Utah Energy Development Summit 2015, May 21, 2015.

Mock Trial Expert Witness, The Energy Bar Association State Commission Practice and Regulation Committee and Young Lawyers Committee and Environment, Energy and Natural Resources Section of the D.C. Bar, Mastering Your First (or Next) State Public Utility Commission Hearing, February 13, 2014.

Panelist, Customer Panel, Virginia State Bar 29th National Regulatory Conference, Williamsburg, Virginia, May 19, 2011.

Chriss, S. (2006). "Regulatory Incentives and Natural Gas Purchasing – Lessons from the Oregon Natural Gas Procurement Study." Presented at the 19th Annual Western Conference, Center for Research in Regulated Industries Advanced Workshop in Regulation and Competition, Monterey, California, June 29, 2006.

Chriss, S. (2005). "Public Utility Commission of Oregon Natural Gas Procurement Study." Public Utility Commission of Oregon, Salem, OR. Report published in June, 2005. Presented to the Public Utility Commission of Oregon at a special public meeting on August 1, 2005.

Chriss, S. and M. Radler (2003). "Report from Houston: Conference on Energy Deregulation and Restructuring." USAEE Dialogue, Vol. 11, No. 1, March, 2003.

Chriss, S., M. Dwyer, and B. Pulliam (2002). "Impacts of Lifting the Ban on ANS Exports on West Coast Crude Oil Prices: A Reconsideration of the Evidence." Presented at the 22nd USAEE/IAEE North American Conference, Vancouver, BC, Canada, October 6-8, 2002.

Contributed to chapter on power marketing: "Power System Operations and Electricity Markets," Fred I. Denny and David E. Dismukes, authors. Published by CRC Press, June 2002.

Contributed to "Moving to the Front Lines: The Economic Impact of the Independent Power Plant Development in Louisiana," David E. Dismukes, author. Published by the Louisiana State University Center for Energy Studies, October 2001.

Dismukes, D.E., D.V. Mesyanzhinov, E.A. Downer, S. Chriss, and J.M. Burke (2001). "Alaska Natural Gas In-State Demand Study." Anchorage: Alaska Department of Natural Resources.

BRYAN A. JACOB

1455 Hampton Hill Drive | Alpharetta, GA 30022 USA
Tel. +1 (770) 891-5927 | email. bryan@cleanenergy.org
<https://www.linkedin.com/in/bryanjacob1>

An accomplished **climate change and environmental sustainability practitioner**, Bryan is the **Solar Program Director** for the **Southern Alliance for Clean Energy (SACE)**. This role includes a broad-spectrum of activities to promote solar power across the Southeast.

Prior to joining SACE, Bryan launched **Climate Coach International** to help organizations understand **climate-related risks and opportunities** then design and implement practical and cost-effective **climate mitigation and adaptation strategies**.

From 1993-2015, Bryan coordinated and managed environmental initiatives for **The Coca-Cola Company**. He was the architect of the Climate Protection Strategy that propelled The Coca-Cola Company to a leading position within the beverage industry and broader corporate sector.

PROFESSIONAL EXPERIENCE

SOUTHERN ALLIANCE FOR CLEAN ENERGY (SACE) **Solar Program Director**

Atlanta, GA
June 2017 - present

Bryan leads activities to promote solar power across the Southeast. These activities range from conducting research on solar power trends to advocacy on utility resource planning and specifically include collaboration with stakeholders in the solar energy development industry. Bryan serves as lead author on the SACE *Solar in the Southeast* Annual Report which provides an equitable, unbiased comparison of various-sized utilities ranked by watts per customer (W/C) of solar power.

CLIMATE COACH INTERNATIONAL, LLC **Founder/owner and “Chief Climate Coach”**

Alpharetta, GA
March 2015 - present

Bryan founded Climate Coach International to offer “bench strength” for climate leadership. *Mitigation, Adaptation, Engagement, and Advocacy are priorities for Climate Coach International*. Example projects include:

- Assessing the competitive landscape and constructing a climate maturity matrix to inform the leadership posture for an apparel client.
- Modeling emission reduction trajectories for a sportswear client using various Science-Based Target-setting methodologies.
- Developing a corporate engagement platform on Energy Productivity for an environmental NGO.
- Curriculum development and instruction on the Food-Water-Energy Nexus for an academic client.

THE COCA-COLA COMPANY

see Position History below

Atlanta, GA

April 1993 – March 2015

- Created and administered a Climate Protection Strategy that propelled The Coca-Cola Company to a leading position within the beverage industry and broader corporate sector.
- Pioneered the Company's signature "eKOfreshment" program on HFC-free Refrigeration with direct accountability for program scale-up to 100,000 deployments (2008-2010).
- Institutionalized energy consumption standards for cold drink equipment, achieving a 40% improvement in energy-efficiency of coolers and vending machines, saving customers an estimated \$440 million per year and delivering corresponding emissions reductions of approximately 3.1 million metric tons/year
- Promoted comprehensive energy conservation and clean energy programs that improved energy-efficiency 20%, delivered a cumulative energy cost avoidance of over \$1 billion since 2004 and reduced greenhouse gas emissions by more than 1 million metric tons/yr
- Designed and coordinated representation at the annual U.N. Climate Conferences since 2009 (COP15/Copenhagen) where I organized a spectacular keynote address from our Chairman and CEO, Muhtar Kent. I also arranged for this to mark the first launch of our PlantBottle™ innovation.
- Represented the Company as spokesperson on climate protection topics; examples range from briefing the U.S. House of Representatives Committee of Science and Technology about HFC-free Refrigeration to a live television interview at The Weather Channel to promote Earth Hour
- Cultivated productive relationships with environmental stakeholders – particularly WWF (World Wildlife Fund) as partners in their ambitious Climate Savers program and Greenpeace who we collaborated with in promoting natural refrigeration.
- Co-chaired a cross-functional, pan-geographic team to establish an end-to-end, value chain target to reduce the carbon footprint of the 'drink in your hand' 25% by 2020.
- Recruited and trained/oriented/commissioned 29 "Climate Ambassadors" from across the global System to champion the new 'drink in your hand' carbon footprint commitment.
- Partnered with ACCO (Association of Climate Change Officers) to design the Future Climate Change Officer Fellowship and hired a candidate from the inaugural class.
- Collaborated with Coca-Cola Enterprises (now Coca-Cola Refreshments) to "jump start" deployment of hybrid-electric trucks; now more than 850 in the United States.
- Developed/managed annual greenhouse gas inventory complete with third-party verification/assurance and assembled annual reports to CDP, Carbon Disclosure Project.
- Commissioned an assessment of climate risks and opportunities including preparation of Risk Factor disclosure in the SEC 10-K filing (the first beverage company to do so).
- Created an Environmental, Occupational Safety & Health (EOSH) Portal for associates to access key materials then managed bi-monthly Positive Currents newsletter (2010-2011).
- Established a program to offset carbon emissions from corporate aviation.
- Administered annual budgets up to \$1.3 million; managed small teams of direct reports.

Position History at The Coca-Cola Company

Director, Climate Protection	August 2011 – March 2015
Manager, Energy Efficiency & Climate Protection	January 2006 – August 2011
Environmental Technologies Manager	June 1999 – December 2005
Environmental Programs Manager	February 1997 – June 1999
Environmental Programs Coordinator	April 1993 – February 1997

Prior Work Experience

ANHEUSER-BUSCH, INC	Atlanta, GA
Olympic Job Opportunities Program (OJOP) Athlete	January 1992 – September 1992
JORDAN, JONES & GOULDING	Atlanta, GA
Technician II (Co-Op Student)	December 1987 – August 1991

EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY	Atlanta, GA
Bachelor of Civil Engineering (BCE), <i>summa cum laude</i>	1993

ADDITIONAL INFORMATION

Two-time U.S.A. OLYMPIAN Weightlifting	1992 Barcelona & 1996 Atlanta
THE CLIMATE (REALITY) PROJECT	January 2007
Trained and delivered the slides that became “An Inconvenient Truth”	
SOLAR LIGHT FOR AFRICA	2008 - present
Board of Directors	
SCIENCE BASED TARGETS (WRI/WWF/CDP)	2014-present
Technical Advisory Group	

FLORIDA POWER & LIGHT COMPANY

Original Sheet No.8.932

FPL SOLARTOGETHER RIDER
(OPTIONAL PROGRAM)

RATE SCHEDULE: STR

AVAILABLE:

The FPL SolarTogetherSM Rider ("FPL SolarTogether" or "the Program") is available in all territory served, subject to subscription availability. This optional program allows FPL customers to subscribe to a portion of universal solar capacity built for the benefit of the Program and receive a credit for the actual solar production associated with their subscription.

APPLICATION:

In conjunction with the otherwise applicable metered rate schedule. All rates and charges under the customers' otherwise applicable metered rate schedule shall apply.

MONTHLY SUBSCRIPTION:

The Monthly Subscription shall be equal to the sum of the *Monthly Subscription Charge + Monthly Subscription Credit* as follows:

Monthly Subscription	
Subscription Charge \$/kW-Month	Subscription Credit ¢/kWh
See Sheet No. 8.934	See Sheet No. 8.934

LIMITATION OF SERVICE:

Any customer taking service under a metered rate schedule who has no delinquent balances with FPL is eligible to participate. Eligible customers may elect a subscription level in 1 kW units representing up to 100% of their previous 12-month total kWh usage. Increases in number of units purchased will be limited to once per year and subject to program availability.

BILLING:

Participants are subject to the minimum bill on their otherwise applicable rate schedule. The FPL SolarTogether Monthly Subscription Charge and offsetting Monthly Subscription Credit will appear as separate line items on a participant's bill during every month of enrollment, and are subject to all applicable taxes and fees.

Monthly Subscription Credit amounts may not result in a total bill less than zero (\$0). Any excess credit amounts will be applied in subsequent months to ensure participant total bill amounts meet this requirement.

TERMS OF SERVICE:

Not less than one (1) billing cycle. Participants may, at any time following their first billing cycle, terminate their participation ("Voluntary Termination") or reduce the number of subscribed units purchased. Participants may be terminated from the program by FPL if the customer becomes delinquent on the customer's electric service account or for failure to satisfy eligibility requirements ("Involuntary Termination"). Upon either Voluntary or Involuntary Termination, the account is prohibited from re-enrolling for a twelve (12) month period.

(Continued on Sheet No. 8.933)

Issued by: Tiffany Cohen, Director, Rates and Tariffs
Effective:

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 28
PARTY: FLORIDA POWER & LIGHT
COMPANY – REBUTTAL
DESCRIPTION: Matthew Valle MV-2

FLORIDA POWER & LIGHT COMPANY

Original Sheet No. 8.933

(Continued from Sheet No. 8.932)

SPECIAL PROVISIONS:

If the customer moves within FPL's service territory, program participation may continue at a new service address with no impact the customer's program enrollment date subject to the limitations and terms outlined above. Notification to transfer participation must be made by the customer to the Company and the Company will have 45 days to complete the transfer.

Upon customer request, FPL will retire the renewable energy certificate (RECs) associated with the customer's subscription. Notification to retire RECs must be made by the customer to the Company. The accumulation of RECs associated with the participant's subscription will begin following notification and FPL will provide participants with REC retirement summary reports periodically throughout the year.

RULES AND REGULATIONS:

Service under this rider is subject to orders of governmental bodies having jurisdiction and to the currently effective "General Rules and Regulations for Electric Service" on file with the Florida Public Service Commission. In case of conflict between any provisions of this schedule and said "General Rules and Regulations for Electric Service" the provisions of this rider shall apply. The participant subscription is neither a security nor an ownership interest in the solar asset and therefore no owned interest is to be surrendered, sold, or traded.

(Continued on Sheet No. 8.934)

Issued by: Tiffany Cohen, Director, Rates and Tariffs
Effective:

FLORIDA POWER & LIGHT COMPANY

Original Sheet No. 8.934

(Continued from Sheet No. 8.933)

MONTHLY SUBSCRIPTION
FPL SOLARTOGETHER PARTICIPANT RATES

Phase 1		
Participant Program Year	Subscription Charge \$/kW-Month	Subscription Credit ¢/kWh
1	\$6.73	(3.39101)
2	\$6.73	(3.44866)
3	\$6.73	(3.50728)
4	\$6.73	(3.56691)
5	\$6.73	(3.62755)
6	\$6.73	(3.68921)
7	\$6.73	(3.75193)
8	\$6.73	(3.81571)
9	\$6.73	(3.88058)
10	\$6.73	(3.94655)
11	\$6.73	(4.01364)
12	\$6.73	(4.08187)
13	\$6.73	(4.15127)
14	\$6.73	(4.22184)
15	\$6.73	(4.29361)
16	\$6.73	(4.36660)
17	\$6.73	(4.44083)
18	\$6.73	(4.51633)
19	\$6.73	(4.59310)
20	\$6.73	(4.67119)
21	\$6.73	(4.75060)
22	\$6.73	(4.83136)
23	\$6.73	(4.91349)
24	\$6.73	(4.99702)
25	\$6.73	(5.08197)
26	\$6.73	(5.16836)
27	\$6.73	(5.25622)
28	\$6.73	(5.34558)
29	\$6.73	(5.43645)
30	\$6.73	(5.52887)

Issued by: Tiffany Cohen, Director, Rates and Tariffs
Effective:

FLORIDA POWER & LIGHT COMPANY

Original Sheet No. 8.932

FPL SOLARTOGETHER RIDER
(OPTIONAL PROGRAM)

RATE SCHEDULE: STR

AVAILABLE:

The FPL SolarTogetherSM Rider ("FPL SolarTogether" or "the Program") is available in all territory served, subject to subscription availability. This optional program allows FPL customers to subscribe to a portion of universal solar capacity built for the benefit of the Program and receive a credit for the actual solar production associated with their subscription.

APPLICATION:

In conjunction with the otherwise applicable metered rate schedule. All rates and charges under the customers' otherwise applicable metered rate schedule shall apply.

MONTHLY SUBSCRIPTION:

The Monthly Subscription shall be equal to the sum of the *Monthly Subscription Charge + Monthly Subscription Credit* as follows:

Monthly Subscription	
Subscription Charge \$/kW-Month	Subscription Credit ¢/kWh
See Sheet No. 8.934	See Sheet No. 8.934

LIMITATION OF SERVICE:

Any customer taking service under a metered rate schedule who has no delinquent balances with FPL is eligible to participate. Eligible customers may elect a subscription level in 1 kW units representing up to 100% of their previous 12-month total kWh usage. Increases in number of units purchased will be limited to once per year and subject to program availability.

BILLING:

Participants are subject to the minimum bill on their otherwise applicable rate schedule. The FPL SolarTogether Monthly Subscription Charge and offsetting Monthly Subscription Credit will appear as separate line items on a participant's bill during every month of enrollment, and are subject to all applicable taxes and fees.

Monthly Subscription Credit amounts may not result in a total bill less than zero (\$0). Any excess credit amounts will be applied in subsequent months to ensure participant total bill amounts meet this requirement.

TERMS OF SERVICE:

Not less than one (1) billing cycle. Participants may, at any time following their first billing cycle, terminate their participation ("Voluntary Termination") or reduce the number of subscribed units purchased. Participants may be terminated from the program by FPL if the customer becomes delinquent on the customer's electric service account or for failure to satisfy eligibility requirements ("Involuntary Termination"). Upon either Voluntary or Involuntary Termination, the account is prohibited from re-enrolling for a twelve (12) month period.

(Continued on Sheet No. 8.933)

Issued by: Tiffany Cohen, Director, Rates and Tariffs
Effective:

FLORIDA POWER & LIGHT COMPANY

Original Sheet No. 8.933

(Continued from Sheet No. 8.932)

SPECIAL PROVISIONS:

If the customer moves within FPL's service territory, program participation may continue at a new service address with no impact the customer's program enrollment date subject to the limitations and terms outlined above. Notification to transfer participation must be made by the customer to the Company and the Company will have 45 days to complete the transfer.

Upon customer request, FPL will retire the renewable energy certificate (RECs) associated with the customer's subscription. Notification to retire RECs must be made by the customer to the Company. The accumulation of RECs associated with the participant's subscription will begin following notification and FPL will provide participants with REC retirement summary reports periodically throughout the year.

RULES AND REGULATIONS:

Service under this rider is subject to orders of governmental bodies having jurisdiction and to the currently effective "General Rules and Regulations for Electric Service" on file with the Florida Public Service Commission. In case of conflict between any provisions of this schedule and said "General Rules and Regulations for Electric Service" the provisions of this rider shall apply. The participant subscription is neither a security nor an ownership interest in the solar asset and therefore no owned interest is to be surrendered, sold, or traded.

(Continued on Sheet No. 8.934)

Issued by: Tiffany Cohen, Director, Rates and Tariffs
Effective:

FLORIDA POWER & LIGHT COMPANY

Original Sheet No. 8.934

(Continued from Sheet No. 8.933)

MONTHLY SUBSCRIPTION
FPL SOLARTOGETHER PARTICIPANT RATES

Phase 1		
Participant Program Year	Subscription Charge \$/kW-Month	Subscription Credit ¢/kWh
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8	\$6.73	(3.81571)
9	\$6.73	(3.88058)
10	\$6.73	(3.94655)
11	\$6.73	(4.01364)
12	\$6.73	(4.08187)
13	\$6.73	(4.15127)
14	\$6.73	(4.22184)
15	\$6.73	(4.29361)
16	\$6.73	(4.36660)
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26	\$6.73	(5.16836)
27	\$6.73	(5.25622)
28	\$6.73	(5.34558)
29	\$6.73	(5.43645)
30	\$6.73	(5.52887)

Issued by: Tiffany Cohen, Director, Rates and Tariffs
Effective:

FLORIDA POWER & LIGHT COMPANY
Estimate of Current Net Metering Subsidy

Month	Total NEM Generation ⁽¹⁾
January	16,510,000
February	16,501,000
March	21,870,000
April	21,736,000
May	22,135,000
June	19,258,000
July	20,680,000
August	19,333,000
September	18,510,000
October	18,998,000
November	17,064,000
December	15,980,000
Annual	228,575,000

Residential (111 MW DC)			Commercial (34 MW DC)			Total NEM Subsidy ⁽⁴⁾
NEM kWh ⁽²⁾	Rate \$/kWh ⁽³⁾	NEM Subsidy (\$) ⁽⁴⁾	NEM kWh ⁽²⁾	Rate \$/kWh ⁽³⁾	NEM Lost Revenue (\$) ⁽⁴⁾	
12,639,000	\$0.06831	\$863,391	3,871,000	\$0.02721	\$105,333	\$968,724
12,632,000	\$0.06831	\$862,913	3,869,000	\$0.02721	\$105,279	\$968,192
16,742,000	\$0.06831	\$1,143,674	5,128,000	\$0.02721	\$139,537	\$1,283,211
16,639,000	\$0.06831	\$1,136,638	5,097,000	\$0.02721	\$138,693	\$1,275,331
16,945,000	\$0.06831	\$1,157,541	5,190,000	\$0.02721	\$141,224	\$1,298,765
14,742,000	\$0.06831	\$1,007,051	4,516,000	\$0.02721	\$122,884	\$1,129,935
15,831,000	\$0.06831	\$1,081,442	4,849,000	\$0.02721	\$131,945	\$1,213,387
14,800,000	\$0.06831	\$1,011,013	4,533,000	\$0.02721	\$123,347	\$1,134,359
14,170,000	\$0.06831	\$967,976	4,340,000	\$0.02721	\$118,095	\$1,086,071
14,543,000	\$0.06831	\$993,457	4,455,000	\$0.02721	\$121,224	\$1,114,681
13,063,000	\$0.06831	\$892,355	4,001,000	\$0.02721	\$108,870	\$1,001,226
12,233,000	\$0.06831	\$835,657	3,747,000	\$0.02721	\$101,959	\$937,616
174,979,000	\$0.06831	\$11,953,107	53,596,000	\$0.02721	\$1,458,390	\$13,411,497

- (1) Per NREL - Assumes 145 MW DC of Residential and Commercial Solar sited in Florida.
(2) Assumes 111 MW DC of Residential and 34 MW DC of Commercial NEM generation.
(3) As of August 2019 - Includes Non-Fuel Base Energy and Non-Fuel Clauses.
(4) Subsidy = NEM kWh x Revenue Class Average rates.

FLORIDA POWER & LIGHT COMPANY
Estimate of 1,490MW AC of Net Metering Subsidy

		Residential (@25%)		Commercial (@75%)				
Month	Total NEM Generation ⁽¹⁾	NEM kWh ⁽²⁾	Rate \$/kWh ⁽³⁾	NEM Subsidy (\$) ⁽⁴⁾	NEM kWh ⁽²⁾	Rate \$/kWh ⁽³⁾	NEM Subsidy (\$) ⁽⁴⁾	Total NEM Subsidy ⁽⁴⁾
January	232,391,000	58,097,750	\$0.06831	\$3,968,754	174,293,250	\$0.02721	\$4,742,659	\$8,711,413
February	232,266,000	58,066,500	\$0.06831	\$3,966,619	174,199,500	\$0.02721	\$4,740,108	\$8,706,727
March	307,834,000	76,958,500	\$0.06831	\$5,257,163	230,875,500	\$0.02721	\$6,282,307	\$11,539,471
April	305,953,000	76,488,250	\$0.06831	\$5,225,040	229,464,750	\$0.02721	\$6,243,920	\$11,468,960
May	311,576,000	77,894,000	\$0.06831	\$5,321,069	233,682,000	\$0.02721	\$6,358,675	\$11,679,744
June	271,065,000	67,766,250	\$0.06831	\$4,629,226	203,298,750	\$0.02721	\$5,531,922	\$10,161,147
July	291,098,000	72,774,500	\$0.06831	\$4,971,347	218,323,500	\$0.02721	\$5,940,757	\$10,912,105
August	272,126,000	68,031,500	\$0.06831	\$4,647,345	204,094,500	\$0.02721	\$5,553,575	\$10,200,920
September	260,553,000	65,138,250	\$0.06831	\$4,449,702	195,414,750	\$0.02721	\$5,317,392	\$9,767,094
October	267,414,000	66,853,500	\$0.06831	\$4,566,874	200,560,500	\$0.02721	\$5,457,412	\$10,024,286
November	240,193,000	60,048,250	\$0.06831	\$4,101,996	180,144,750	\$0.02721	\$4,901,883	\$9,003,879
December	224,931,000	56,232,750	\$0.06831	\$3,841,353	168,698,250	\$0.02721	\$4,590,415	\$8,431,768
Annual	3,217,400,000	804,350,000	\$0.06831	\$54,946,490	2,413,050,000	\$0.02721	\$65,661,025	\$120,607,514

(1) Per NREL - Assumes 1,490 MW AC of Solar sited in Florida.

(2) Assumes 25% Residential and 75% Commercial NEM generation.

(3) As of August 2019 - Includes Non-Fuel Base Energy and Non-Fuel Clauses.

(4) Subsidy = NEM kWh x Revenue Class Average rates.

Discount Rate
Annual Amount
Term

7.73%
\$ 121
30

MM
years

FPL WACC
Annual NEM Subsidy assuming 2022 rates
Program Term

Present Value **\$1,397** MM

ERRATA SHEET OF STEVEN R. SIM

September 23, 2019 – Rebuttal Testimony and Exhibit

<u>PAGE #</u>	<u>LINE #</u>	<u>CHANGE</u>
Page 1	Line 3	Delete “JUAN E. ENJAMIO” and insert “STEVEN R. SIM”
Page 2	Line 4	Delete “Juan E. Enjamio” and insert “Steven R. Sim”
Exhibit JE-5		Total Reserve Margin % without unit additions for the year 2020 (column 2) from “19.1%” to “19.9%”
Exhibit JE-5		Total Generation-only Reserve Margin % without unit additions for the year 2020 (column 4) from “10.0%” to “10.7%”

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 30
PARTY: FLORIDA POWER & LIGHT
COMPANY – REBUTTAL
DESCRIPTION: *Juan E. Enjamio JE-5

**Need Without New Generation Resources
Summer Peak - Through 2030**

Year	Total Reserve Margin % without unit additions	Summer MW Needed to Meet 20% Reserve Margin	Total Generation-only Reserve Margin % without unit additions	GRM MW Needed to Meet 10% Reserve Margin
2020	19.9%	19	10.7%	-180
2021	18.9%	252	9.7%	79
2022	18.2%	400	8.9%	253
2023	16.7%	764	7.5%	625
2024	14.8%	1,216	5.8%	1,079
2025	13.3%	1,603	4.3%	1,472
2026	11.4%	2,092	2.6%	1,960
2027	9.3%	2,640	0.7%	2,501
2028	7.3%	3,195	-1.1%	3,049
2029	4.8%	3,929	-3.4%	3,761
2030	2.2%	4,708	-5.7%	4,514

Note:

FPL generating unit capability values shown above assume the following major changes to the FPL system.

No new generation resources are added in this computation, other than those listed below:

- Okeechobee Clean Energy Center (OCEC) unit in-service April 2019
- Retirement of the Manatee 1 and 2 units by the end of 2021 and replaced, in part, with a 469 MW Battery
- Dania Beach Clean Energy Center (DBEC) in-service in June 2022
- 2020 298 MW SoBRA
- FPL's proposed DSM goals for Summer MW.

Resource Plans

Year	No ST Plan	FPL SolarTogether Plan
2020	100 MW 2-Hour Battery ; 2020 298 MW SoBRA	447 MW FPL SolarTogether; 2020 298 MW SoBRA
2021	200 MW 2-Hour Battery	1,043 MW FPL SolarTogether
2022	Dania Beach Energy Center; Greenfield 469 MW CT Unit; 469 MW Manatee Battery; Manatee 1&2 retire	Dania Beach Energy Center; 469 MW Manatee Battery; Manatee 1&2 retire
2023	Greenfield 469 MW CT	Greenfield 704 MW CT Unit
2024	---	---
2025	Greenfield 1,886 MW CC Unit	Greenfield 1,886 MW CC Unit
2026	---	---
2027	---	---
2028	Greenfield 1,886 MW CC Unit	---
2029	---	Greenfield 1,886 MW CC Unit
2030	---	---
2031	Equalizing 333 MW CC Unit	Equalizing 142 MW CC Unit

* MW values shown above for solar projects are nameplate AC. MW values for fossil units are based on summer MW ratings.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for approval of FPL SolarTogether
program and tariff, by Florida Power & Light
Company

Docket No. 20190061-EI

Filed: October 28, 2019

ERRATA SHEET OF JUAN E. ENJAMIO

September 23, 2019 – Rebuttal Testimony

EXHIBIT # CHANGE

Exhibit JE-7 Solar Revenue Requirements Categories: Change “\$106 Fixed O&M (Millions)” amount to “\$96” and changed “\$136 Land (Millions)” amount to “\$146”.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 32
PARTY: FLORIDA POWER & LIGHT
COMPANY – REBUTTAL
DESCRIPTION: *Juan E. Enjamio JE-7

CPVRR

	Solar Revenue Requirements				Non-Solar Generation Costs Avoided					System Costs Avoided			
Program Admin. Costs (Millions)	Generation Capital (Millions)	Transmission Interconnection (Millions)	Fixed O&M (Millions)	Land (Millions)	Generation Capital (Millions)	Fixed O&M (Millions)	Transmission Interconnection (Millions)	Capital Replacement (Millions)	Incremental Gas Transport (Millions)	System Net Fuel (Millions)	Startup + VOM (Millions)	Emission (Millions)	Total CPVRR (Millions)
\$11	\$1,376	\$174	\$96	\$146	(\$415)	(\$58)	(\$19)	(\$27)	(\$368)	(\$1,049)	(\$25)	(\$91)	(\$249)

* Negative () indicates savings to FPL customers

Year	System Average Rate Impact \$/1,000 kWh
2020	0.45
2021	1.10
2022	0.93
2023	0.60
2024	0.55
2025	0.44
2026	0.37
2027	(0.19)
2028	(1.38)
2029	(0.80)
2030	(0.15)
2031	(0.51)
2032	(0.49)
2033	(0.48)
2034	(0.57)
2035	(0.66)
2036	(0.71)
2037	(0.74)
2038	(0.88)
2039	(0.95)
2040	(0.74)
2041	(0.97)
2042	(1.09)
2043	(1.14)
2044	(1.16)
2045	(1.29)
2046	(1.33)
2047	(1.25)
2048	(1.46)
2049	(1.43)
2050	(1.53)

**Sensitivity Analysis
CPVRR**

Fuel Cost Forecast	Environmental Compliance Cost Forecast	No Solar Together Plan (\$ Millions)	FPL Solar Together Plan (\$ Millions)	Net Difference (\$ Millions)
High Fuel Cost	Low CO2	\$50,936	\$50,613	(\$323)
High Fuel Cost	Mid CO2	\$54,342	\$53,928	(\$414)
High Fuel Cost	High CO2	\$59,688	\$59,124	(\$563)
Mid Fuel Cost	Low CO2	\$45,472	\$45,313	(\$159)
Mid Fuel Cost	Mid CO2	\$48,851	\$48,603	(\$249)
Mid Fuel Cost	High CO2	\$54,183	\$53,781	(\$401)
Low Fuel Cost	Low CO2	\$39,972	\$39,980	\$8
Low Fuel Cost	Mid CO2	\$43,341	\$43,259	(\$82)
Low Fuel Cost	High CO2	\$48,666	\$48,434	(\$232)

Base Scenario

- Negative () Indicates Savings to FPL Customers.
- Low CO2 has a cost of \$0/ton annually.

Sensitivity Analysis - General Body of Customers
CPVRR

Fuel Cost Forecast	Environmental Compliance Cost Forecast	Net Difference SolarTogether -No SolarTogether Plans (\$ Millions)	Participant Net Benefit (Payment) (\$ Millions)	Benefit to General Body of Customers (\$ Millions)
High Fuel Cost	Low CO2	(\$323)	\$137	(\$186)
High Fuel Cost	Mid CO2	(\$414)	\$137	(\$277)
High Fuel Cost	High CO2	(\$563)	\$137	(\$427)
Mid Fuel Cost	Low CO2	(\$159)	\$137	(\$22)
Mid Fuel Cost	Mid CO2	(\$249)	\$137	(\$112)
Mid Fuel Cost	High CO2	(\$401)	\$137	(\$265)
Low Fuel Cost	Low CO2	\$8	\$137	\$145
Low Fuel Cost	Mid CO2	(\$82)	\$137	\$54
Low Fuel Cost	High CO2	(\$232)	\$137	(\$96)

Base Scenario

- Negative () Indicates Savings to FPL Customers.
- Low CO2 has a cost of \$0/ton annually.

				1	2	3	4	5	6	7	8	9	10	11		
				2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2035
(\$ millions)																
Discount Factor				1.01	0.93	0.87	0.80	0.75	0.69	0.64	0.60	0.55	0.51	0.48	0.44	
		Nominal Total														
		CPVRR														
Base Revenue Requirements																
FPL SolarTogether Capital, O&M		\$1,792.4	\$3.5	\$71.7	\$202.2	\$210.8	\$199.6	\$190.8	\$183.0	\$176.9	\$171.9	\$167.3	\$162.2	\$157.3	\$2,247.4	
Program Administrative Costs		11.5	2.3	2.1	1.8	1.7	1.1	0.7	0.4	0.3	0.3	0.3	0.3	0.3	8.5	
Total FPL SolarTogether Costs		1,803.9	5.8	73.8	204.0	212.4	200.7	191.5	183.4	177.2	172.2	167.6	162.5	157.6	2,256.0	
System Impacts (Avoided Generation Capital, O&M)		(544.6)	-	(2.0)	(14.8)	(38.2)	(60.4)	(48.3)	(47.0)	(44.5)	(37.4)	(176.3)	(111.1)	(28.0)	(862.1)	
Total Base RevReq's (fav) unfav		\$1,259.2	\$5.8	\$71.7	\$189.3	\$174.3	\$140.3	\$143.2	\$136.5	\$132.6	\$134.7	(\$8.7)	\$51.4	\$129.6	\$1,393.8	
Clause Revenue Requirements																
System Net Fuel		(\$1,049.4)	\$0.0	(\$19.6)	(\$60.6)	(\$65.6)	(\$69.8)	(\$78.8)	(\$84.2)	(\$88.3)	(\$96.4)	(\$97.6)	(\$87.9)	(\$86.6)	(\$2,478.4)	
Incremental Gas Transport		(367.9)	-	-	-	-	-	-	-	-	(59.6)	(59.2)	(58.9)	(58.6)	(1,116.0)	
Emissions		(90.6)	-	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.7)	(1.2)	(2.4)	(2.6)	(3.6)	(503.7)	
Total Clause RevReq's (fav) unfav		(\$1,507.9)	\$0.0	(\$19.6)	(\$60.7)	(\$65.6)	(\$69.9)	(\$78.9)	(\$84.2)	(\$89.0)	(\$157.1)	(\$159.3)	(\$149.5)	(\$148.8)	(\$4,098.1)	
Net Revenue Requirements (fav) unfav		(\$248.6)	\$5.8	\$52.2	\$128.6	\$108.6	\$70.4	\$64.4	\$52.3	\$43.6	\$22.4	(\$168.0)	(\$98.1)	(\$19.1)	(\$2,704.3)	
Participant Subscription Charge and Credit																
Subscription Charge (Revenue)	% of Total	(\$1,315.5)	\$0.0	(\$33.1)	(\$108.3)	(\$120.3)	(\$120.3)	(\$120.3)	(\$120.3)	(\$120.3)	(\$120.3)	(\$120.3)	(\$120.3)	(\$120.3)	(\$120.3)	(\$2,385.6)
Subscription Credits		1,452.2	-	31.6	104.8	117.9	119.6	121.5	122.9	124.6	126.4	128.5	129.9	131.7	3,028.6	
Participant Net Distribution (Payment)	55.0%	\$136.8	\$0.0	(\$1.5)	(\$3.5)	(\$2.4)	(\$0.8)	\$1.2	\$2.6	\$4.3	\$6.0	\$8.1	\$9.6	\$11.4	\$643.0	
Revenue Requirements																
Base																
Total Base RevReq's	% of Total	\$1,259.2	\$5.8	\$71.7	\$189.3	\$174.3	\$140.3	\$143.2	\$136.5	\$132.6	\$134.7	(\$8.7)	\$51.4	\$129.6	\$1,393.8	
Participant Subscription (Revenue)	104.47%	(1,315.5)	-	(33.1)	(108.3)	(120.3)	(120.3)	(120.3)	(120.3)	(120.3)	(120.3)	(120.3)	(120.3)	(120.3)	(2,385.6)	
Net Base RevReq's (fav) unfav	-4.47%	(\$56.2)	\$5.8	\$38.7	\$81.0	\$53.9	\$20.0	\$22.9	\$16.1	\$12.3	\$14.4	(\$129.0)	(\$68.9)	\$9.3	(\$991.7)	
Clause																
Total Clause RevReq's (fav) unfav	% of Total	(\$1,507.9)	\$0.0	(\$19.6)	(\$60.7)	(\$65.6)	(\$69.9)	(\$78.9)	(\$84.2)	(\$89.0)	(\$157.1)	(\$159.3)	(\$149.5)	(\$148.8)	(\$4,098.1)	
Participant Credits	96.31%	1,452.2	-	31.6	104.8	117.9	119.6	121.5	122.9	124.6	126.4	128.5	129.9	131.7	3,028.6	
Net Clause RevReq's (fav) unfav	3.69%	(\$55.6)	\$0.0	\$12.0	\$44.1	\$52.3	\$49.7	\$42.7	\$38.7	\$35.6	(\$30.8)	(\$19.6)	(\$19.6)	(\$17.0)	(\$1,069.6)	
Total Net RevReq's (fav) unfav	45.0%	(\$111.9)	\$5.8	\$50.7	\$125.1	\$106.2	\$69.7	\$65.6	\$54.8	\$47.9	(\$16.4)	(\$159.8)	(\$88.5)	(\$7.7)	(\$2,061.3)	

Terry Deason*



Special Consultant (Non-Lawyer)*

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Practice Areas:

- Energy, Telecommunications, Water and Wastewater and Public Utilities

Education:

- United States Military Academy at West Point, 1972
- Florida State University, B.S., 1975, Accounting, summa cum laude
- Florida State University, Master of Accounting, 1989

Professional Experiences:

- Radey Thomas Yon & Clark, P.A., Special Consultant, 2007 - Present
- Florida Public Service Commission, Commissioner, 1991 - 2007
- Florida Public Service Commission, Chairman, 1993 - 1995, 2000 - 2001
- Office of the Public Counsel, Chief Regulatory Analyst, 1987 - 1991
- Florida Public Service Commission, Executive Assistant to the Commissioner, 1981 - 1987
- Office of the Public Counsel, Legislative Analyst II and III, 1979 - 1981
- Ben Johnson Associates, Inc., Research Analyst, 1978 - 1979
- Office of the Public Counsel, Legislative Analyst I, 1977 - 1978
- Quincy State Bank Trust Department, Staff Accountant and Trust Assistant, 1976 - 1977

Professional Associations and Memberships:

- National Association of Regulatory Utility Commissioners (NARUC), 1993 - 1998,
Member, Executive Committee
- National Association of Regulatory Utility Commissioners (NARUC), 1999 - 2006,
Board of Directors



RADEY
ATTORNEYS & COUNSELORS at LAW

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 37
PARTY: FLORIDA POWER & LIGHT
COMPANY – REBUTTAL
DESCRIPTION: Terry Deason JTD-1

Terry Deason*

- National Association of Regulatory Utility Commissioners (NARUC), 2005-2006,
Member, Committee on Electricity
- National Association of Regulatory Utility Commissioners (NARUC), 2004 - 2005,
Member, Committee on Telecommunications
- National Association of Regulatory Utility Commissioners (NARUC), 1991 - 2004,
Member, Committee on Finance and Technology
- National Association of Regulatory Utility Commissioners (NARUC), 1995 - 1998,
Member, Committee on Utility Association Oversight
- National Association of Regulatory Utility Commissioners (NARUC) 2002 *Member, Rights-of-Way Study*
- Nuclear Waste Strategy Coalition, 2000 - 2006, *Board Member*
- Federal Energy Regulatory Commission (FERC) South Joint Board on Security
Constrained Economic Dispatch, 2005 - 2006, *Member*
- Southeastern Association of Regulatory Utility Commissioners, 1991 - 2006, *Member*
- Florida Energy 20/20 Study Commission, 2000 - 2001, *Member*
- FCC Federal/State Joint Conference on Accounting, 2003 - 2005, *Member*
- Joint NARUC/Department of Energy Study Commission on Tax and Rate
Treatment of Renewable Energy Projects, 1993, *Member*
- Bonbright Utilities Center at the University of Georgia, 2001, *Bonbright Distinguished Service Award Recipient*
- Eastern NARUC Utility Rate School - Faculty Member



RADEY
ATTORNEYS & COUNSELORS at LAW

FPL's Response to Staff's First Set of Interrogatories Nos. 1-25, 27, 29-61, 63-74, 76, 78-82, 84-87, 89-90, 92, 94-96, 100-101, 103, 105, 107-109, 112-113, 115-116, 118, 121-123, 125-127, 130-133, 135-136, 138-148, 150-159.

**Additional files contained on Staff Hearing Exhibits
CD/USB for Nos. 33, 39, 46, 55, 72, 75, 78-79, 81, 92, 95,
113, 125, 146-147**

(Amended Nos. 78, 79, 100)

(Confidential Nos. 34, 96, 147)

Confidential DN. 05668-2019

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 38
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Valle (1-3, 25, 48-57, 59,
60-61, 63-71, 80, 90, 94, 100-101, 105, 112,
116, 121-123, 125-127, 130-1...

QUESTION:

Petition at 1, Paragraph 3. Will the proposed program replace FPL's SolarNow program? Please explain the relationship, if any, between the SolarNow program and the SolarTogether programs.

RESPONSE:

There is no formal relationship between the two programs; however, the success of SolarNow supported the development of FPL SolarTogether. FPL is continuing to explore the interaction between running both SolarNow and FPL SolarTogether contemporaneously as they potentially cater to slightly different to overlapping customer groups, and it is not clear to what extent enrollment in one program might impact the other. FPL will make a recommendation regarding the future of SolarNow later this year.

QUESTION:

Petition at 2, Paragraph 3. What percentage of SolarNow customers are categorized as residential/small business accounts? What percentage of SolarNow customers are categorized as commercial, industrial, or governmental accounts?

RESPONSE:

Customer Type	Enrolled as of March 31, 2019	Percent of Total
Residential/Small Business	48,715	99%
Commercial	633	1%
Governmental¹	0	0%
Industrial	0	0%
Total	49,348	100%

¹ There is no formal governmental rate class; these customer types are typically included as “commercial” accounts.

QUESTION:

Text in the Petition at 3, Paragraph 6 refers to the “initial” program as Phase 1. At this time, how many Phases are planned?

RESPONSE:

FPL has not yet planned future Phases. FPL’s intent is to offer future Phases based on customer demand and the continued cost-effectiveness of solar. FPL will actively evaluate enrollment levels and waitlisted customers to determine whether the construction of an additional phase or additional phases is warranted.

QUESTION:

Petition at 3, Paragraph 6. For interrogatory numbers 4-6 and sub-parts, the three installations that FPL collectively refers to as "ST Project 1 sites" will be described as "Site Numbers 1, 2, and 3" for ST Project 1. For Site Number 1, populate Columns (b), (c), and (d) in the chart below.

ST Project 1, Site Number 1			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 1 in ST Project 1?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 1, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 1?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 1, Site Number 1			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$71.2	74.5	\$956.3
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$7.2	74.5	\$97.1
Land	\$5.4	74.5	\$71.9
AFUDC	\$2.6	74.5	\$35.5
Total	\$86.5*	74.5	\$1,160.8

* Total does not add due to rounding

- A. The total size of the ST Project 1, Site Number 1 property is 565.79 acres.
- B. The land required for this solar installation is 407.35 acres, which includes the solar array, the substation and transmission facilities, construction laydown areas, a planned borrow pit for required fill material and other areas subject to permit conditions (such as land containing roads, easements and setbacks).
- C. None of the 158.44 remaining acres are suitable for future solar installations, energy storage installations, or other utility purposes. This is due to the fact that 133.04 acres are comprised of waters, wetlands and preserve areas, and the remaining 25.40 acres are comprised of small, isolated remote parcels with access limitations and attendant construction requirements.
- D. The property for Site Number 1 was acquired on January 5, 2018 for \$5.4 million.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 2" of ST Project 1, populate Columns (b), (c), and (d) in the chart below.

ST Project 1, Site Number 2			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 2 in ST Project 1?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 2, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 2?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 1, Site Number 2			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$67.6	74.5	\$907.7
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$6.4	74.5	\$86.4
Land (including easement costs)	\$5.2	74.5	\$69.3
AFUDC	\$2.5	74.5	\$33.6
Total	\$81.7	74.5	\$1,096.9*

* Total does not add due to rounding

- A. The total size of the ST Project 1, Site Number 2 property is 565.38 acres.
- B. The land required for this solar installation is 420.77 acres, which includes the solar array, the substation and transmission facilities, and other areas subject to permit conditions (such as land within the flood zone, roads and setbacks).
- C. None of the 144.61 remaining acres are suitable for future solar installations, energy storage installations or other utility purposes. This is due to the fact that 124.68 acres are comprised of waters, wetlands and preserve areas, and the remaining 19.93 acres are comprised of small, isolated remote parcels with access limitations and attendant construction requirements.
- D. The property for Site Number 2 was acquired on August 29, 2017 for \$5.0 million.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 3" of ST Project 1, populate Columns (b), (c), and (d) in the chart below.

ST Project 1, Site Number 3			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 3 in ST Project 1?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 3, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 3?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 1, Site Number 3			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$75.8	74.5	\$1,017.8
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$6.0	74.5	\$80.0
Land	\$0.0	74.5	\$0.0
AFUDC	\$2.8	74.5	\$37.0
Total	\$84.6	74.5	\$1,134.8

- A. The total size of the ST Project 1, Site Number 3 property is 981.85 acres.
- B. The land required for this solar installation is 728.10 acres, which includes the solar array, the substation and transmission facilities, and other areas subject to permit conditions (such as setbacks and land located within a flood zone).
- C. None of the 253.74 remaining acres are suitable for future solar installations, energy storage installations or other utility purposes. This is due to the fact that 239.0 acres are comprised of waters, wetlands, preserve areas, 9.35 acres comprised of protected birds' nest exclusion zone and the remaining 5.39 acres are comprised of small, isolated remote parcels with access limitations and attendant construction requirements.
- D. The property for Site Number 3 was acquired in August 1974. No land costs are included in the Project cost.
- E. Yes, it does qualify.

QUESTION:

Petition at 3, Paragraph 6. For interrogatory numbers 7-9 and sub-parts, the three installations that FPL collectively refers to as "ST Project 2 sites" will be described as "Site Numbers 1, 2, and 3" for ST Project 2. For Site Number 1, populate Columns (b), (c), and (d) in the chart below.

ST Project 2, Site Number 1			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 1 in ST Project 2?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 1, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 1?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 2, Site Number 1			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$78.6	74.5	\$1,055.7
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$6.9	74.5	\$93.0
Land (including easement costs)	\$1.8	74.5	\$24.5
AFUDC	\$2.9	74.5	\$38.8
Total	\$90.3*	74.5	\$1,211.9*

* Total does not add due to rounding

- A. The total size of the ST Project 2, Site Number 1 property is 858.14 acres.
- B. The land required for this solar installation is 544.48 acres, which includes the solar array, the substation and transmission facilities, construction laydown areas, and other areas subject to permit conditions (such as setbacks and roads).
- C. None of the 313.66 remaining acres are suitable for future solar installations, energy storage installations or other utility purposes. This is due to the fact that 245.09 acres are comprised of waters, wetlands and preserve areas, and the remaining 68.57 acres are comprised of small, isolated remote parcels with access limitations and attendant construction requirements.
- D. The property for Site Number 1 was acquired on September 28, 2016 for \$1.6 million.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 2" of ST Project 2, populate Columns (b), (c), and (d) in the chart below.

ST Project 2, Site Number 2			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 2 in ST Project 2?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 2, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 2?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 2, Site Number 2			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$79.2	74.5	\$1,062.9
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$7.2	74.5	\$97.1
Land (including easement costs)	\$5.1	74.5	\$68.2
AFUDC	\$2.9	74.5	\$39.1
Total	\$94.4	74.5	\$1,267.3

- A. The total size of the ST Project 2, Site Number 2 property is 628.40 acres.
- B. The land required for this solar installation is 446.69 acres, which includes the solar array, the substation and transmission facilities, construction laydown areas, and other areas subject to permit conditions (such as roads and setbacks).
- C. Of the remaining acres at Site Number 2, 147.71 acres are not suitable for future solar installations, energy storage installations or other utility purposes due to the fact that 79.27 acres are comprised of waters, wetlands and preserve areas, 45.35 acres that are comprised of small, isolated remote parcels and 23.09 acres comprised of abandoned areas for vegetation monitoring with access limitations and attendant construction requirements. The remaining 34 acres are comprised of two non-contiguous areas of 18 acres and 16 acres that might be suitable for future solar installation, energy storage installations or other utility purposes, subject to environmental and other permitting constraints.
- D. The property for Site Number 2 was acquired on March 16, 2018 for \$5.0 million.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 3" of ST Project 2, populate Columns (b), (c), and (d) in the chart below.

ST Project 2, Site Number 3			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 3 in ST Project 2?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 3, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 3?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 2, Site Number 3			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$79.6	74.5	\$1,069.0
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$6.1	74.5	\$81.7
Land	\$4.4	74.5	\$59.5
AFUDC	\$2.9	74.5	\$38.8
Total	\$93.1	74.5	\$1,249.0

- A. The total size of the ST Project 2, Site Number 3 property is 430.01 acres.
- B. The land required for this solar installation is 403.16 acres, which includes the solar array, the substation and transmission facilities, and other areas subject to permit conditions (such as roads, easements and setbacks).
- C. None of the 26.85 remaining acres are suitable for future solar installations, energy storage installations or other utility purposes. This is due to the fact that 13.39 acres are comprised of waters, wetlands and preserve areas, and the remaining 13.46 acres are comprised of small, isolated remote parcels with access limitations and attendant construction requirements.
- D. The property for Site Number 3 was acquired on December 20, 2017 for \$4.4 million.
- E. Yes, it does qualify.

QUESTION:

For Interrogatory Numbers 10-15 and sub-parts, the six installations that FPL collectively refers to as "ST Project 3 sites" will be described as "Site Numbers 1, 2, 3, 4, 5, and 6" for ST Project 3. For Site Number 1, populate Columns (b), (c), and (d) in the chart below.

ST Project 3, Site Number 1			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 1 in ST Project 3?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 1, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 1?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 3, Site Number 1			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$72.6	74.5	\$974.4
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$7.2	74.5	\$97.1
Land	\$7.3	74.5	\$97.6
AFUDC	\$2.7	74.5	\$36.1
Total	\$89.8	74.5	\$1,205.2

- A. The total size of the ST Project 3, Site Number 1 property is 692.61 acres.
- B. The land required for this solar installation is 563.36 acres, which includes the solar array, the substation and transmission facilities, construction laydown areas, and other areas subject to permit conditions (such land located within flood zones, roads and setbacks).
- C. None of the 129.25 remaining acres are suitable for future solar installations, energy storage installations or other utility purposes. This is due to the fact that 58.69 acres are comprised of waters, wetlands and preserve areas, 63.47 are comprised of protected birds' nests and the remaining 7.09 acres are comprised of small, isolated remote parcels with access limitations and attendant construction requirements.
- D. The property for Site Number 1 was acquired on September 4, 2018 for \$7.3 million.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 2" of ST Project 3, populate Columns (b), (c), and (d) in the chart below.

ST Project 3, Site Number 2			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 2 in ST Project 3?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 2, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 2?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 3, Site Number 2			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$71.9	74.5	\$965.3
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$6.4	74.5	\$86.4
Land	\$0.0	74.5	\$0.0
AFUDC	\$2.6	74.5	\$35.4
Total	\$81.0*	74.5	\$1,087.1

* Total does not add due to rounding

- A. The total size of the ST Project 3, Site Number 2 property is 490.69 acres.
- B. The land required for this solar installation is 429.35 acres, which includes the solar array, the substation and transmission facilities.
- C. None of the 61.34 remaining acres are suitable for future solar installations, energy storage installations or other utility purposes. This is due to the fact that 61.34 acres are comprised of waters, wetlands and preserve areas with access limitations and attendant construction requirements.
- D. There is no purchase price for the property for Site Number 2 because it is leased.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 3" of ST Project 3, populate Columns (b), (c), and (d) in the chart below.

ST Project 3, Site Number 3			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 3 in ST Project 3?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 3, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 3?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 3, Site Number 3			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$73.0	74.5	\$980.2
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$7.2	74.5	\$97.1
Land	\$6.2	74.5	\$83.1
AFUDC	\$2.7	74.5	\$36.3
Total	\$89.2*	74.5	\$1,196.7

* Total does not add due to rounding

- A. The total size of the ST Project 3, Site Number 3 property is 851.20 acres.
- B. The land required for this solar installation is 626.87 acres, which includes the solar array, the substation and transmission facilities, and other areas subject to permit conditions (such as roads and setbacks).
- C. None of the 224.33 remaining acres are suitable for future solar installations, energy storage installations or other utility purposes. This is due to the fact that 222.00 acres are comprised of waters, wetlands and preserve areas, and the remaining 2.33 acres are comprised of small, isolated remote parcels with access limitations and attendant construction requirements.
- D. The property for Site Number 3 was acquired on June 8, 2018 for \$6.2 million.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 4" of ST Project 3, populate Columns (b), (c), and (d) in the chart below.

ST Project 3, Site Number 4			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 4 in ST Project 3?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 4, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 4?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 3, Site Number 4			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$71.3	74.5	\$956.9
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$9.5	74.5	\$127.1
Land	\$2.3	74.5	\$30.4
AFUDC	\$2.7	74.5	\$36.5
Total	\$85.7*	74.5	\$1,151.0*

* Total does not add due to rounding

- A. The total size of the ST Project 3, Site Number 4 property is 676.03 acres.
- B. The land required for this solar installation is 564.49 acres, which includes the solar array, the substation and transmission facilities, and other areas subject to permit conditions (such as roads and setbacks).
- C. None of the 111.54 remaining acres are suitable for future solar installations, energy storage installations or other utility purposes. This is due to the fact that 104.27 acres are comprised of waters, wetlands and preserve areas, and the remaining 7.27 acres are comprised of a small, isolated remote parcel with access limitations and attendant construction requirements.
- D. The property for Site Number 4 was acquired on December 10, 2018 for \$2.3 million.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 5" of ST Project 3, populate Columns (b), (c), and (d) in the chart below.

ST Project 3, Site Number 5			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 5 in ST Project 3?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 5, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 5?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 3, Site Number 5			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$77.6	74.5	\$1,042.1
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$9.5	74.5	\$127.5
Land (including easement costs)	\$4.3	74.5	\$57.2
AFUDC	\$2.8	74.5	\$38.1
Total	\$94.2	74.5	\$1,264.9

- A. The total size of the ST Project 3, Site Number 5 property is 565.00 acres.
- B. The land required for this solar installation is 534.20 acres, which includes the solar array, the substation and transmission facilities, and other areas subject to permit conditions (such as land containing roads and setbacks).
- C. None of the 30.80 remaining acres are suitable for future solar installations, energy storage installations or other utility purposes. This is due to the fact that 25.29 acres are comprised of waters, wetlands and preserve areas, and the remaining 5.51 acres are comprised of small, isolated remote parcels with access limitations and attendant construction requirements.
- D. The property for Site Number 5 was acquired on May 15, 2019 for \$4.2 million.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 6" of ST Project 3, populate Columns (b), (c), and (d) in the chart below.

ST Project 3, Site Number 6			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 6 in ST Project 3?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 6, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 6?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 3, Site Number 6			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$74.2	74.5	\$996.2
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$6.0	74.5	\$80.0
Land	\$0.0	74.5	\$0.0
AFUDC	\$2.7	74.5	\$36.3
Total	\$82.9	74.5	\$1,112.6*

* Total does not add due to rounding

- A. The total size of the ST Project 3, Site Number 6 property is 1,192.55 acres.
- B. The land required for this solar installation is 882.34 acres, which includes the solar array, the substation and transmission facilities, and other areas subject to permit conditions (such as roads, setbacks and land located within flood zones).
- C. Of the remaining acres, 154.91 acres are not suitable for future solar installations, energy storage installations or other utility purposes. This is due to the fact that 119.96 acres are comprised of waters, wetlands and preserve areas with access limitations and attendant construction requirements, and 34.95 acres are comprised of a birds' nest exclusion zone. There are 155.30 acres that are remote isolated and undeveloped areas and may be suitable for future solar installations, energy storage installations, or other utility purposes, subject to environmental and other permitting constraints.
- D. The property for Site Number 6 was acquired in August 1974. No land costs are included in the Project costs.
- E. Yes, it does qualify.

QUESTION:

For Interrogatory Numbers 16-19 and sub-parts, the four installations that FPL collectively refers to as "ST Project 4 sites" will be described as "Site Numbers 1, 2, 3, and 4" for ST Project 4. For Site Number 1, populate Columns (b), (c), and (d) in the chart below.

ST Project 4, Site Number 1			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 1 in ST Project 4?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 1, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 1?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 4, Site Number 1			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$75.3	74.5	\$1,010.2
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$9.3	74.5	\$125.5
Land (including easement costs)	\$9.4	74.5	\$125.8
AFUDC	\$2.9	74.5	\$38.3
Total	\$96.8*	74.5	\$1,299.8

* Total does not add due to rounding

- A. The total size of the ST Project 4, Site Number 1 property is 972.00 acres.
- B. The land required for this solar installation is 554.54 acres, which includes the solar array, the substation and transmission facilities, construction laydown areas, and other areas subject to permit conditions (such as roads, setbacks and land located within flood zones).
- C. None of the 417.46 remaining acres are suitable for future solar installations, energy storage installations or other utility purposes. This is due to the fact that 379.15 acres are comprised of waters, wetlands and preserve areas, and the remaining 38.31 acres are comprised of small, isolated remote parcels with access limitations and attendant construction requirements.
- D. The property for Site Number 1 was acquired on September 7, 2017 for \$9.3 million.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 2" of ST Project 4, populate Columns (b), (c), and (d) in the chart below.

ST Project 4, Site Number 2			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 2 in ST Project 4?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 2, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 2?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 4, Site Number 2			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$76.1	74.5	\$1,021.9
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$7.2	74.5	\$97.1
Land (including easement costs)	\$5.4	74.5	\$72.4
AFUDC	\$2.8	74.5	\$37.7
Total	\$91.6*	74.5	\$1,229.1

* Total does not add due to rounding

- A. The total size of the ST Project 4, Site Number 2 property is 485.64 acres.
- B. The land required for this solar installation is 425.15 acres, which includes the solar array, the substation and transmission facilities, construction laydown areas, and other areas subject to permit conditions (such roads and setbacks).
- C. Of the remaining acres, 29.39 acres are not suitable for future solar installations, energy storage installations or other utility purposes due to the fact that they are comprised of waters, wetlands and preserve areas with access limitations and attendant construction requirements. There are 31.10 acres that are undeveloped and may be suitable for future solar installations, energy storage installations or other utility purposes, subject to environmental and other permitting constraints.
- D. The property for Site Number 2 was acquired on May 1, 2019 for \$5.3 million.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 3" of ST Project 4, populate Columns (b), (c), and (d) in the chart below.

ST Project 4, Site Number 3			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 3 in ST Project 4?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 3, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 3?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 4, Site Number 3			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$76.8	74.5	\$1,031.5
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$6.4	74.5	\$86.4
Land	\$6.5	74.5	\$86.8
AFUDC	\$2.8	74.5	\$37.7
Total	\$92.6*	74.5	\$1,242.3*

* Total does not add due to rounding

- A. The total size of the ST Project 4, Site Number 3 property is 814.29 acres.
- B. The land required for this solar installation is 520.43 acres, which includes the solar array, the substation and transmission facilities, construction laydown areas, and other areas subject to permit conditions (such as roads and setbacks).
- C. None of the 293.86 remaining acres are suitable for future solar installations, energy storage installations or other utility purposes. This is due to the fact that 224.66 acres are comprised of waters, wetlands and preserve areas, and the remaining 69.20 acres are comprised of small, isolated remote parcels with access limitations and attendant construction requirements.
- D. The property for Site Number 3 was acquired on March 5, 2018 for \$6.5 million.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 4" of ST Project 4, populate Columns (b), (c), and (d) in the chart below.

ST Project 4, Site Number 4			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 4 in ST Project 4?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 4, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 4?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 4, Site Number 4			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$76.4	74.5	\$1,026.1
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$7.0	74.5	\$94.4
Land	\$4.4	74.5	\$58.5
AFUDC	\$2.8	74.5	\$37.7
Total	\$90.6	74.5	\$1,216.8*

* Total do not add due to rounding

- A. The total size of the ST Project 4, Site Number 4 property is 606.75 acres.
- B. The land required for this solar installation is 501.47 acres, which includes the solar array, the substation and transmission facilities, construction laydown areas, and other areas subject to permit conditions (such as roads and setbacks).
- C. Of the remaining acres, 29.97 acres are not suitable for future solar installations, energy storage installations, or for other utility purposes due to the fact that they are comprised of waters, wetlands and preserve areas with access limitations and attendant construction requirements. There are 75.31 acres that are undeveloped areas and may be suitable for future solar installations, energy storage installations or other utility purposes, subject to environmental and other permitting constraints.
- D. FPL does not yet own the land for Site Number 4. FPL anticipates closing on the property for Site Number 4 in December 2019 for a purchase price of \$4.4 million.
- E. Yes, it does qualify.

QUESTION:

For Interrogatory Numbers 20-23 and sub-parts, the four installations that FPL collectively refers to as "ST Project 5 sites" will be described as "Site Numbers 1, 2, 3, and 4" for ST Project 5. For Site Number 1, populate Columns (b), (c), and (d) in the chart below.

ST Project 5, Site Number 1			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 1 in ST Project 5?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 1, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 1?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 5, Site Number 1			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$76.6	74.5	\$1,028.4
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$6.4	74.5	\$86.4
Land (including easement costs)	\$6.9	74.5	\$92.3
AFUDC	\$2.8	74.5	\$37.6
Total	\$92.7	74.5	\$1,244.6*

* Total does not add due to rounding

- A. The total size of the ST Project 5, Site Number 1 property is 843.98 acres.
- B. The land required for this solar installation is 554.20 acres, which includes the solar array, the substation and transmission facilities, construction laydown areas, and other areas subject to permit conditions (such as roads, setbacks and land located within flood zones).
- C. None of the 289.78 remaining acres are suitable for future solar installations, energy storage installations or other utility purposes. This is due to the fact that 218.44 acres are comprised of waters, wetlands and preserve areas, and the remaining 71.34 acres are comprised of small, isolated remote parcels with access limitations and attendant construction requirements.
- D. The property for Site Number 1 was acquired on August 2, 2018 for \$6.8 million.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 2" of ST Project 5, populate Columns (b), (c), and (d) in the chart below.

ST Project 5, Site Number 2			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 2 in ST Project 5?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 2, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 2?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 5, Site Number 2			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$78.6	74.5	\$1,054.9
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$9.0	74.5	\$121.1
Land	\$9.7	74.5	\$129.7
AFUDC	\$3.0	74.5	\$39.6
Total	\$100.2*	74.5	\$1,345.2*

* Total does not add due to rounding

- A. The total size of the ST Project 5, Site Number 2 property is 646.03 acres.
- B. The land required for this solar installation is 559.95 acres, which includes the solar array, the substation and transmission facilities, and other areas subject to permit conditions (such as roads and setbacks).
- C. None of the 86.08 remaining acres are suitable for future solar installations, future energy storage installations or other utility purposes. This is due to the fact that 86.08 acres are comprised of waters, wetlands and preserve areas with access limitations and attendant construction requirements.
- D. The property for Site Number 2 was acquired on June 6, 2018 for \$9.7 million.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 3" of ST Project 5, populate Columns (b), (c), and (d) in the chart below.

ST Project 5, Site Number 3			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 3 in ST Project 5?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 3, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, energy storage installations, or for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 3?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 5, Site Number 3			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$69.9	74.5	\$938.7
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$7.5	74.5	\$101.1
Land (including easement costs)	\$4.6	74.5	\$62.0
AFUDC	\$2.6	74.5	\$35.1
Total	\$84.7*	74.5	\$1,136.9

* Total does not add due to rounding

- A. The total size of the ST Project 5, Site Number 3 property is 395.48 acres.
- B. The land required for this solar installation is 387.75 acres, which includes the solar array, the substation and transmission facilities, and other areas subject to permit conditions (such as roads and setbacks).
- C. None of the 7.73 remaining acres are suitable for future solar installation or other utility purposes. This is due to the fact that 7.73 acres are comprised of waters, wetlands and preserve areas that cannot be used for future solar installations or other utility purpose due to access limitations and attendant construction requirements.
- D. FPL does not yet own the property for Site Number 3. FPL anticipates closing on the property in December 2019 for a purchase price of \$4.5 million.
- E. Yes, it does qualify.

QUESTION:

For "Site Number 4" of ST Project 5, populate Columns (b), (c), and (d) in the chart below.

ST Project 5, Site Number 4			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)			
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)			
Land			
AFUDC			
Total			

- A. What is the total acreage for Site Number 4 in ST Project 5?
- B. How many acres are required (or planned) for the solar installation at this site?
- C. Of the remaining acres at Site Number 4, those not required (or planned) for this solar installation, how many acres would be suitable for future solar installations, or energy storage installations, for other utility purposes?
- D. What was the purchase price, and how long has FPL owned Site Number 4?
- E. Does this site qualify for the statewide property tax exemption for solar generation? If not, why?

RESPONSE:

The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL expects the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

ST Project 5, Site Number 4			
(a)	(b)	(c)	(d)
Cost Category	Cost (\$MM)	Alternating Capacity (MW _{ac})	Cost (\$/kW _{ac})
PV Array (includes panels, racks, posts, collection cables, EPC contractor, and development/project management expenses)	\$75.8	74.5	\$1,017.0
Transmission Interconnection and Integration (includes generator step-up transformers, substation materials, and contractor scope)	\$6.5	74.5	\$87.7
Land	\$3.3	74.5	\$44.3
AFUDC	\$2.8	74.5	\$37.2
Total	\$88.4	74.5	\$1,186.2

- A. The total size of the ST Project 5, Site Number 4 property is 716.00 acres.
- B. The land required for this solar installation is 465.90 acres, which includes the solar array, the substation and transmission facilities, and other areas subject to permit conditions (such as roads and setbacks).
- C. None of the 250.10 remaining acres are suitable for future solar installations, energy storage installations, or other utility purposes. This is due to the fact that 250.10 acres are comprised of waters, wetlands and preserve areas with access limitations and attendant construction requirements.
- D. FPL does not yet own the property for Site Number 4. FPL anticipates that it will close on the property in August 2019 for a purchase price of \$3.3 million.
- E. Yes, it does qualify.

QUESTION:

Petition at 4, Paragraph 7. Define the term cost-effective, as used in this text.

RESPONSE:

FPL defines a project or resource plan as cost-effective when it results in a lower Cumulative Present Value of Revenue Requirement (CPVRR) than the alternative. FPL compared two resource plans, one plan that includes the FPL SolarTogether projects and the alternative of not including the projects. The plan with the FPL SolarTogether showed a lower CPVRR, making that plan cost-effective for participants and the general body of FPL customers. In determining CPVRR, FPL considers the annual revenue requirements of all system costs and system benefits, including all cost associated with the project or plan.

QUESTION:

Petition at 4, Paragraph 7. Define the term unsubsidized, as used in this text.

RESPONSE:

The term unsubsidized as used in Paragraph 7 refers to the fact that over the life of the proposed Centers, non-participating customers are not burdened with program related costs from which they receive no benefits. Over the life of the program, base revenue requirements for non-participants' projected savings will more than offset the non-participants base revenue requirements (\$76.6 million savings compared to \$48.9 million revenue requirements).

QUESTION:

Please refer to FPL's petition filed March 13, 2019. In paragraph 22, FPL notes that emissions are a consideration of the variable costs.

- A. Please detail whether FPL's emissions savings achieved in the "FPL SolarTogether Plan" include CO₂ or CO₂ equivalent emissions. If so, please provide a sensitivity of the analysis without these costs. Also, please provide the revised annual and cumulative values (in nominal and net present value) for each category in electronic (Excel) format.

RESPONSE:

The emission savings achieved by the FPL SolarTogether Plan do include CO₂ costs which start in 2026. These projected CO₂ compliance costs are the same as used in the development of the 2019 Ten Year Site Plan, and the 2020 SoBRA filing. Please see FPL's response to Staff's First Set of Interrogatories No. 78 for the sensitivity analysis that reflects no CO₂ costs.

QUESTION:

For consideration of the SolarTogether projects, and their combined savings, in what year does FPL first account for a non-zero CO2 emission price?

RESPONSE:

The CO₂ compliance cost forecast that FPL is using in its 2019 IRP work (including the FPL SolarTogether analyses) was provided by the consultant ICF. This forecast has its first non-zero cost value in 2026.

QUESTION:

Please describe the methodology and assumptions that underlie FPL's CO₂ price forecast.

RESPONSE:

FPL uses ICF International for its CO₂ compliance cost forecast. ICF is a consulting firm with extensive experience in forecasting the cost of complying with the regulation of air emissions and is recognized as one of the industry leaders in this field. FPL has utilized ICF's CO₂ emission compliance cost forecast in all of its resource planning analyses since 2007. In the fourth quarter of 2018, ICF provided updated CO₂ compliance cost projections through the year 2050. ICF provided what amounts to a "middle" compliance cost projection and a "high" compliance cost projection. In addition, they provided annual probability values for these two non-zero compliance cost projections and for a zero compliance cost scenario. The compliance cost values were provided by ICF in real dollars and, following the direction from ICF, were converted by FPL to nominal dollars using a 2.1% factor. In the economic analysis of the FPL SolarTogether Program, as presented in the petition, FPL used the "middle" CO₂ emission price scenario.

QUESTION:

Please identify the date on which this CO₂ forecast was accepted as FPL's official CO₂ price forecast.

RESPONSE:

FPL adopted this price forecast as its official CO₂ price forecast in November 2018.

QUESTION:

Please identify the source of FPL's CO2 price forecast, in particular, was the forecast conducted internally or externally?

- A. If conducted externally please identify the organization responsible.

RESPONSE:

This forecast was conducted externally by ICF International. FPL has utilized ICF as the source of CO2 emission price forecasts since 2007.

QUESTION:

Please provide in electronic (Excel) format the forecasted values for FPL's official CO₂ price forecast.

RESPONSE:

Please see Attachment No. 1 to this Interrogatory for FPL's official CO₂ price forecast.

Florida Power & Light Company
Docket No. 20190061-EI
Staff's First Set of Interrogatories
Interrogatory No. 33
Attachment No. 1
Tab 1 of 1

Year	ICF Mid CO ₂ Nominal (\$/ton)	ICF High CO ₂ Nominal (\$/ton)	ICF Low CO ₂ Nominal (\$/ton)
2020	0.00	0	0
2021	0.00	0	0
2022	0.00	0	0
2023	0.00	0	0
2024	0.00	0	0
2025	0.00	0	0
2026	0.52	0	0
2027	0.84	0	0
2028	1.76	14.29	0
2029	2.19	15.26	0
2030	3.33	16.30	0
2031	4.25	17.40	0
2032	5.28	18.59	0
2033	6.44	19.85	0
2034	7.72	21.20	0
2035	9.15	22.64	0
2036	10.14	24.49	0
2037	11.24	26.49	0
2038	12.44	28.66	0
2039	13.77	31.00	0
2040	15.23	33.54	0
2041	16.98	37.91	0
2042	18.93	42.86	0
2043	21.13	48.45	0
2044	23.59	54.77	0
2045	26.36	61.92	0
2046	29.47	70.00	0
2047	32.97	79.13	0
2048	36.90	89.45	0
2049	41.33	101.12	0
2050	46.31	114.32	0

**FPL's responses to
Staff's First Set of Interrogatories**

**No. 34 - Attachment No.1
Bates No. 000001 – 000008**

is confidential in its entirety

QUESTION:

Please provide a copy of the Company's annual fuel price forecast covering the useful life of the 1,490 MW SolarTogether projects. Please provide as commodity transportation, and delivered fuel prices.

RESPONSE:

Please refer to confidential Attachment No. 1 to this Interrogatory.

QUESTION:

Please identify the source and date of FPL's fuel price forecasts by fuel type used to support its Petition.

RESPONSE:

FPL's Long Term Fuel Price Forecast was developed internally in December 3, 2018.

In its projections of oil and natural gas prices, FPL used the following methodology:

- (a) For the current + 2 years (2019-2021), the methodology used the December 2018 forward curve for New York Harbor 0.7% sulfur heavy oil, WTI Crude Oil, Ultra-Low Sulfur Diesel (ULSD) fuel oil, and Henry Hub natural gas commodity prices;
- (b) For the next two years (2022 and 2023), FPL used a 50/50 blend of the December 2018 forward curve and the most current projections (9/18/2018 for Gas and 11/16/2018 for Oil and products) from The PIRA Energy Group;
- (c) For the 2024 through 2040 period, FPL used the annual projections from The PIRA Energy Group (0/18/2018 for Gas and 11/16/2018 for Oil and products); and
- (d) For the period beyond 2040, FPL used the real rate of escalation from the Energy Information Administration (EIA) (EIA's Annual Energy Outlook (AEO) released 2/6/2018). In addition to the development of oil and natural gas commodity prices, nominal price forecasts also were prepared for oil and natural gas transportation costs. The pipeline charges and forward market location basis as of 12/3/2018 are applied on a monthly basis to the entire forecast period. The addition of commodity and transportation forecasts resulted in delivered price forecasts.

Coal prices were forecasted using the following approach:

- (a) Delivered price forecasts for Central Appalachian (CAPP), Illinois Basin (IB), and Powder River Basin (PRB) coal were provided by JD Energy (there are no future prices for coal so, we use the services of JD Energy for coal forecasts – the forecast is dated 11/2/2018; and
- (b) The coal price forecast for Plant Scherer assumes the continuation of the existing mine-mouth and transportation contracts until expiration, along with the purchase of spot coal (coal is purchased on an as needed basis), to meet generation requirements.

QUESTION:

Please identify the date of FPL's next/updated fuel price forecast that will be used for Company/business planning purposes.

RESPONSE:

FPL develops its Long Term Fuel Price Forecast once a year, typically in the 4th Quarter of the current year or early in the 1st Quarter of the new year.

QUESTION:

Has FPL compared the fuel price forecast considered in this Petition to any other publicly available source of forecasted fuel prices, such as forecasts which may be available from the Energy Information Administration? If so, please discuss the results of any analysis performed.

RESPONSE:

As described in detail below, FPL's projections are thorough and are based on widely recognized sources. Therefore, the company does not believe comparisons to other forecasts are necessary.

Fossil Fuel:

FPL's medium fossil fuel price forecast methodology utilizes projections from The PIRA Energy Group (PIRA), rates of escalation from the U.S. Energy Information Administration (EIA), forward commodity price curves for fuel oil and natural gas, and projections from JD Energy, Inc. PIRA, a world-recognized consulting firm with expertise in all aspects of the fuel oil and natural gas industry, supplies FPL with an extensive database to support its short and long-term projections of future fuel oil and natural gas prices. FPL utilizes forward commodity price curves for fuel oil and natural gas to project the short-term forecast (current year, current year plus 1 and current year plus 2), creates a blend of forward curves and PIRA curves for the medium term (current year plus 3 and current year plus 4) and finally, applies escalation rates, provided by the EIA, to the long-term fuel oil and natural gas projections provided by PIRA. JD Energy, a consulting firm retained by many utilities and coal suppliers, has expertise in all aspects of the coal and petroleum coke industry. The firm supplies FPL with an extensive database to support its short and long-term projections of future coal prices. FPL's forecasts reflect these authoritative and independent sources. Consequently, FPL believes the Company's projections are reasonable and comparisons to other forecasts are not necessary.

Nuclear:

For nuclear fuel price projections, FPL subscribes to a number of publications such as reports published by UX Consulting, Energy Resources International, and Trade Tech. These firms represent a broad spectrum of companies and serves as indicators for spot and long term market behaviors. FPL's long term price projections are monitored and updated as necessary to be reasonably consistent with the best estimates/projections of these recognized independent companies. FPL expects that there will be times when uranium market prices will fluctuate about these projections, but the price used for uranium provides a better representation of long term trends.

QUESTION:

Did the Company perform any price sensitivity analysis (high and low) of its fuel price forecast considered in this Petition?

- A. If so, please provide the results for the full 30-year forecast period, and discuss the methodology used by the company in preparing its base, high, and low, fuel sensitivities.
- B. If not, please detail why sensitivity analysis was not done.

RESPONSE:

- A. Yes. Please refer to FPL's response to Staff's First Set of Interrogatories No. 78 with regards to the fuel price sensitivities.

FPL develops its Medium fuel cost forecast first. FPL's approach has been to then adjust the Medium fuel cost forecast upward (for the High fuel cost forecast) or downward (for the Low fuel cost forecast) by multiplying the annual cost values from the Medium fuel cost forecast by a factor of $(1 + \text{the historical volatility of the 12-month forward price, one year ahead})$ for the High fuel cost forecast, and by a factor of $(1 - \text{the historical volatility of the 12-month forward price, one year ahead})$ for the Low fuel cost forecast.

- B. Not applicable.

QUESTION:

Please refer to the petition, page 8, paragraph 21. It is stated that "Both plans [No ST Plan and FPL SolarTogether Plan] use the same major system assumptions, including the Company's official load, fuel price, and carbon dioxide price forecasts."

- A. Please provide FPL load forecasts used to determine the CPVRR in this proceeding in electronic format (Excel).
- B. Please provide the date(s) FPL's load forecasts were completed and approved.
- C. Please detail how FPL's load forecast is considered in the Cumulative Present Value Revenue Requirement Analysis.
- D. Did FPL consider different combinations of forecast sensitivities in the CPVRR? i.e. did FPL prepare a separate CPVRR based on "low case", "base case", and "high case" load forecast scenarios?
- E. If the answer to 1(d) is yes, please provide all such forecasts, summaries of such CPVRR results using such forecasts, and all related data output.
- F. If the answer to 1(d) is no, please explain why not?

RESPONSE:

In the economic analysis of the FPL SolarTogether Program, as described in the Petition, FPL used the same major system assumptions and methodology as used in the 2019 FPL Ten Year Site Plan and the 2020 SoBRA filing. This applies to both plans [No ST Plan and FPL SolarTogether Plan].

- A. Please see Attachment No. 1 to this response.
- B. FPL's load forecast was completed and approved in December 2018.
- C. FPL's load forecast is a key input in the development of resource plans, and in the economic dispatch of FPL's generating units which in turn determine the CPVRR for each resource plan and, as such, it is used in FPL's resource plans and production costing models.
- D. FPL did not consider different load forecast sensitivities.
- E. See response to subpart (D) above.
- F. FPL does not perform load forecast sensitivity analysis in the economic determination of resource plans. The principal concern for potential load forecast error is system reliability; FPL's reserve margin criteria is in part developed to account for such potential load forecast error.

QUESTION:

Please refer to Schedules 3.1 and 3.2, Forecasted Columns (10) "Net Firm Demand," and Schedule 3.3, Column (2) "Forecasted Net Energy For Load without DSM" of the Ten Year Site Plans 2018-2029 and 2019-2029.

- A. Staff notes that the Company expects both Summer and Winter Peak Forecasts to decrease in 2019 relative to their 2018 forecast, while Net Energy For Load (NEL) is forecasted to be higher in 2019 than FPL's NEL forecast in 2018. Please discuss in detail the implications and the drivers behind a lower Peak Forecast but a higher Net Energy For Load forecast. Additionally, please specify what model inputs contribute significantly to the lower Peak forecasts and the higher Net Energy for Load forecasts.

RESPONSE:

Net Energy Load ("NEL")

There are a number of reasons why the NEL forecast in the 2019 TYSP is higher than the NEL forecast in the 2018 TYSP. First, the customer forecast is higher in the 2019 TYSP compared with the 2018 TYSP. Second, there is a smaller impact of Codes & Standards in the 2019 TYSP forecast compared with the 2018 TYSP. Third, on a weather normalized basis, the NEL forecast in the 2018 TYSP under forecasted NEL in 2018 by 3.1%. The model used in 2018 consistently under forecast NEL throughout 2018. A new model was developed with similar drivers as the 2018 model but with a different model specification. The new model is a daily as opposed to a monthly model. Along with the first two reasons, the result is a higher forecast, consistent with the actual 2018 NEL. Through the first quarter of 2019, this new NEL model has performed very well. While results are available only for the first three months of this year, both negative and positive monthly variances have been observed. This is a sign of an unbiased forecast. The first quarter weather normalized NEL variance is +0.8%.

Summer Peak and Winter Peak

The 2019 TYSP summer peak forecast is lower than the 2018 TYSP summer peak forecast for a few reasons. First, the real per capita income forecast which is a variable in the summer peak model and obtained from IHS Markit, was lowered by about 0.4%. Second, there is a larger impact of Codes & Standards in the 2019 TYSP model compared with the 2018 TYSP model. Third, since the 2018 summer peak model over forecasted the actual 2018 peak, it is not surprising that the revised 2019 TYSP forecast is lower than the 2018 TYSP forecast.

Like the summer peak, the 2018 TYSP over forecasted the winter peak. The actual 2018 winter peak, on a weather normalized basis, was 1.4% below the forecast. Since the 2010-2011 time frame, the model has consistently over-forecasted the winter peak. The trend since 2010-2011 has been a successively lower winter peak forecast due to the mild winters experienced in the FPL territory. The 2019 TYSP forecast continues this trend.

QUESTION:

Please identify the source and date of all historical and projected independent and dependent variables used to produce forecasted values in the Net Energy for Load, Summer Firm Peak, and Winter Firm Peak models.

RESPONSE:

a. Net Energy for Load Model

- a. Actuals: January 2008 – August 2018
- b. Estimated: September 2018 – December 2040

Variables	Source
Net Energy for Load	FPL
Weekend Holiday	Calendar
Irma20170909 Dummy	FPL
Irma20170910 Dummy	FPL
Irma20170911 Dummy	FPL
Irma20170912 Dummy	FPL
Weighted Per capita income	IHS Markit
Codes Standards 2018 Update	Itron
Real Price Increase	FPL & IHS Markit
January - December Cooling Degree Hours	The Weather Company
January, February, March, and December Heating Degree Days	The Weather Company
Heating Degree Day Square Term	The Weather Company
Cooling Degree Hour Square Term	The Weather Company

b. Summer Peak Model

- a. Actuals: January 1991 – August 2018
- b. Estimated: September 2018 – December 2063

Variables	Source
Summer Peak	FPL
Annual Data 2019TYSP Max Temperature Day	The Weather Company
Annual Data 2019TYSP Cooling Degree Hours	The Weather Company
Annual Data 2019TYSP Sum KW savings per customer	Itron
Annual Data 2019TYSP Per capita income	IHS Markit
Trans1.Year 2005 Dummy	FPL

c. Winter Peak Model

- a. Actuals: January 2000 – August 2018
- b. Estimated: September 2018 – December 2063

Variables	Source
Winter Peak	FPL
Winter Peak Min Temp	The Weather Company
Trans1.trend80 Dummy	FPL

QUESTION:

Please detail all changes to model specifications or assumptions used to prepare the 2019 Ten Year Site Plan Net Energy for Load, Winter Firm Peak, and Summer Firm Peak models relative to FPL's 2018 Ten Year Site Plan specifications and assumptions. Why did these assumptions/specifications change and how are they implemented in the modeling process?

RESPONSE:

Net Energy for Load ("NEL")

Changes from the 2018 Ten Year Site Plan include moving from a monthly model to a daily model. A daily model is more responsive to the impact of day to day temperature swings on energy usage. Weather data was also changed from monthly to daily. Other changes to the model include the removal of the leap year term, the replacement of the monthly dummies with monthly temperature variables, the removal of the price decrease term, the inclusion of variables to account for the impact of Hurricane Irma, and the inclusion of an additional autoregressive term. These changes were made based on model diagnostics.

System Summer Peak

Changes made from the 2018 Ten Year Site Plan summer peak model were the inclusion of autoregressive terms. The inclusion of autoregressive terms was prescribed by the model diagnostics.

System Winter Peak

Changes from the 2018 Ten Year Site Plan winter peak model were the inclusion of a trend term and an autoregressive term, the removal of the two dummy variables; one for post 2011 and one for the year 2008, the removal of the customer variable, and the removal of the heating degree hour variable for the prior day squared. These changes were made based on model diagnostics.

QUESTION:

Please discuss all economic and non-economic assumptions undertaken in development of the Net Energy for Load, Summer Firm Peak, and Winter Firm Peak models. Please detail how these assumptions were built into all three models.

RESPONSE:

Economic and non-economic assumptions used in the development of our Net Energy for Load (NEL), Summer Peak, and Winter Peak models include Florida real per capita income, the price of electricity, weather, and the impact of mandated energy efficiency standards.

Florida real per capita income is included in our NEL and Summer peak models. This variable is weighted by the percentage of the Florida population that is employed. This specification began following the Great Recession. During and following the Great Recession, the decline in electric sales was not fully reflected, as indicated by the model statistics, by the decline in Florida real per capita income. FPL determined that the missing component was the high unemployment rate at the time. Adjusting real per capita income by the percentage of the population employed markedly improved the significance of the real per capita income variable and the model overall.

Various specifications of electric price have been used in our NEL model over the years. For the current model, a price index of the real electric price increase is used. This price index has a 2005 base and increases when the real electric price increases from the prior month and stays constant when the real electric price decreases from the prior month. This is based on the notion that customers will react to higher electric prices by using less electricity, but the elasticity on declining electric prices would be small or insignificant.

Weather is a critical variable in forecasting NEL and peaks. For the NEL model, monthly Cooling Degree Hours "CDH", monthly Heating Degree Day "HDD" for the winter months, and monthly squared terms for CDH and HDD are used. The squared terms are used to capture the non-linear impacts of weather on energy usage. For the Summer peak model, the maximum temperature on the summer peak day and the CDH two days prior to the peak are the chosen weather variables. A hot summer day combined with prior days' heat buildup are important weather factors that drive the summer peak. For the Winter peak model, the minimum temperature on the winter peak day is used, since the colder the temperature, the higher the winter load.

A variable for the impact of mandated energy efficiency standards is used in our models to capture the behavioral component of the impact of energy efficiency measures. Every two years, Itron provides estimates of the impact of these standards on FPL's NEL and peaks. By including this variable in our models, FPL can capture customer behavior with respect to these energy efficiency measures.

QUESTION:

Please identify all "out of model" adjustments to DEF's Net Energy for Load, Summer Firm Peak, and Winter Firm Peak models and/or forecasts and explain the basis for each.

RESPONSE:

FPL assumes the reference to "DEF's" to mean "FPL's."

Plug-in Electric Vehicles (PHEV)

A line item adjustment is made for the incremental load from PHEVs in order to reflect additional load not otherwise captured in FPL's historical load levels. The introduction of plug-in electric vehicles began at the end of 2010. Since then, the number of PHEVs has been increasing slowly but steadily. Because there is limited historical data for PHEV load, the load from PHEVs are not adequately reflected in the forecast. The forecast therefore is adjusted for the incremental load from PHEVs.

Private Solar

Similar to PHEVs, a line item adjustment is made for Private Solar in order to reflect the load impact not otherwise captured in FPL's historical load levels. As with PHEVs, there are not enough historical data for Private Solar to adequately reflect its impact on the load forecast. Therefore, the forecast is adjusted to reflect the impact of incremental Private Solar.

Economic Development Rates

The Economic Development Rider and Existing Facility Economic Rider add incremental load to FPL's system, not otherwise captured in FPL's historical load levels. These riders offer discounts to customers for adding new or incremental load. Since this additional load is not captured by the models, a line item adjustment is made to incorporate this load into FPL's forecasts.

Wholesale Contracts

FPL's forecast is adjusted for incremental wholesale loads in order to reflect changes in load not otherwise reflected in FPL's historical load levels. These adjustments are the result of new, modified, expanded, or expired wholesale contracts.

City of Vero Beach electric system (COVB)

A line item adjustment is made for the acquisition of the City of Vero Beach electric system. The City of Vero Beach became part of FPL's system on December 17, 2018. In order to reflect additional load not captured in FPL's historical load levels, the forecast is adjusted for the load expected from COVB.

QUESTION:

Please identify all FPSC dockets where FPL's load forecast used to support the instant docket has been used to support FPL's filings in those dockets.

RESPONSE:

The FPL load forecast used to support this docket was also used in the Company's 2019 Ten-Year Site Plan, as well as the following FPSC dockets:

- 20190001-EI – FPL Petition for Approval of Solar Base Rate Adjustment
- 20190082-EQ – FPL Petition for Approval of Renewable Energy Tariff and Standard Offer Contract
- 20190015-EG – FPL Petition for Approval of Numeric Conservation Goals

QUESTION:

Please provide historical and forecasted data used to project FPL's Summer Firm Peak, Summer Winter Peak, and Net Energy for Load in monthly series. Please provide forecasted values for the entire useful life of the 1,490 MW SolarTogether investment in electronic (Excel) format.

RESPONSE:

Please see Attachment No. 1 to this Interrogatory. Note the models for Summer Peak, Winter Peak, and Net Energy for Load are used to develop forecasts through 2040. Beyond 2040, the forecasts are trended. Although the useful life of the 1,490 MW FPL SolarTogether investment extends through 2051, there are no forecast data beyond 2040. Daily data are used to project Net Energy for Load. For the Summer and Winter peak, the data are annual.

QUESTION:

Please provide an explanation of the method(s) FPL used to continue its projections appearing in FPL's 2019 Ten Year Site Plan for the period 2029 through 2051 for each forecasted load series used to determine the CPVRR cited in the Petition, Page 8, Paragraph 20 (\$139 M).

RESPONSE:

When evaluating resource options, FPL performs economic analyses and develops resource plans to cover the life of the resource option under consideration. This approach culminates in the development of the resource plan shown in the 2019 FPL Ten Year Power Plant Site Plan as well as all other resource planning analyses. For the FPL SolarTogether Program analysis, FPL developed resource plans and annual revenue requirements through the year 2050. These resource plans through 2050 were included in the system modeling that develops annual revenue requirements for each resource plan. In this process, FPL modeled the system using its production costing model through the year 2049 and then extrapolated the results to obtain the results for 2050. This extrapolation was required as the UPLAN model can only run for 30 years.

The development of FPL's resource plans used in the FPL SolarTogether Program analysis is discussed in more detail in the response to Staff's First Set of Interrogatories No. 76.

QUESTION:

Please refer to paragraph 3 of the Petition. Explain the similarities and differences of SolarTogether with each of the programs listed below, especially with regards to whether they are subsidized by the general body of ratepayer

- A. SolarNow
- B. Net Metering

RESPONSE:

A. FPL SolarTogether vs. SolarNow

- a. Both are voluntary programs, offering all customers who wish to participate the option to do so, and both are unsubsidized over the life of the projects they support.
- b. SolarNow is a program designed to focus on education and awareness. As such, the solar installations under SolarNow were intended to be in highly visible areas and supported by local messaging and online platforms to convey the larger story in solar energy. Under SolarNow, the participants bear the net revenue requirements (revenue requirements minus avoided fuel and emission costs resulting from the projects' electric production) associated with the Program's solar facilities and the addition of facilities is such that the net revenue requirements match the participants' contributions. The objective is that no remaining costs for the facilities will be borne by non-participating customers at the end of the pilot. While there is no direct bill benefit associated with SolarNow, program participants are enthusiastic about spreading the news about the potential of solar energy and the highly visible installations support this mission.
- c. FPL SolarTogether offers participants a bill credit that is representative of the actual solar generation the participant's share produces monthly. No such bill credits are offered to SolarNow program participants, and all generation value from SolarNow facilities is to the benefit of all FPL customers.

B. FPL SolarTogether vs. Net Metering (a/k/a NEM, private solar, or rooftop solar)

- a. Both are voluntary programs, offering all customers who wish to participate the option to do so. Both programs offer financial bill credits that are based, in part, on actual solar generation.
- b. Unlike SolarTogether, Net Metering is a legislatively created program. NEM participants own and operate their own solar energy system and are allowed to earn full retail rate bill credits for any solar generation produced but not utilized on site. This creates a cross subsidy where non-participants are burdened with a higher, disproportionate share of fixed system costs, as NEM customers are earning credits at the full retail rate inclusive of the fixed system costs related to generation, distribution, and transmission. Under the

existing rule, this full rate credit creates an inherent subsidy from non-participants to participants which persists through the life of the private solar asset.

- c. FPL SolarTogether allows those who cannot afford, do not wish to own, or cannot place private solar on their home, multi-unit dwelling or business the opportunity to participate in a program that increases their personal use of solar generation with no cross-subsidy over the life of the program. FPL owns and operates the solar energy centers built for the purposes of the program leveraging economies of scale of building universal scale solar. FPL SolarTogether participants will continue to pay their full customer bill as the program in no way changes their energy usage or rate structure.

QUESTION:

Please refer to paragraph 3 of the Petition. Provide the number of customers and the estimated installed capacity (in MW_{ac}) for each of the programs listed below by customer class.

- A. SolarNow
- B. Net Metering

RESPONSE:

As of March 31, 2019, customer counts and estimated installed capacity (MW_{ac}) for each program are as follows:

Participant Counts – As of March 31, 2019				
Program	Residential	Commercial	Industrial	Total
Total SolarNow	48,715	633	0	49,348
Net Metering – Solar	11,477	907	15	12,399
Net Metering – Wind	3	7	0	10
Net Metering - Biomass	0	1	3	4
Total Net Metering	11,480	915	18	12,413

Installed Capacity (MW _{ac}) – As of March 31, 2019				
Program	Residential	Commercial	Industrial	Total
Total SolarNow¹	1.883 MW_{ac}			
Net Metering – Solar	78.668	28.181	1.239	108.088
Net Metering – Wind	0.007	0.050	0.000	0.057
Net Metering – Biomass	0.000	0.750	5.199	5.949
Total Net Metering -	78.675	28.981	6.4380	114.094

¹ SolarNow program capacity is tracked based on MW_{DC}, for the purposes of this response the conversion was based on an estimated DC to AC ratio of 1.2.

QUESTION:

Please refer to paragraph 3 of the Petition. Please answer the following questions regarding FPL's existing SolarNow program:

- A. Do current participants of FPL's SolarNow program pay a monthly contribution of \$9.00 and receive no additional credit on their bill?
- B. Is enrollment in the SolarNow program on a month-to-month basis?
- C. Could these participants move from the SolarNow to the SolarTogether program?

RESPONSE:

- A. Yes, FPL SolarNow program participants pay a monthly contribution of \$9.00 and do not receive a credit on their bill.
- B. Yes, FPL SolarNow program is on a month to month basis.
- C. Assuming the SolarNow program continues beyond December 31, 2019, there is nothing that prohibits participants from exiting SolarNow to join FPL SolarTogether. Further, should they wish to do so, customers may participate in both program simultaneously.

QUESTION:

Please refer to paragraph 4 of the Petition where it states that the SolarTogether program is a "... cost-effective opportunity for customers to directly support the expansion of solar power without the need to install solar on their rooftop." Explain whether the web-based enrollment system described in paragraph 16 of the Petition will provide a payback calculation for residential and small commercial customers. If yes, as part of this response explain whether the web-site will also include a payback estimate if the customer were to install roof-top solar.

RESPONSE:

FPL is developing a comprehensive program website with detailed information about how the program works, benefits, frequently asked questions, etc. The site will have a self-service engagement tool to help customers determine the subscription level that will best suit their personal needs and budget – (estimate monthly cost, credit, potential saving, and paybacks).

FPL also is partnering with Clean Power Research® to incorporate the intelligence of their WattPlan® calculator into FPL.com. WattPlan® calculator is a third party tool licensed product from Clean Power Research and is used by numerous other utilities across the country (www.cleanpower.com). Although this will not be part of the enrollment process, the calculator will give customers the ability to compare an FPL SolarTogether subscription with a net-metered rooftop solar system, including payback estimates. Clean Power Research's WattPlan® calculator is a customized web-based offering that has been implemented by other utilities and receives positive customer feedback.

QUESTION:

Please refer to paragraph 4 of the Petition. What alternative program options or structures did FPL consider for community solar?

RESPONSE:

As FPL developed the FPL SolarTogether program it utilized learnings from both SolarNow and other successful community solar programs offered throughout the U.S.

FPL reviewed several of the in state community solar programs that have been approved or are in the process of being approved including: Orlando Utilities Commission, Jacksonville Electric Authority, City of Tallahassee Utilities, Duke Energy Florida, Gulf Power, and Tampa Electric Company programs. Additionally, FPL reviewed notable out of state community solar programs, including Xcel Energy, Southern Company, Duke/Progress Energy Carolinas, Puget Sound Energy, and Pacific Gas & Electric. Programs had numerous varying elements, including program and project size, location requirements, compensation, customer allocations, and subscription size. Finally, FPL conducted outreach with several large national commercial customers who participate in these types of programs outside of Florida to better understand what drives them to participate and what options/structures they preferred. This information helped to identify the attributes that were critical to program participation including ownership risk, generation risk, contractual commitments and financial attributes, such as first annual benefits and payback expectations, and renewable energy certificate retirement. Utilizing this information, FPL developed a program that would meet these needs while still working within the regulatory structure within which FPL operates today.

QUESTION:

Please refer to paragraph 5 of the Petition. Explain why FPL opened a pre-registration period for only commercial, industrial, and government accounts. Describe any barriers these customers face to install solar on their rooftop that are similar to the barriers faced by residential customers.

RESPONSE:

FPL elected to offer a pre-registration period for commercial, industrial, and governmental (C&I-G) accounts as these are the largest energy users and thus potentially the largest subscribers. Understanding the level at which C&I-G customers were willing to participate helped inform FPL on the appropriate initial program size and schedule. In reviewing other community solar programs, FPL learned that many have instituted programs that did not reasonably satisfy interest, leading to lengthy waitlists and delays in fulfilling customer subscriptions.

FPL had market information that indicated residential and small business customers have interest in different types of solar offers which was partially informed by FPL's SolarNow program. Based on this data, FPL felt it was not necessary to offer pre-registration to residential and small business customers, but rather set aside a fixed amount to ensure the program could service this interest. This desire to have different solar offerings continues today within FPL territory where, as of the end of March 2019, there are over 45,000 SolarNow participants and over 12,000 Net Energy Metering customers. This equates to approximately 1.1% of the 5 million total FPL customers. Each of these programs has seen increased levels of interest in the last 12-18 months, indicating that there is market demand within this segment for different types of solar and renewable products.

Residential and C&I-G accounts face very similar barriers to installing their own net metered solar generation. These include:

1. Availability of the upfront capital needed to fund the installation of a new system, which may include roof replacement
2. Willingness to take on the ownership obligations associated with a rooftop system, including the option to self-maintain or hire outside support to maintain and repair the system, and the associated recurring maintenance and insurance costs
3. Roof integrity and insolation. Many older roofs may not be suitable to support the additional weight of a system or would require replacement prior to installation of a system; the roof could be oriented such that it is not adequate to support effective generation or is shaded by nearby buildings or trees. In addition, rooftop solar panels can increase the cost of homeowner insurance and may cause homeowner insurance coverage issues if the panels cause damage to the roof.
4. Roof access and size. Many Florida residents rent or live in high-rise condos where they do not have a roof upon which to install a system. While less prevalent with C&I-G accounts, some do lease building space and do not have roof right access. Additionally, roof size may be limited and thus unable to provide enough space to provide for a 100% energy offset.

QUESTION:

Please refer to paragraph 5 of the Petition. Provide all pre-registration marketing materials given to commercial, industrial, and governmental accounts.

RESPONSE:

Please refer to the following attachments to this Interrogatory and link below (Attachment Nos. 1-7 respectively):

- 1.) Webinar slides (recorded webinar: <https://youtu.be/PDCXp3SIVDM>)
- 2.) FPL.com pre-registration web pages
- 3.) Pre-registration website frequently asked questions and answers
- 4.) Pre-registration agreement
- 5.) Example 30-year value stream
- 6.) Example pre-registration letter (un-assigned account)
- 7.) Example pre-registration email (assigned account)

ADVANCING SOLAR IN FLORIDA

SolarTogether

An FPL Shared Solar Program



Solar in Florida is on the rise



Sunshine state now ranks
6th in the country for
universal solar capacity and
expected to grow

FPL plans to install **1,200 MW** of **solar** by 2020

The FPL Shared Solar Program leverages the economies of scale of building Universal Solar, bringing a cost effective, hassle-free solar alternative to our customers.



Advancing Solar in Florida

SolarTogether, an FPL shared solar program, is designed to allow all FPL customers the opportunity to share in the benefits and costs of large scale solar while receiving monthly bill credits on their FPL bill.



FPL Shared Solar

How the program works in first year of enrollment



Shared Solar Subscription

100 kW subscription share
X \$6.76/kW fixed subscription rate

Your Monthly Subscription Cost

\$676

Solar Energy Produced

212 hours per month
x 100 kW subscription share

21,200 kWh solar energy

Subscription Credit

21,200 kWh solar energy produced
x \$0.0308/kWh subscription credit rate/ kWh

Your Monthly Bill Credit

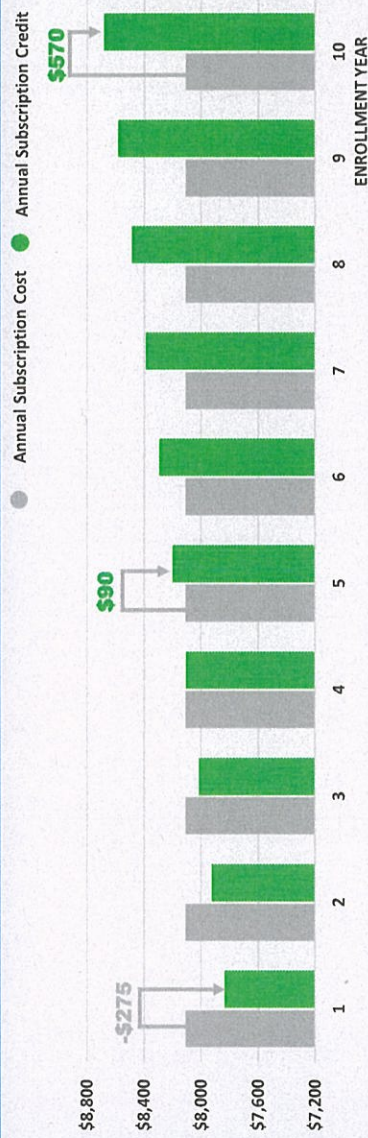
\$653

Illustrative examples presented here for discussion purposes only, program charges and credits will be established per the Florida PSC approved tariff



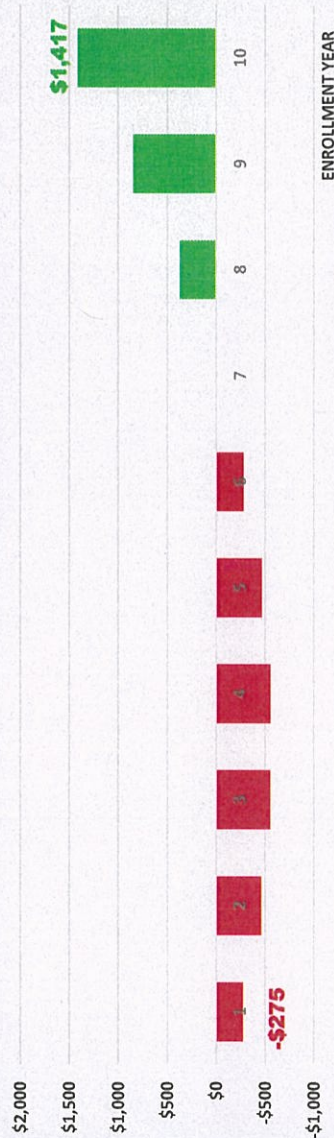
Estimated Bill Impact

ESTIMATED ANNUAL SUBSCRIPTION BILL IMPACT



Overtime the annual benefits are forecasted to exceed the costs

ESTIMATED CUMULATIVE SUBSCRIPTION BILL IMPACT



Program is designed to allow participants to achieve simple payback between years 5-7



Illustrative examples presented here for discussion purposes only, program charges and credits will be established per the Florida PSC approved tariff

FPL Shared Solar

Reduce your energy costs while achieving your sustainability goals.

Benefits

- » Offset up to 100 percent of your energy usage
- » Renewable Energy Credits (RECs) are retired on your behalf
- » Receive bill credits immediately

Economics

- » Simple payback between 5-7 years
- » Fixed monthly subscription rate
- » Escalating bill credits
- » No maintenance, operational or insurance costs

Terms

- » No upfront cost
- » No long term contract
- » Subscription is transferable to another store or location
- » Subscription cannot be sold or transferred to another customer



Pre-Registration

Pre-Registration starts November 29, 2018 through January 25, 2019

- **Why is there a pre-registration window for Commercial, Industrial, and Municipal customers?**
 - Allows us to better understand Customer interest so we can file an appropriately sized program and development plan to meet the need
 - Allows interested customers to reserve their spot in the program



Pre-Registration Process

Easy 3 Step Pre-Registration Process

Step 1

- Learn about the program
- Sign up for an informational webinar

Step 2

- Calculate your maximum subscription

Step 3

- Complete the pre-registration form
- Read, sign, and submit the pre-registration agreement



Determining Maximum Subscription

Method 1: Estimation from FPL bill

1. Review your FPL bills to determine your annual kWh usage
2. Divide your annual kWh usage by 2,535 kWh / kW
3. Maximum Subscription Calculation:

$$\frac{15,300 \text{ kWh}}{2,535 \text{ kWh} / \text{kW}} = 6 \text{ kW Max. Subscription}$$



Determining Maximum Subscription

Method 2: Subscription Calculator

Program Subscription Estimator

First, let's calculate your estimated maximum subscription based on your average monthly FPL bill.

How many business locations do you currently have in FPL service territory?

10

On average, how much do you spend monthly (in dollars) on your FPL bill for a single location?

1000

CALCULATE

Your maximum subscription is **479 kW**

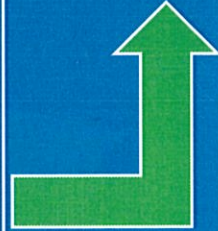
You are eligible to subscribe between 1 kW - 479 kW.

Remember this number, you will need it to complete your early registration.

Recalculate >

PRE-REGISTER

Or to learn more, view our FAQs >



Pre-Registration Form & Agreement

Customer Information

This is how we'll send status updates.

Test Company

test.company@att.net

999-888-7777

47 kW

1298347655

NEXT

FPL Shared Solar Subscription Agreement

Your signature is required to submit your enrollment. Please read carefully the Subscription Agreement and provide your signature electronically.

SolarTogether - An FPL Shared Solar Program

Pre-Registration Agreement

Pursuant to this pre-registration agreement ("Agreement"), the undersigned ("Subscriber") is agreeing to subscribe to a specified number of kilowatts ("kW") of solar-generated electric power under SolarTogether - An FPL Shared Solar Program ("Program") sponsored by Florida Power & Light Company ("FPL"). The Program will be filed with the Florida Public Service Commission ("FPSC") in 2019, and it is anticipated that Program power will become available to FPL customers sometime in March 2020. This voluntary program allows FPL customers to subscribe to a portion of universal solar capacity built specifically for this Program, thereby sharing in the benefits of solar generation and receiving a credit for the customer's entire enrollment for the remainder

By signing below I agree to the subscription terms and conditions

Please print your name here

Jane Doe

Please print your company here

TEST Company

[View Pre-Registration Agreement](#)

SUBMIT



Program Implementation

Pending Florida PSC Approval, Billing would begin as early as March 2020

	2018		2019				2020	
	Q4		Q1	Q2	Q3	Q4	Q1	Q2
Pre-Registration For Commercial Cust.			11/29/2018 - 1/25/2019					
Florida PSC Petition & Tariff Filing						3/1/2019 - 10/31/2019		
Expected PSC Program Approval							10/7/2019 - 10/31/2019	
Expected Program Opening							11/1/2019 - 11/17/2019	
Energy Centers Operational								1/31/2020
First Bill Cycle								3/1/2020



FPL Shared Solar

Helpful Program Information

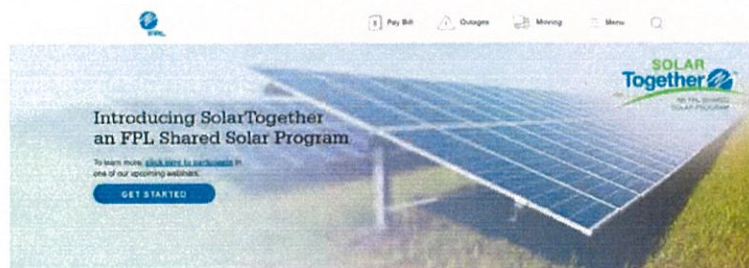
Program Website

www.fpl.com/solartogether

Contact Us via Email

SolarTogether@fpl.com





Florida Power & Light Company
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Advancing solar in Florida

Solar Together, an FPL Shared Solar Program, allows customers to share in the benefits and costs of universal solar while receiving monthly bill credits on their FPL bill.

Reduce your energy costs while achieving your sustainability goals

Benefits

- Offset up to 100 percent of your energy usage (subject to availability)
- Renewable Energy Credits (RECs) are retired on your behalf
- Receive bill credits immediately

Economics

- Simple contract between 5-7 years
- Fixed monthly subscription rate
- Essentially \$0 burden
- No maintenance, disruptions or insurance costs

Terms

- No upfront cost
- No long-term contract
- Subscription is transferable to another entity or location
- Subscription cannot be sold or transferred to another customer

[GET STARTED](#)

How the program works

1. Determine your subscription share by allocating the amount of energy you wish to offset - up to 100%.
2. Calculate your monthly subscription cost based on the fixed subscription rate of \$6.76/kWh multiplied by your subscription share.
3. Estimate your monthly subscription credit based on your subscription share multiplied by the amount of solar energy produced multiplied by the subscription credit rate.

100 kW subscription example

100 kW

Shared Solar Subscription
100 kW subscription share
x \$6.76/kWh fixed subscription rate

Your Monthly Subscription Cost
\$676

Solar Energy Produced
212 hrs per month
x 100 kW subscription share

21,200 kWh solar energy

Subscription Credit
21,200 kWh solar energy produced
x \$0.625/kWh subscription credit rate

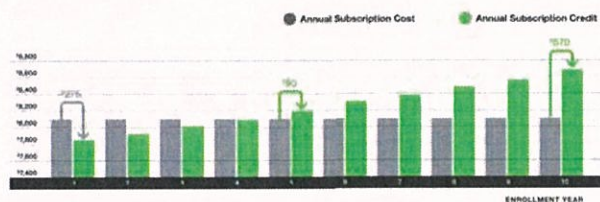
Your Monthly Bill Credit
\$653

That means you get solar energy for just \$23 for the month!*

And over time, the annual benefits are forecasted to exceed the costs.

Estimated Annual Bill Impact

100 kW Subscription Example



The graph above shows the estimated bill impact over a ten-year period for a 100 kW subscription example. While the annual subscription cost remains the same year after year, due to the fixed nature of the subscription rate, the annual subscription credit grows annually. In the first year of a 100 kW subscription program participation, credit cost approximately \$275, which is the difference between the subscription cost of \$6,760 and the credit of \$6,530. By year five, the annual subscription remains \$6,760 and the credit grows to \$8,200, so the credit exceeds subscription cost by \$1,440. By year ten, the cost of the subscription is still \$6,760 and the credit is now \$10,775 for the year, increasing the credit difference by \$575.

Ready to sign up?

[GET STARTED](#)

Or to learn more, view our frequently asked questions or register for one of our upcoming webinars.

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WELFARE

WELFARE

WELFARE

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20190061.EI Staff Hearing Exhibits 00091

Shared Solar Program Frequently Asked Questions

Program Questions

How does SolarTogether, FPL shared solar program work?	+
Who can participate and how are the meter/baseload different between customer rate classes?	+
How much energy can a customer/account subscribe?	+
When will the program be approved by the Florida PSC?	+
What if the program is sold out and I want to participate?	+
Is my subscription transferable, and if so, what are the guidelines for transferring my subscription?	+
Can participants in the program claim the Investment Tax Credit?	+
How does participating in this program impact my electric rate structure, time of use, demand charges, and/or load control credits?	+
Can I subscribe for all the power I need or only a portion of it? How do you determine how much power each customer can receive?	+
What does the monthly subscription cost represent?	+
What does the subscription credit represent?	+
How will the program appear on my bill?	+
When will billing begin for enrolled customers?	+
Does my enrollment and PSC approval of the program mean that FPL will bill me under a new FPL electric rate?	+
Could program subscription rates be changed if the price of natural gas or other fuels changes?	+
When can I expect to see this program lower my electric service bills?	+
Will I have access to the subscription credit schedule to help me determine my payback time/frame?	+
As a participant, am I able to obtain the Renewable Energy Credits (RECs)?	+
Is the renewable energy I support through the program, delivered directly to my residence or business?	+
How much capacity will FPL build for the program?	+
Where will the FPL SolarTogether projects be built – must I live in the same community as the solar project?	+
What is the expected life cycle of the new solar power energy centers?	+
How do your solar energy centers perform during/after hurricanes?	+
Will I have access to information to monitor how my subscription share is performing?	+
Who should I contact if I have questions about this program?	+

Pre-Registration Questions

Why is pre-registration restricted to only commercial customers?

When will small business and residential customers be able to enroll?

Where can I find a copy of the pre-registration agreement?

How many customers are going to be selected for the program?

Is the pre-registration agreement binding?

What if I decide I don't want to participate in the program after pre-registering or if I'd like to reduce my subscription?

If I pre-register, can I increase, decrease or terminate my subscription?

If I don't subscribe before the pre-register deadline, can I be placed on a waiting list?

What is the subscription calculator and how does it work?

I haven't received a pre-registration status update; can you provide me with one?

If I pre-registered, how will I be notified of my subscription size and if I have been waitlisted?

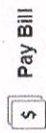
Who should I contact if I have questions about the pre-registration process?

- About IPR
- Implications
- Water
- Current
- Dissemination
- Continuity
- Control in C
- Notes and

- **Attract Energy**
- **Swing Me Into**
- **Exercising Motivation**
- **Close & Settle**
- **Solar**
- **Stream-Govern**
- **Protect Suburbanites**
- **Safety**

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06/01/2016 09:55:00



First, let's calculate your estimated maximum subscription based on your average monthly FPL bill.

How many business locations do you currently have in FPL service territory?

On average, how much do you spend monthly (in dollars) on your FPL bill for a single location?

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Chat service by BoldChat



Customer Info

Agreement

Confirmation

1

2

3

Customer Information

This is how we'll send status updates.

Business Name

Please enter Business Name

Email Address

Phone Number

Estimated Kilowatt Subscription

Account Number (Optional)

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Customer Info

Agreement

Confirmation



Staff's First Set of Interrogatory
Interrogatory No. 54
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FPL Shared Solar Subscription Agreement

Your signature is required to submit your enrollment. Please read carefully the Subscription Agreement and provide your signature electronically.

SolarTogether - An FPL Shared Solar Program

Pre-Registration Agreement

Pursuant to this pre-registration agreement ("Agreement"), the undersigned ("Subscriber") is agreeing to subscribe to a specified number of kilowatts ("kW") of solar generated electric power under SolarTogether - An FPL Shared Solar Program ("Program") sponsored by Florida Power & Light Company ("FPL"). The Program will be filed with the Florida Public Service Commission ("FPSC") in 2019, and it is anticipated that Program power will become available to FPL customers sometime in March 2020. This voluntary program allows FPL customers to subscribe to a portion of universal solar capacity built specifically for this Program, thereby sharing in the benefits of solar generation and receiving a credit for the system savings produced by the respective capacity for which such customer

By signing below I agree to the subscription terms and conditions

Please print your name here

Full Name

Please enter your full name

Please print your company here

Cristina Test

[View Pre-Registration Agreement](#)

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Thank you!

Thank you for your interest in FPL's Shared Solar program. Your early registration has been received.

REGISTRATION NUMBER 1920

ESTIMATED SUBSCRIPTION 7

REGISTRATION DATE Apr 25, 2019 09:58 AM

A confirmation email will be sent to crisina.habersetzer@fpl.com

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Program Questions

How does SolarTogether, FPL shared solar program work?

SolarTogether, FPL's shared solar program is designed to provide customers with the opportunity to share in the benefits and costs of a large solar energy center while receiving monthly credits on their FPL bill.

Who can participate and how are the costs/benefits different between customer rate classes?

All of FPL's residential and business customers, regardless of whether you own or rent your residence or business, are eligible to participate.

All customers and all rate classes may enroll in this program – the monthly subscription charge and subscription credit rates are the same for all customers.

How much energy can a customer/account subscribe?

Participants can subscribe an amount that would produce up to 100% of their annual kilowatt hour electricity usage.

When will the program be approved by the Florida PSC?

The program will be filed with the Florida PSC in the first quarter of 2019, and we anticipate the Commission's approval in the fourth quarter of 2019.

Pending approval, we expect the earliest you would be billed for your subscription is the first quarter of 2020.

When will the program be approved by the Florida PSC?

The program will be filed with the Florida PSC in the first quarter of 2019, and we anticipate the Commission's approval in the fourth quarter of 2019.

Pending approval, we expect the earliest you would be billed for your subscription is the first quarter of 2020.

What if the program is sold out and I want to participate?

FPL will maintain a waitlist of interested customers. Pending program approval and the start of enrollment, FPL will notify you if space is available; you then will have 2 weeks to enroll in the program.

You can notify FPL at any time if you would like to be removed from the waitlist.

Is my subscription transferable, and if so, what are the guidelines for transferring my subscription?

Yes, your subscription is transferable to another metered account that is in your name (i.e., a different retail store location, office or manufacturing operation).

We assist you in finding another one of your FPL accounts with similar usage to your current subscription or we can adjust your subscription in the program to align with the new account associated with your subscription.

Can participants in the program claim the Investment Tax Credit?

No. The subscription charge already factors in the financial benefits associated with the Investment Tax Credit (ITC).

How does participating in this program impact my electric rate structure, time of use, demand charges, and/or load control credits?

Enrolling in the program will have no impact on your existing electric rate structure, time of use charges and/or demand charges.

Enrolling will not change in any way the number of kWh you consume on a monthly basis.

Your subscription charge and subscription credit will appear as individual line items on your monthly billing statement.

Can I subscribe for all the power I need or only a portion of it? How do you determine how much power each customer can receive?

Participants can subscribe to an amount that would produce up to 100% of their annual kilowatt-hour usage. (Refer to [the subscription calculator](#))

Following the PSC's expected approval of our filing, FPL will provide information to subscribers about the capacity they will receive.

What does the monthly subscription cost represent?

our monthly subscription cost is the fixed dollar subscription rate times your subscription share (the number of kW in your subscription).

The subscription rate reflects the costs related to construct, own and operate the solar plants we build to serve participants in the program. The monthly subscription rate does not change over time.

What does the subscription credit represent?

Your subscription credit is based on the actual solar generation your subscription share produced in a given month multiplied by the subscription credit rate.

The subscription credit rate will increase annually, if you remain in the program.

How will the program appear on my bill?

Your subscription cost and subscription credit will appear as two individual line items on your bill, so you can always see how much your subscription is saving you.

When will billing begin for enrolled customers?

FPL will file the program with the Florida PSC in the first quarter of 2019, and we anticipate PSC approval in the fourth quarter of 2019.

Pending PSC approval, we expect the earliest you would be billed for your subscription is the first quarter of 2020.

Does my enrollment and PSC approval of the program mean that I'll be billed under a new FPL electric rate?

Enrolling in the program will have no impact on your existing electric rate structure, time of use charges and/or demand charges.

Enrolling will not change in any way the number of kWh you consume on a monthly basis.

The subscription charge and subscription credit will appear as individual line items on your monthly billing statement.

Could program subscription rates be changed if the price of natural gas or other fuels changes?

No, the subscription rates approved by the Florida PSC will be locked and cannot change without Florida PSC approval.

When can I expect to see this program lower my electric service bills?

On an annual basis, program participants are expected to realize a net bill reduction sometime between three to five years and achieve simple payback between five to seven years.

Will I have access to the subscription credit schedule to help me determine my payback timeframe?

Because your credit is based on solar generation, we cannot guarantee payback. However, assuming typical Florida weather, we expect a payback between years 5-7.

Yes, the credit schedule will be submitted to the PSC and will appear on the SolarTogether website for those considering participation in the program.

As a participant, am I able to obtain the Renewable Energy Credits (RECs)?

During the enrollment process you may elect to have the Renewable Energy Credits (RECs) retired on your behalf. FPL will provide you with the appropriate documentation if REC retirement is elected.

Is the renewable energy I support through the program, delivered directly to my residence or business?

No, as with any solar energy center connected to the electric grid, the power generated for the FPL SolarTogether program is delivered directly to the grid, where it is combined with power from conventional generation sources in FPL's energy system.

How much capacity will FPL build for the program?

Capacity has not yet been finalized, we're offering pre- registration to our largest energy user, commercial on a demand-use rate, to better understand their interest in the program and plan accordingly for the solar capacity we will need to meet customers' interest.

Where will the FPL SolarTogether projects be built – must I live in the same community as the solar project?

FPL will build and operate solar energy centers for this program throughout the FPL service territory.

There is no geographic restriction on participation if you live within FPL's service area.

What is the expected life cycle of the new solar power energy centers?

As with all of FPL's power-generating assets, the new solar energy centers are designed to operate for 30 years or more.

Standard O&M, upgrades and equipment replacement over the 30-year lifespan have been factored into program pricing and rates.

How do your solar energy centers perform during/after hurricanes?

Our solar energy centers are built to local wind and building codes; they have performed extremely well during major storms, including Hurricane Irma.

Will I have access to information to monitor how my subscription share is performing?

Your subscription cost and subscription credit will appear as two individual line items on your bill, so you can always see how much your subscription is saving.

You will have online access to additional details, including your shares' monthly power generation.

We expect to make this information available on the program website in near-real time; also, previous months' data will appear on your energy dashboard.

Who should I contact if I have questions about this program?

If you have further questions, please e-mail us at SolarTogether@FPL.com. If you would prefer to speak to a net metering representative, you can contact us at (305) 387-6614.

Pre-Registration Questions

Why is pre-registration restricted to only commercial customers?

We're offering pre-registration for all commercial customer with accounts on a demand rate. These are our largest energy users and will enable us to better understand their interest in the program and plan accordingly for the solar capacity we will need to meet customers' interest.

Following approval from the Florida PSC, the program will be open to all FPL customers for enrollment in the fourth quarter of 2019. We will announce more details closer to the program's expected launch next year. And you are always welcome to check back with us.

When will small business and residential customers be able to enroll?

Following approval from the Florida PSC, the program will be open to all FPL customers for enrollment in the fourth quarter of 2019.

We will announce more details on the program closer to its expected launch next year. And you are always welcome to check back with us.

Where can I find a copy of the pre-registration agreement?

You can download a [copy of the agreement here](#).

How many customers are going to be selected for the program?

We expect this program to be very well received -- that's why we are opening a pre-registration period to encourage you to reserve your space now.

Is the pre-registration agreement binding?

Pre-registering in the program requires a binding agreement. Customers who pre-register will be automatically enrolled in the program pending PSC approval.

Participants will not see a subscription cost or subscription credit on their bill until after the solar power plants dedicated to this program are operational.

After the first billing cycle of the program, customers can unsubscribe from the program and will not be able to re-enroll for a 12-month period. Customer's may also elect to reduce their subscription following the first billing cycle.

What if I decide I don't want to participate in the program after pre-registering or if I'd like to reduce my subscription?

Pre-registering in the program requires a binding agreement. Customers who pre-register will be automatically enrolled in the program pending PSC approval.

If I pre-register, can I increase, decrease or terminate my subscription?

Pre-registering in the program requires a binding agreement. Customers who pre-register will be automatically enrolled in the program pending PSC approval.

If you wish to increase your subscription, we ask you to submit a new agreement through the FPL SolarTogether website (www.fpl.com/solartogether).

After the first billing cycle of the program, customers can unsubscribe from the program and will not be able to re-enroll for a 12-month period. Customer's may also elect to reduce their subscription following the first billing cycle.

If I don't subscribe before the pre-register deadline, can I be placed on a waiting list?

The pre-registration window is Nov. 29, 2018 through Jan. 25, 2019. Following approval from the Florida PSC, the program will be open to all FPL customers for enrollment in the fourth quarter of 2019.

We will announce more details on the program closer to its expected launch next year. And you are always welcome to check back with us.

What is the subscription calculator and how does it work?

The subscription calculator is a tool to help you estimate your maximum program subscription.

To use the tool successfully you need to provide the number of FPL business locations and an average monthly spend in dollars for a single location. The calculator uses this information to estimate your annual electric usage in kWh and converts that to a maximum subscription quantity.

I haven't received a pre-registration status update; can you provide me with one?

FPL will update you on your subscription request by email within 30 to 60 days after pre-registration has closed.

If I pre-registered, how will I be notified of my subscription size and if I have been waitlisted?

Within 30 to 60 days after pre-registration has closed, FPL will update you on your subscription request by email.

Who should I contact if I have questions about the pre-registration process?

If you have further questions, please e-mail us at SolarTogether@FPL.com. If you would prefer to speak to a net metering representative, you can contact us at (305) 387-6614.

**SolarTogether – An FPL Shared Solar Program
Pre-Registration Agreement**

Pursuant to this pre-registration agreement ("Agreement"), the undersigned ("Subscriber") is agreeing to subscribe to a specified number of kilowatts ("kW") of solar-generated electric power under SolarTogether – An FPL Shared Solar Program ("Program") sponsored by Florida Power & Light Company ("FPL"). The Program will be filed with the Florida Public Service Commission ("FPSC") in 2019, and it is anticipated that Program power will become available to FPL customers sometime in March 2020. This voluntary program allows FPL customers to subscribe to a portion of universal solar capacity built specifically for this Program, thereby sharing in the benefits of solar generation and receiving a credit for the system savings produced by the respective capacity for which such customer subscribes.

**Article I
Pre-Registration Terms**

1. **Pre-Registration Quantity.** Subscriber hereby registers for [_____] kilowatts (kW) ("Pre-Registration Quantity") of Program capacity. The Pre-Registration Quantity Amount must be in whole kilowatt (kW) increments and cannot exceed Subscriber's total kWh usage for the immediately preceding 12 months, which will be determined by dividing Subscriber's total kWh for the preceding 12 months by 2,535 ("Maximum Subscription Quantity").

2. **Reservations; Wait Listing; Reservation Quantity Increases and Decreases.**

- a) **Reservations.** Upon submission of this Agreement, Subscriber will receive via email a date and time stamped confirmation of its receipt ("Timestamped Confirmation") by FPL. Following the pre-registration period, FPL will verify Subscriber's FPL electric service account ("FPL Account") information and, subject to then-remaining Program capacity, will reserve the Pre-Registration Quantity based on Subscriber's Timestamped Confirmation. FPL reserves the right to apportion the available Program power to ensure that no single customer or customer group amasses all or an unreasonable share of the Program capacity. FPL will notify Subscriber in writing of Subscriber's reserved kilowatt (kW) allocation of Program capacity ("Reservation"). If the Reservation reflects a reduction in the Pre-Registration Quantity by more than 10%, Subscriber will have 10 business days after its receipt of the Reservation in which to cancel the Reservation, except in the case where the reduction is made to meet the Maximum Subscription Quantity requirement.
- b) **Wait Listing.** Subscribers whose Agreements are received after the Program's kW capacity is fully subscribed will be so notified by FPL and will be placed on a waiting list in the order of their Timestamped Confirmation and will be admitted into the Program as, when and to the extent that Program kW capacity thereafter becomes available.
- c) **Reservation Increases.** Subscriber may elect to increase the Reservation, subject to the Program's then-available kW capacity and the Maximum Subscription Quantity, at any time prior to the opening of the Program in accordance with Section 3 of this Article I by executing and delivering to FPL a new Agreement, which would supersede this Agreement. Subscriber

may not elect to decrease its Reservation prior to Enrollment (as defined in Section 3 of this Article I). A decrease in Subscriber's Subscription Quantity (as defined in Section 3 of this Article I) may be made after Enrollment in accordance with Section 4 of Article II of this Agreement.

3. Opening of Program and Enrollment. When the Florida Public Service Commission approves the Program ("FPSC Approval"), FPL will designate the date on which the Program will open ("Program Opening Date"), and Subscriber hereby authorizes FPL to enroll Subscriber in the Program ("Enrollment") on the Program Opening Date. The Reservation will determine the total number of kW subscribed to ("Subscription Quantity") by Subscriber. Opening of the Program and Enrollment are conditioned upon FPSC Approval. FPL will notify all Subscribers as to whether FPSC Approval is or is not obtained, and if FPSC Approval is obtained, FPL will notify Subscribers of the Program Opening Date and their Enrollment in the Program, provided that, if the FPSC Approval provides for Monthly Subscription Charge pricing *in excess* of, or Monthly Subscription Credit pricing *less than*, the amounts set forth in Section 1 of Article II of this Agreement or other material modifications to any of the other material terms in Article II of this Agreement, FPL will so notify Subscribers, and each Subscriber will have 10 business days after the date of its receipt of such notification in which to elect to (i) cancel its Reservation and forgo Enrollment or (ii) cancel its Enrollment, if Enrollment shall have already occurred prior to the expiration of such period of 10 business days.

4. Termination. This Agreement shall remain in effect until the earlier of the Program Opening Date and the date on which FPSC Approval is denied. Except as provided in the last sentence of Section 3 of this Article I, Subscriber may not terminate this Agreement at any time prior to Enrollment. If Subscriber terminates this Agreement after Enrollment and before the first billing month under the Program, Subscriber's monthly FPL Account bill for the first billing month under the Program will nevertheless include the full amount of the Monthly Subscription Charge and the full amount of the Monthly Subscription Credit (as such terms are defined in Section 1 of Article II of this Agreement).

Article II FPL Proposed FPSC Program Terms

1. Monthly Rate. Subscriber's total monthly FPL Account bill will include a "Monthly Subscription Charge" and a "Monthly Subscription Credit," calculated as follows:

Monthly Subscription Charge = Subscription Quantity x \$6.76/kW

Monthly Subscription Credit = \$0.0308/kWh (escalating annually at 1.45%) × $\frac{\text{Subscription Quantity}}{\text{Program Capacity (kW)}}$ × Program Output (kWh)

2. Eligibility. Any FPL customer that takes electric service under a metered rate schedule and has no delinquent FPL Account balances is eligible to participate in the Program ("Eligible Customers"). An Eligible Customer may elect a subscription level in whole kW increments up to such customer's total kWh usage for the immediately preceding 12 months and may elect once every year thereafter to increase the number of whole kW purchased under the Program, subject to then-available Program capacity.

3. Billing. Eligible Customers participating in the Program will be subject to the minimum FPL Account bill on their otherwise applicable rate schedule. The Monthly Subscription Charge and the

offsetting Monthly Subscription Credit will appear as separate line items on the monthly FPL Account bills of participating Eligible Customers during every month of their respective Enrollments and will be subject to all applicable taxes and fees.

4. **Termination and Reduction.** Program participants may terminate their participation in the Program ("**Voluntary Termination**"), or reduce the number of their respective whole kW Subscription Quantities, at any time after the Program Opening Date, and FPL may terminate any customer's participation in the Program if such customer's FPL Account becomes delinquent ("**Involuntary Termination**"), provided that, in the event of either Voluntary Termination or Involuntary Termination, (i) the customer's monthly FPL Account bill for the month in which such termination occurs will include the full amount of the Monthly Subscription Charge and the full amount of the Monthly Subscription Credit, and (ii) the customer will be prohibited from re-enrolling in the Program for a period of 12 months after any such termination, subject to then-available Program capacity.

5. **Portability.** Program participation is entirely portable within FPL's electric service territory. A Program participant may transfer Program participation to a new service address and will be deemed to have continuous, uninterrupted Enrollment for the purpose of determining the participant's Monthly Subscription Credit.

6. **Attributes.** Program participants may elect to have FPL retire on their behalf any renewable energy credits associated with their Program participation.

7. **Subscription Is Not a Security; No Guarantee of Savings.** A Program participant's subscription to purchase kW under the Program is not a security and does not represent an ownership interest in any of the Program's assets and, therefore, may not be sold, assigned, transferred or conveyed by such participant to any other person or entity or otherwise disposed of by such participant. There is no guarantee that a Program participant will realize any savings from participation in the Program.

Example Customer

INPUTS

Customer's Annual Electricity 10,000,000 kilowatt hours

Selected Offset 100%

Maximum Subscription 3,944 kilowatts

Subscription Size 3,944 kilowatts

Enrollment Yr

	YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10	YR 11	YR 12	YR 13	YR 14	YR 15
Estimated Annual Subscription Cost	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937
Estimated Annual Subscription Credit	\$309,094	\$312,635	\$316,216	\$319,839	\$323,503	\$327,210	\$330,958	\$334,750	\$338,585	\$342,464	\$346,387	\$350,356	\$354,370	\$358,430	\$362,536
Annual Bill Impact	(\$10,844)	(\$7,303)	(\$3,721)	(\$98)	\$3,566	\$7,272	\$11,021	\$14,813	\$18,648	\$22,527	\$26,450	\$30,419	\$34,432	\$38,492	\$42,599
Net Cumulative Impact	(\$10,844)	(\$18,146)	(\$21,867)	(\$21,965)	(\$18,399)	(\$11,127)	(\$106)	\$14,707	\$33,355	\$55,882	\$82,332	\$112,750	\$147,183	\$185,675	\$228,273

Enrollment Yr

	YR 16	YR 17	YR 18	YR 19	YR 20	YR 21	YR 22	YR 23	YR 24	YR 25	YR 26	YR 27	YR 28	YR 29	YR 30
Estimated Annual Subscription Cost	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937	\$319,937
Estimated Annual Subscription Credit	\$366,689	\$370,890	\$375,139	\$379,437	\$383,784	\$388,181	\$392,628	\$397,126	\$401,676	\$406,278	\$410,932	\$415,640	\$420,402	\$425,218	\$430,090
Annual Bill Impact	\$46,752	\$50,953	\$55,202	\$59,500	\$63,847	\$68,244	\$72,691	\$77,189	\$81,739	\$86,341	\$90,995	\$95,703	\$100,465	\$105,281	\$110,153
Net Cumulative Impact	\$275,025	\$325,978	\$381,180	\$440,680	\$504,527	\$572,771	\$645,462	\$722,651	\$804,389	\$890,730	\$981,725	\$1,077,428	\$1,177,893	\$1,283,174	\$1,393,326

30 yr Net Present Value at 3%

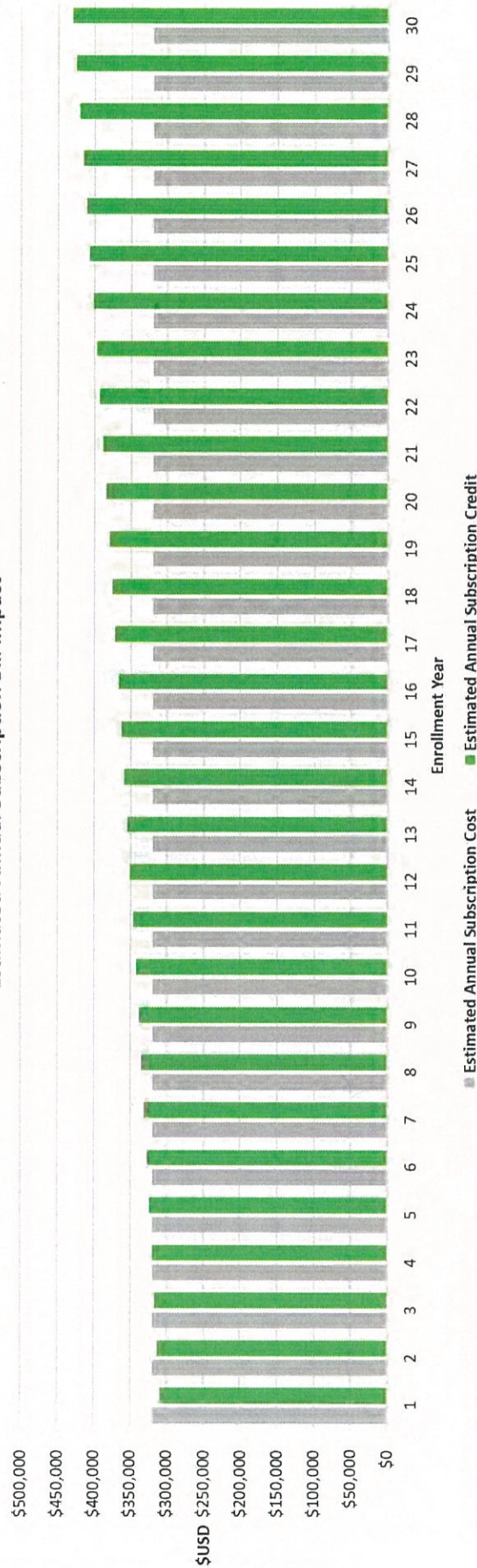
30 yr Net Present Value at 5%

30 yr Net Present Value at 7%

Illustrative examples presented here for discussion purposes only, program charges and credits will be established per the Florida PSC approved tariff

Example Customer

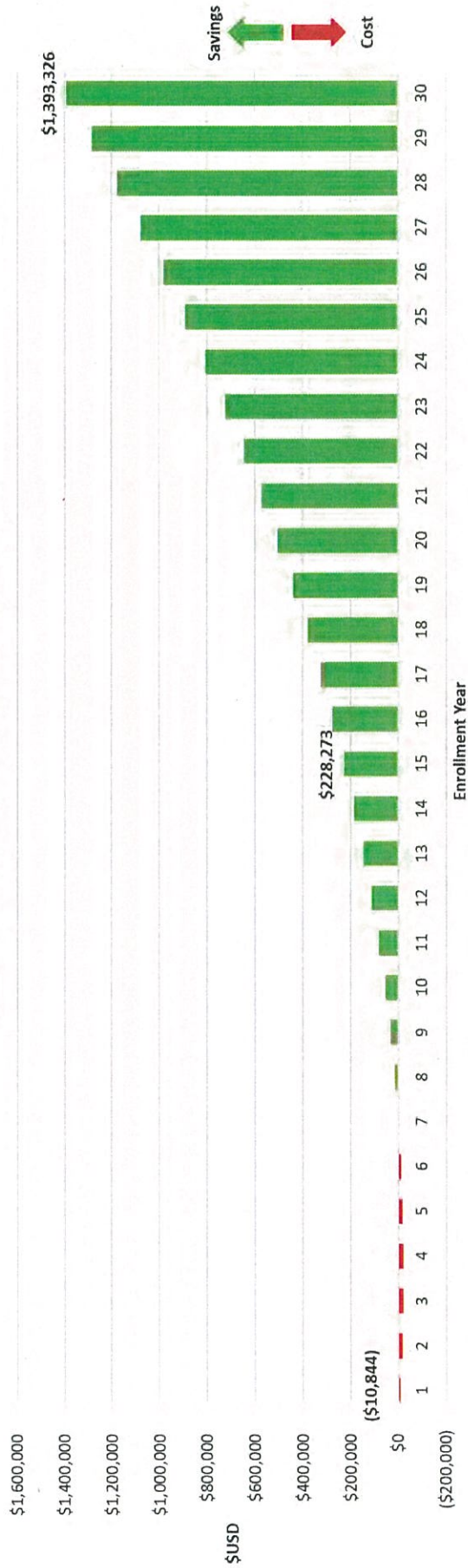
Estimated Annual Subscription Bill Impact



Illustrative examples presented here for discussion purposes only, program charges and credits will be established per the Florida PSC approved tariff

Example Customer

Estimated Net Cumulative Subscription Bill Impact



Illustrative examples presented here for discussion purposes only, program charges and credits will be established per the Florida PSC approved tariff



<Customer Address

Dear <Customer,

Announcing FPL Shared Solar Program

SolarTogether, an FPL Shared Solar Program, is an exciting new program that allows you to participate directly in large-scale solar projects in Florida. As a participant, you will be able to offset up to 100% of your energy usage with solar and receive monthly bill credits on your FPL bill for a fixed subscription rate.

The program will be filed with the Florida Public Service Commission (PSC) in the first quarter of 2019. Based on preliminary feedback, we anticipate this program will be very well received, and we're providing you with the opportunity to pre-register starting Nov. 29, 2018, through Jan. 25, 2019. By pre-registering, you are reserving your spot in the program as FPL will enroll you upon PSC approval.

Renewable Benefits

- Offset up to 100% of your annual energy usage (subject to availability)
- Meet sustainability goals - FPL to retire Renewable Energy Credits (RECs) on your behalf

Economics

- Simple payback by seven years
- Fixed monthly subscription rate
- Bill credits that escalate over time

Terms

- No upfront costs or termination fees
- No contract
- Subscription is transferable within FPL territory
- Subscription cannot be sold or transferred to another customer

Once you pre-register, you will receive a confirmation email. As a future participant, FPL will continue to update you on the status of the program in 2019 as we near approval and launch of the program.

We invite you to learn more about the program at an upcoming webinar – visit FPL.com/sswebinar for a list of dates and times.

Sincerely,

John Haney
Sr. Director of Customer Solutions

EC32.ECCP.201811



USEFUL TELEPHONE NUMBERS

Customer Service: (954)797-5000
Outside Florida: 1-800-226-3545
Power Outages: 1-800-4OUTAGE (468-8243)
Hearing/Speech Impaired: 711 (Relay Service)
Visit FPL's Web Site at <http://www.fpl.com>

Dear <customer>,

Introducing SolarTogether - An FPL Shared Solar Program

SolarTogether, an FPL Shared Solar Program is an exciting new program that allows your company to participate directly in large-scale solar projects in Florida. As a participant, you will be able to offset up to 100% of your energy usage with solar and receive monthly bill credits on your FPL bill for a fixed subscription rate.

The program will be filed with the Florida Public Service Commission (PSC) in the first quarter of 2019. Based on preliminary feedback, we anticipate that this program will be very well received, and we're providing you with the opportunity to pre-register starting Nov. 29, 2018, through Jan. 25, 2019. By pre-registering, you are reserving your spot in the program.

To assist you with the registration process, we've calculated your maximum subscription based on your previous 12 months' energy usage – <insert annual usage kWh. Your maximum subscription is <insert max subscription kW.

Once you pre-register, you will receive a confirmation email. As a future participant, FPL will continue to update you on the status of the program in 2019 as we near approval and launch of the program.

We invite you to learn more about the program at FPL.com/solartogether and register for an upcoming informational webinar by visiting FPL.com/sswebinar.

Pre-registration will start on Nov. 29 at FPL.com/ssregister

Sincerely

<customer advisor name
<customer advisor title

QUESTION:

Please refer to paragraph 5 of the Petition. For the approximately 200 customers with 1,100 MW of pre-registered capacity, provide the number of customers by type (commercial, industrial, and governmental), their individual subscription capacity, and subscription level compared to annual energy usage. As part of this response, provide a copy of the pre-registration agreements and binding subscription reservation agreements.

RESPONSE:

See Attachment No. 1 to this Interrogatory for the requested data for pre-registered customers. Pre-registration was offered online only, and participants committed to the terms of the pre-registration agreement, (see Attachment No. 2 to this Interrogatory) by signing electronically, as such there are no "individual" pre-registration agreements to provide. Upon signature, customers were provided with an email and on screen confirmation including a confirmed registration number, estimated subscription, and the registration date (see Attachment No. 3).

SolarTogether – An FPL Shared Solar Program Pre-Registration Agreement

Pursuant to this pre-registration agreement ("**Agreement**"), the undersigned ("**Subscriber**") is agreeing to subscribe to a specified number of kilowatts ("**kW**") of solar-generated electric power under SolarTogether – An FPL Shared Solar Program ("**Program**") sponsored by Florida Power & Light Company ("**FPL**"). The Program will be filed with the Florida Public Service Commission ("**FPSC**") in 2019, and it is anticipated that Program power will become available to FPL customers sometime in March 2020. This voluntary program allows FPL customers to subscribe to a portion of universal solar capacity built specifically for this Program, thereby sharing in the benefits of solar generation and receiving a credit for the system savings produced by the respective capacity for which such customer subscribes.

Article I Pre-Registration Terms

1. **Pre-Registration Quantity.** Subscriber hereby registers for [_____] kilowatts (kW) ("**Pre-Registration Quantity**") of Program capacity. The Pre-Registration Quantity Amount must be in whole kilowatt (kW) increments and cannot exceed Subscriber's total kWh usage for the immediately preceding 12 months, which will be determined by dividing Subscriber's total kWh for the preceding 12 months by 2,535 ("**Maximum Subscription Quantity**").

2. **Reservations; Wait Listing; Reservation Quantity Increases and Decreases.**

- a) **Reservations.** Upon submission of this Agreement, Subscriber will receive via email a date and time stamped confirmation of its receipt ("**Timestamped Confirmation**") by FPL. Following the pre-registration period, FPL will verify Subscriber's FPL electric service account ("**FPL Account**") information and, subject to then-remaining Program capacity, will reserve the Pre-Registration Quantity based on Subscriber's Timestamped Confirmation. FPL reserves the right to apportion the available Program power to ensure that no single customer or customer group amasses all or an unreasonable share of the Program capacity. FPL will notify Subscriber in writing of Subscriber's reserved kilowatt (kW) allocation of Program capacity ("**Reservation**"). If the Reservation reflects a reduction in the Pre-Registration Quantity by more than 10%, Subscriber will have 10 business days after its receipt of the Reservation in which to cancel the Reservation, except in the case where the reduction is made to meet the Maximum Subscription Quantity requirement.
- b) **Wait Listing.** Subscribers whose Agreements are received after the Program's kW capacity is fully subscribed will be so notified by FPL and will be placed on a waiting list in the order of their Timestamped Confirmation and will be admitted into the Program as, when and to the extent that Program kW capacity thereafter becomes available.
- c) **Reservation Increases.** Subscriber may elect to increase the Reservation, subject to the Program's then-available kW capacity and the Maximum Subscription Quantity, at any time prior to the opening of the Program in accordance with Section 3 of this Article I by executing and delivering to FPL a new Agreement, which would supersede this Agreement. Subscriber

may not elect to decrease its Reservation prior to Enrollment (as defined in Section 3 of this Article I). A decrease in Subscriber's Subscription Quantity (as defined in Section 3 of this Article I) may be made after Enrollment in accordance with Section 4 of Article II of this Agreement.

3. **Opening of Program and Enrollment.** When the Florida Public Service Commission approves the Program ("**FPSC Approval**"), FPL will designate the date on which the Program will open ("**Program Opening Date**"), and Subscriber hereby authorizes FPL to enroll Subscriber in the Program ("**Enrollment**") on the Program Opening Date. The Reservation will determine the total number of kW subscribed to ("**Subscription Quantity**") by Subscriber. Opening of the Program and Enrollment are conditioned upon FPSC Approval. FPL will notify all Subscribers as to whether FPSC Approval is or is not obtained, and if FPSC Approval is obtained, FPL will notify Subscribers of the Program Opening Date and their Enrollment in the Program, provided that, if the FPSC Approval provides for Monthly Subscription Charge pricing *in excess* of, or Monthly Subscription Credit pricing *less than*, the amounts set forth in Section 1 of Article II of this Agreement or other material modifications to any of the other material terms in Article II of this Agreement, FPL will so notify Subscribers, and each Subscriber will have 10 business days after the date of its receipt of such notification in which to elect to (i) cancel its Reservation and forgo Enrollment or (ii) cancel its Enrollment, if Enrollment shall have already occurred prior to the expiration of such period of 10 business days.

4. **Termination.** This Agreement shall remain in effect until the earlier of the Program Opening Date and the date on which FPSC Approval is denied. Except as provided in the last sentence of Section 3 of this Article I, Subscriber may not terminate this Agreement at any time prior to Enrollment. If Subscriber terminates this Agreement after Enrollment and before the first billing month under the Program, Subscriber's monthly FPL Account bill for the first billing month under the Program will nevertheless include the full amount of the Monthly Subscription Charge and the full amount of the Monthly Subscription Credit (as such terms are defined in Section 1 of Article II of this Agreement).

Article II FPL Proposed FPSC Program Terms

1. **Monthly Rate.** Subscriber's total monthly FPL Account bill will include a "Monthly Subscription Charge" and a "Monthly Subscription Credit," calculated as follows:

Monthly Subscription Charge = Subscription Quantity x \$6.76/kW

Monthly Subscription Credit = \$0.0308/kWh (escalating annually at 1.45%) × $\frac{\text{Subscription Quantity}}{\text{Program Capacity}}$ × Program Output (kWh)

2. **Eligibility.** Any FPL customer that takes electric service under a metered rate schedule and has no delinquent FPL Account balances is eligible to participate in the Program ("**Eligible Customers**"). An Eligible Customer may elect a subscription level in whole kW increments up to such customer's total kWh usage for the immediately preceding 12 months and may elect once every year thereafter to increase the number of whole kW purchased under the Program, subject to then-available Program capacity.

3. **Billing.** Eligible Customers participating in the Program will be subject to the minimum FPL Account bill on their otherwise applicable rate schedule. The Monthly Subscription Charge and the

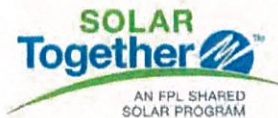
offsetting Monthly Subscription Credit will appear as separate line items on the monthly FPL Account bills of participating Eligible Customers during every month of their respective Enrollments and will be subject to all applicable taxes and fees.

4. **Termination and Reduction.** Program participants may terminate their participation in the Program ("**Voluntary Termination**"), or reduce the number of their respective whole kW Subscription Quantities, at any time after the Program Opening Date, and FPL may terminate any customer's participation in the Program if such customer's FPL Account becomes delinquent ("**Involuntary Termination**"), provided that, in the event of either Voluntary Termination or Involuntary Termination, (i) the customer's monthly FPL Account bill for the month in which such termination occurs will include the full amount of the Monthly Subscription Charge and the full amount of the Monthly Subscription Credit, and (ii) the customer will be prohibited from re-enrolling in the Program for a period of 12 months after any such termination, subject to then-available Program capacity.

5. **Portability.** Program participation is entirely portable within FPL's electric service territory. A Program participant may transfer Program participation to a new service address and will be deemed to have continuous, uninterrupted Enrollment for the purpose of determining the participant's Monthly Subscription Credit.

6. **Attributes.** Program participants may elect to have FPL retire on their behalf any renewable energy credits associated with their Program participation.

7. **Subscription Is Not a Security; No Guarantee of Savings.** A Program participant's subscription to purchase kW under the Program is not a security and does not represent an ownership interest in any of the Program's assets and, therefore, may not be sold, assigned, transferred or conveyed by such participant to any other person or entity or otherwise disposed of by such participant. There is no guarantee that a Program participant will realize any savings from participation in the Program.



LOG IN

PAY BILL

Registration Name: [REDACTED]

Registration Date: May 09, 2019 02:39 PM

Subscription Quantity Requested: 40,007 kW

Registration Confirmation Number: 430

FPL Shared Solar Registration Confirmation

Thank you for pre-registering for SolarTogether, an FPL Shared Solar Program.

As a future participant, we will continue to update you on the status of the program in 2019 as we near approval and launch of the program.

Please do not reply to this email. This address is not monitored.

For help, visit FPL.com

[Update Profile](#)

[Customize Preferences](#)

[Privacy Policy](#)

[Contact Us](#)

Florida Power & Light Company
700 Universe Blvd., Juno Beach, FL 33408
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QUESTION:

Please refer to paragraph 6 of the Petition. Explain why FPL has opted to only construct facilities below the 75 MW Power Plant Siting Act threshold. As part of this response, discuss whether any economics of scale are being lost by limiting capacity below this threshold for each site. Discuss whether any economics of scale are being lost by limiting capacity below this threshold for each site.

- A. Has FPL has conducted a comparison of the costs and benefits of building solar facilities at or above the 75 MW threshold? If so, provide the results. If not, explain why not.
- B. Identify any of the 20 SolarTogether project sites that could accommodate solar facilities greater than 74.9 MW.

RESPONSE:

FPL considers numerous factors when evaluating the scope of its solar facilities. These factors include availability of land, proximity to transmission, facility costs, and environmental impacts, to name a few. Since 2016 FPL has successfully added fifteen new 74.5 MW solar energy centers. This practice is advantageous for a number of reasons, including:

- **Timing:** Limiting the capacity to less than 75 MW allows the proposed sites to be permitted locally rather than via the Power Plant Siting Act, as correctly identified in this question. Local permitting typically saves 6-8 months on the overall site development timeline, meaning that FPL can deliver low-cost solar energy to its customers as quickly as possible and avoid unforeseen risks resulting from political changes or movement in commodity and labor markets.
- **Local Input:** Because the sites are permitted locally instead of via a State level process, the communities and elected officials who live and work in the areas where the sites are constructed have the opportunity to provide their input and approve these sites. This helps to attain local input which may otherwise be absent via approval by a geographically remote siting authority.
- **Siting Flexibility:** A 74.5 MW sized facility typically requires between six to eight acres per MW, or roughly 450-600-acres per site – essentially one “section” of land. Experience has shown that parcels of this size are available on the real estate markets with far greater frequency than parcels of a much larger size. This allows FPL to construct its facilities in places where it makes practical sense from a land use and environmental perspective.
- **Geographic Diversity:** By geographically dispersing its solar generation assets, FPL is able to minimize the risk to the portfolio from weather events (*i.e.*, hurricanes or other high wind

events), solar resource fluctuations from local weather patterns, or catastrophic failures to critical equipment, such as the main transformer or interconnected transmission line.

Regarding economies of scale, as FPL has stated in various other proceedings and filings before this commission, experience indicates that there is no material loss of scale benefits for an individual site above 50-60 MW. At the 74.5 MW size, FPL is able to capture the economies of scale related to each site's fixed costs, such as the interconnection equipment and also achieve the benefits discussed above. FPL in fact realizes significant benefits of scale in procurement and construction because, for the FPL SolarTogether program, FPL went to market for major equipment and Engineering, Procurement, Construction (EPC) services for all sites at the same time thus realizing savings similar to those associated with constructing a single large site.

That said, since 2016 FPL has historically constructed multiple sites in different locations concurrently. These multiple sites are managed as a "Project" for engineering, procurement, construction, and contracting purposes, which would capture any other theoretical scale economies that may be available from contractors or suppliers.

In regards to the specific sub-questions:

- A. As noted above, there are advantages associated with sites below the 75 MW threshold. At the same time, FPL's experience indicates there is not material loss of scale economies based on its engineering procurement, contracting, and construction management practices. Accordingly, FPL has not conducted the specific comparison referenced in the question.
- B. Of the twenty FPL SolarTogether sites under consideration, three of the locations could accommodate sites larger than 74.5 MW.

QUESTION:

Please refer to paragraphs 6 and 13 of the Petition, including the table on page 3. Please explain the discrepancy between paragraph 6, which states that five SolarTogether Projects have billing start dates ranging from March 2020 to May 2021, and paragraph 13, which states the last SolarTogether Projects are estimated to come online by April 2020.

RESPONSE:

Paragraph 13 contains a scrivener's error. It should state that the last SolarTogether Projects are estimated to come online by April 2021. The billing dates on the table on page 3 reflect FPL's proposal to begin including the SolarTogether charge and credit 30 days after the commercial operation date of the Project associated with the participant's capacity subscription. The estimated dates are as follows:

	Comm. Operation Date (Est.)	Billing Start Date (Est.)
ST Project 1	2/1/2020	3/1/2020
ST Project 2	2/1/2020	3/1/2020
ST Project 3	1/1/2021	2/1/2021
ST Project 4	4/1/2021	5/1/2021
ST Project 5	4/1/2021	5/1/2021

QUESTION:

Please refer to paragraph 7 of the Petition, where it states "... FPL SolarTogether will share the resulting system benefits between participants and the general body of FPL customers." Demonstrate how the SolarTogether program will share the resulting system benefits between participants and the general body of ratepayers.

RESPONSE:

All FPL customers benefit from the FPL SolarTogether centers over the life of the assets as FPL SolarTogether displaces higher cost fossil-fuel generation and lowers fuel expenses for all customers. The CPVRR analysis estimates projected benefits of \$139 million that will be shared between participants and the general body of customers. Over the life of the program, base revenue requirements for non-participants are expected to increase, on a CPVRR basis, \$48.9 million. This increase is more than offset by the expected clause related CPVRR savings of \$76.6 million, resulting in non-participant CPVRR savings of \$27.7 million. In addition, non-participants benefit from the fuel diversity and environmental benefits associated with the additional solar centers while paying for less than 4% of the cost of the assets, assuming full subscription in the program.

QUESTION:

Please refer to paragraph 7, where it states "... customers who do not participate in FPL SolarTogether will not subsidize the Program."

- A. Explain how FPL guarantees no subsidization given the variability of fuel forecasts and the usage of fixed credit payments to participants.
- B. Does this statement mean that non-participants will not pay for any administrative costs associated with the Program, rate base costs for FPL SolarTogether Projects, above avoided cost capacity/energy payments, or any similar expenses?

RESPONSE:

- A. The assumptions embedded in the program's financial analysis regarding system benefits are consistent with the analyses provided to support FPL's SoBRA investments and other generation expansion. This analysis provides the Cumulative Present Value of Revenue Requirements (CPVRR) which in this case shows the program is expected to save customers \$139 million over the life of the FPL SolarTogether Centers. Recognizing the variable nature of fuel pricing and forecasting, FPL designed the program such that 20% of the forecasted system benefits are reserved for the non-participants to protect them from the unknown potential decline in future fuel prices versus the forecast utilized in the analysis. However, it is important to recognize that fuel prices could increase above forecasted levels, in which case the participants' benefits would be unchanged and non-participants' benefits would increase.
- B. The FPL SolarTogether program is designed for FPL to recover 96.4% of the program revenue requirements from the participants through the levelized subscription fees, when fully subscribed; however, the subscription fees will not cover the entire declining revenue requirement at the program onset. All Program costs and expenses will be reflected as base rate recoverable costs. At the time of the next base rate review, the difference between the levelized and declining revenue requirement as well as any unsubscribed capacity would then be recovered via base rates. Over the life of the program, base revenue requirements for non-participants are expected to be \$48.9 million on a CPVRR basis. This increase is more than offset by the expected clause related CPVRR savings of \$76.6 million, resulting in non-participant CPVRR savings of \$27.7 million.

QUESTION:

Please refer to paragraph 10 of the Petition. Provide sample calculations of how FPL would convert a customer's usage for the preceding 12 months into an equivalent solar capacity value. Provide a sample calculation for a typical residential, commercial, and industrial customer.

RESPONSE:

The calculation for determining a participant's maximum subscription is as follows:

$$\frac{\text{Annual Usage (kWh)}}{\text{Estimated Solar Production Rate (kWh/kW)}} = \text{Maximum Subscription (kW)}$$

Where:

Annual Usage = Total kilowatt hours consumed in the preceding 12-month period

Estimated Solar Production Rate = 2,278 kWh/kW installed¹

Maximum Subscription (kW) is rounded down to the full kilowatt

Customer Type	Annual Usage		Est. Solar Production		Maximum Subscription
Residential (RS-1)	12,000 kWh	÷	2,278	=	5 kW
Commercial (GSLD-1)	219,000 kWh	÷	2,278	=	96 kW
Industrial (GSLDT-3)	5,475,000 kWh	÷	2,278	=	2,403 kW

¹ Based on solar system with a 26% net capacity factor. This figure is used establishing the maximum subscription size, and participants monthly subscription credits will be based on actual monthly generation.

QUESTION:

Please refer to paragraph 10 of the Petition where it states "FPL will review annually the enrolled accounts to ensure that participants have not exceeded their maximum allowable subscription and will make adjustments if needed."

- A. Explain how FPL will monitor and notify the customer of any changes.
- B. If a customer's usage declines due to behavioral changes or the adoption of energy efficiency measures could FPL reduce the customer's subscription in the SolarTogether program? If so, how will this be disclosed to the customer?

RESPONSE:

Similar to net metering, the goal of the program is to allow participants to offset all or a part of their own energy use with solar energy; subscriptions therefore are sized to not exceed 100% of the customer's annual kWh consumption. FPL recognizes natural variation, consumer behavior, and energy efficiency measures may impact a customer's annual kWh consumption. The ability to make adjustments effectuates the program intent to offset the participant's personal usage with solar generation.

- A. On an annual basis FPL will review the customer's historical energy consumption. If the customer's subscription exceeds 115% of their historical kWh consumption, the customers will be notified by email or standard mail notification that their subscription will be reduced to 100%, effective as of the next billing cycle. The 115% threshold is the same FPL standard applied to net metering customers and will provide a buffer for natural fluctuations or changes in energy use.
- B. Yes. This provision is intended to account for all reductions in energy consumption, including behavioral changes or new energy efficiency measures adopted by a participant. The same process explained in response to subsection (A) above would be followed to determine if a reduction is necessary.

QUESTION:

Please refer to paragraph 12 of the Petition. Explain why divestiture of generation would result in termination of the SolarTogether program.

RESPONSE:

The divestiture of generation would result in the termination of the FPL SolarTogether Program because the basis for FPL's ability to offer the Program would be abolished. The FPL rates and tariffs approved by the Florida Public Service Commission that are in existence at the time of divestiture would no longer be offered to customers. Under a paradigm in which FPL no longer owns generation, the capacity of the solar centers will be owned and marketed by the new owners, and pricing would be market-based. Additionally, there would be no "clause" through which the Program Credits would be charged, and it is unclear how any such Credits would even be calculated.

QUESTION:

Please refer to paragraph 14 of the Petition. Explain how FPL determined the allocation of 25 percent to residential and small business customers and 75 percent to commercial, industrial, and government accounts. As part of the response, explain how FPL would determine whether a customer is a small business customer or a commercial customer.

RESPONSE:

FPL determined an allocation among customer classes would support a diversity of participants and ensure all customers have an opportunity to participate. The 25 percent allocation for residential and small business customers was established in an effort to achieve this goal while being mindful of program costs and pre-registration demand. Twenty-five percent of the 1,490 MW, or 372.5 MW, will be allocated to residential and small business, enabling 74,500 customers, assuming a subscription of 5 kW each. FPL proposes to allocate 1,117.5 MW to commercial, industrial, and government customers, an amount that reflects the high level of capacity subscribed during preregistration. As stated in Paragraph 14 of the Petition, FPL will periodically reevaluate the level of capacity subscription among these two customer groups (including waitlist) and, if warranted, reassign subscribed capacity between the groups and adjust the allocation as appropriate.

For purposes of the program allocation, customers taking service under a demand-rate rate structure will be classified as commercial, industrial, and government. Non-demand rate customers will be included in the residential and small business group.

For more information on the ability to re-allocate between customer classes, refer to FPL's response to Staff's First Set of Interrogatories No. 65.

For more information on residential and small business customer interest, refer to FPL's response to Staff's First Set of Interrogatories No. 53.

QUESTION:

Please refer to paragraph 14 of the Petition, where it states that "FPL will periodically reevaluate demand among these two customer groups and, if warranted, reassign subscribed capacity between the groups and adjust the allocation as appropriate."

- A. How often will FPL perform this evaluation?
- B. How will FPL evaluate the demand among the two customer groups?
- C. What notice, if any, would be provided to customers and/or the Commission?
- D. Would reassignment of capacity require Commission approval or review?
- E. What limits would FPL have for reassigning capacity? As part of this response, consider whether FPL could allocate 100 percent of the SolarTogether Program to one customer group.
- F. If allocated 100 percent to residential, what percentage of the Company's residential customers would be able to participate?

RESPONSE:

The purpose of the allocation is to provide all customer classes a fair and equitable opportunity to participate. This is especially important at program launch when the program is new. The intent of FPL's request in Paragraph 14 is to allow operational flexibility to meet varying customer needs over the life of the program. It is difficult to predict the perfect allocation, as customer attitudes and behaviors vary and change with time. Allocation flexibility would allow adjustments such that if there is higher than expected demand within one group, and adoption growth in the other is such that unsubscribed capacity is sitting unused, it is reasonable and appropriate to offer that capacity to the waitlisted accounts.

- A. FPL plans to monitor program enrollment on a continuous and ongoing basis.
- B. For each customer class, FPL will track enrollment, subscribed capacity, the number of customers and total capacity waitlisted and calculate growth rates which can be used to measure demand.
- C. FPL interprets this question to mean, what notice of an allocation change would be provided. FPL does not believe it is necessary to notify customers generally should there be a change in the allocation, but would notify Commission staff of the change. An allocation adjustment would be implemented by making subscriptions available for waitlisted and/or new enrollments thereby allowing subscription enrollments to proceed. In the case of waitlisted customers, they will be notified via email or standard mail that the subscription can be fulfilled and given the opportunity to confirm or cancel enrollment activation.
- D. Approval of the Program would include approval of FPL's right to reallocate capacity among the customer groups to better provide all customers who are interested in participating the opportunity to do so. Therefore, reallocation would not require additional commission approval.

- E. Reallocation would be premised on historical behavior and trends among the customer groups. Based on customer interest to date as denoted in FPL's response to Staff's First Set of Interrogatories No. 53, FPL believes it would not be necessary to allocate 100% of the capacity to one customer class at this time. However, over time, customer attitudes and behaviors change, increasing the allocation to or near 100% may be appropriate to meet the future needs of the customers and the program.
- F. If the full 1,490 MW Phase 1 were 100% allocated to residential customers and assuming a 5 kW subscription size per residential customer, this capacity could serve 298,000 customers. However, as pre-registration demonstrated, there is strong commercial/industrial/ governmental (C&I-G) interest for this program. Allocating 100% of the program to residential customers would not meet the interests and desires of C&I-G customers and vice versa.

QUESTION:

Please refer to paragraph 14 of the Petition, where it states "FPL reserves the right to implement a cap on the maximum portion of Program capacity that can be attributed to one subscriber to ensure that no single customer amasses an unreasonable share of the Program capacity."

- A. Has FPL determined what would be considered an unreasonable share of the Program Capacity? If so, provide the value and explain its derivation. If not, explain how FPL would determine what an unreasonable share is.
- B. Explain how FPL would implement a cap on maximum program subscription by a participant.

RESPONSE:

- A. FPL has not designated a specific capacity amount or percentage as "unreasonable." Given that only one customer pre-registered for more than 10% of Phase 1 (149 MW), FPL believes that if Phase 1 is approved at 1,490 MW, a cap will likely not be necessary. However, preserving the right to implement a cap in the future ensures that no single customer amasses a disproportionate share of the program capacity in an amount that effectively prevents other customers from participating.

When evaluating "unreasonableness", FPL will look to community solar reporting and benchmarking to establish a threshold. The 2018 National Renewable Energy Lab study, "Focusing the Sun: State Considerations for Designing Community Solar Policy" reports that as of 2017 "ten states have limited the ability of certain large customers to procure majority interests in the output of facilities, including six states that have prohibited participants from subscribing to more than 40% of a project's capacity."¹

- B. The following example is for illustrative purposes only.

Assuming a 10% cap, no more than 10% of the program capacity can be attributed to one subscriber. For Phase 1, that would translate to a maximum subscription of 149 MW. Customers would not be able to subscribe to more than 149 MW. Any customer who pre-registered for more than 149 MW would be notified that a cap is being implemented and their subscription is being reduced to 149 MW. Per the terms of the Pre-Registration Agreement, if the cap reduced the subscription by more than 10%, the subscriber will have 10 business days to cancel if they so choose.

As the program size increases (*i.e.*, additional Phases are added), the maximum subscription automatically increases. In other words, if a Phase 2 of 250 MW were added, the program

¹ Cook, Jeffrey J., and Monisha Shah. 2018. Focusing the Sun: State Considerations for Designing Community Solar Policy. Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-70663.
<https://www.nrel.gov/docs/fy18osti/70663.pdf>.

size would be 1,740 MW, and the cap would increase to 174 MW. A customer whose capacity was reduced by the cap would have the option to increase their subscription, subject to the cap.

QUESTION:

Please refer to paragraph 15 of the Petition, where it states “FPL will actively evaluate enrollment levels and waitlisted customers to determine whether the construction of additional FPL SolarTogether Projects is warranted.” Explain what factors FPL will consider in this evaluation.

RESPONSE:

FPL’s intent is to offer future Phases based on customer demand if the addition of new solar centers is determined to be cost-effective. FPL will evaluate the total number of waitlisted customers, the total requested subscription capacity, and the rate at which new customers are added to the waitlist. If demand exists, and the subscription growth rates indicate demand will continue to grow, FPL will begin to develop the next Phase.

QUESTION:

Please refer to paragraphs 16 and 17. Provide separate estimates of the administrative costs for the residential web-based system and the Commercial/Industrial/Governmental customer system.

RESPONSE:

Residential administrative cost estimate (\$1.36 million). The residential web-based enrollment system will enable fully automated online enrollment with user authentication and will integrate with all back office customer information systems. This facilitates the use of actual customer premise data for the establishment of the maximum subscription calculations. The web-based enrollment system and back office integration is expected to cost \$1.36 million, with no future administrative costs expected.

Commercial/Industrial/Governmental cost estimate (\$0.9 million). The system that will be utilized to handle the complexity of multi-account businesses for our Commercial/Industrial/Governmental customers will be a back office application and enrollment will be facilitated by FPL's internal customer service organization. This system will utilize actual customer data for establishing the maximum subscription and will assist with distributing the subscription over the customer's multiple accounts (if necessary). The back office application is expected to cost \$0.9 million, with no future administrative costs expected.

QUESTION:

Please refer to paragraph 18 of the Petition. Regarding renewable energy certificates (RECs), answer the following questions below.

- A. Provide an example of a social attribute that is represented by a REC.
- B. Provide an example of a non-power attribute that is represented by a REC.
- C. Do REC's environmental benefits confer any other benefits, such as emissions?
- D. If a participant elects to have FPL retire RECs on their behalf, would FPL be able to claim the social and other non-power attributes represented by the REC?
- E. Could a participant elect to have RECs continuously retired at a rate equivalent to their subscription?
- F. If a participant elects to have FPL retire RECs on their behalf, would this be at any additional cost to the participant?
- G. Identify where in the proposed tariff participating customers can elect to have RECs retired on their behalf.
- H. What happens if a customer does not request retirement of RECs on their behalf?

RESPONSE:

- A. FPL does not have an example. Paragraph 18 references the US EPA's definition of a REC, which does not include further explanation of "social attributes."
- B. FPL does not have an example. Paragraph 18 references the US EPA's definition of a REC, which does not include further explanation of "non-power attributes."
- C. No. However, a REC does represent generation for a zero-carbon source.
- D. No, FPL cannot claim the social and other non-power attributes of RECs retired on the participant's behalf.
- E. Yes, a participant who elects to have RECs retired will receive the RECs generated by the associated subscription for as long as the customer is enrolled.
- F. No, FPL plans to retire the RECs on the participant's behalf at no additional cost.
- G. The proposed tariff 8.933 makes no mention of REC retirement. Participants may elect this no cost option during enrollment as it is a no cost option participants elect during the enrollment process.
- H. RECs that are generated but not retired remain in the possession of FPL on behalf of its customers.

QUESTION:

Please refer to paragraph 18 of the Petition. Regarding the regulatory treatment of RECs associated with the SolarTogether Program, answer the following questions:

- A. How are proceeds from REC sales calculated?
- B. What are the administrative costs to create and/or retire a REC, and who would be responsible for these costs?
- C. Where are REC related costs and/or benefits attributed?
- D. Is there a viable REC market for which RECs produced by FPL's solar facilities could be sold? If yes, provide an estimated sales price.

RESPONSE:

- A. There are no proceeds from REC sales.
- B. The operational costs associated with registering and retiring the RECs in the North American Renewables Registry™ is estimated to be between \$0.06 to \$0.08 per megawatt hour. These costs are part of the overall program administration costs and are included in the subscription rate.
- C. There is no active market for REC sales in Florida, and therefore there are no monetized REC related costs and/or benefits included in FPL SolarTogether.
- D. There is no active market for REC sales in Florida.

QUESTION:

Please refer to paragraph 19 of the Petition. Explain why the projected installed cost rate, including administrative costs, is below FPL's Solar Base Rate Adjustment facilities in the Company's 20190001-EI clause filings.

RESPONSE:

FPL's 2020 Solar Project that is the subject of FPL's Solar Base Rate Adjustment request in Docket 20190001-EI (the "2020 SoBRA Project") as well as the FPL SolarTogether Projects are cost effective and projected to generate significant customer savings. As described below, there is inherent variation in costs from site to site given differences in the costs of land acquisition, interconnection, specific site configurations, material needs, labor, and transportation, among other things. It is also important to note that a cost-effectiveness analysis considers both the installed cost and the performance (*i.e.*, the expected capacity factor and firm-capacity value) of the projects. As explained below, the 2020 SoBRA Project has a higher capacity factor and a correspondingly higher installed cost, while the SolarTogether Projects have a lower capacity factor and a corresponding lower installed cost.

The major factor driving the cost difference is the differences in the solar module selection and site design.

Solar Array Equipment.

Solar Modules. FPL prioritized the procurement of equipment for the 2020 SoBRA Project. For the 2020 SoBRA Project, FPL completed a design optimization process to ensure that the technology and designs selected for the SoBRA sites maximized customer savings. This process demonstrated that the use of monocrystalline solar modules created the greatest customer value. Therefore, the design and installation costs for 2020 SoBRA Project include monocrystalline solar modules.

When FPL gained enough information through pre-registration regarding the level of customer interest in SolarTogether, there was an insufficient supply of these monocrystalline modules in the solar module market. FPL elected to proceed with the Program using polycrystalline modules with a slightly lower power rating (lower wattage per module) which were available for purchase in the required quantities and on the timelines needed to support SolarTogether. Therefore, the designs and installed costs for the SolarTogether Program include polycrystalline solar modules, which have a lower power rating and lower cost.

DC/AC Ratio. The lower power rating of each module effectively means that in order to achieve the same DC/AC ratios for FPL SolarTogether sites that were achieved for the 2020 SoBRA Project, the sites would need to utilize a considerably larger number of solar modules, require more land, and higher balance of system costs. This approach was impractical given the physical constraints at the majority of the FPL SolarTogether sites coupled with additional permitting timelines that would result from the size increase. Accordingly, FPL was unable to achieve the same DC/AC ratios at the SolarTogether sites.

Module Racking System Selection. Finally, FPL SolarTogether has a higher percentage of fixed tilt sites relative to single-axis tracker sites than the 2020 SoBRA Project, as depicted in the table below. The cost of a fixed tilt site is typically lower on an installed cost basis compared to a single axis tracker, which effectively drives down the average installed cost for FPL SolarTogether.

A table which summarizes the performance characteristics of the two different site portfolios is included below for comparison.

	SolarTogether*	SoBRA
Average \$/kWAC	\$1,202	\$1,378
Average Net Capacity Factor	26.2%	28.7%
Panels Technology	Polycrystalline	Monocrystalline
Avg. Firm Capacity Value	50%	61%
DC/AC Ratio	1.26 to 1.54	1.45 to 1.50
Design	11 Fixed Tilt / 9 Tracking	2 Fixed Tilt / 2 Tracking
*Exclusive of program administration costs		

QUESTION:

Please refer to paragraph 19. Provide the annual and total expenses for Program administrative costs.

RESPONSE:

Please refer to Attachment No. 1 to this Interrogatory ("FPL SolarTogether Admin Costs by Year").

QUESTION:

Please refer to paragraph 20 of the Petition where it states that the "... SolarTogether offering is projected to save customers an estimated \$139 million when compared to FPL's system costs without these additions."

- A. Are these net benefits dependent on any changes in forecasts such as fuel, sales, or capacity costs?
- B. If the answer to a) is yes, has FPL performed any sensitivities to these forecast assumptions? If so, provide the results of these sensitivities.

RESPONSE:

- A. Similar to the way all resource planning is conducted, the net benefits of FPL SolarTogether are a function of the modeled forecast and projections for fuel, sales, or capacity costs.
- B. FPL has performed sensitivities with regards to fuel and emissions forecasts. Please refer to FPL's response to Staff's First Set of Interrogatories No. 78 for these results.

QUESTION:

Please refer to paragraph 20 and Exhibits B and C.

- A. Verify that the system CPVRR difference between the total participant's SolarTogether Charges (\$1,321,343,647 from Exhibit B) and the total participant's SolarTogether Credits (\$1,432,320,931 from Exhibit C) is approximately \$111 million.
- B. Does this show that the estimated net system benefits of \$139 million stated in paragraph 20 would be reduced to \$28 million (\$139M - \$111M) CPVRR for non-participants?
- C. Explain whether these benefits are subject to change since both the cost and benefits to the participant is known.

RESPONSE:

- A. Yes, the difference between the participant's FPL SolarTogether Charges and Credits is approximately \$111 million.
- B. Yes. The total CPVRR savings are estimated at \$139 million. The participant savings amount is \$111 million, resulting in non-participants CPVRR savings in the amount of \$28 million.
- C. The non-participant benefits are subject to change, either favorably or unfavorably. For example, to the extent the program is not fully subscribed in any given month, the benefits that would have accrued to this unsubscribed subscription amount would instead accrue to non-participants. In another example, although the Subscription Charge is fixed, the Subscription Credit is variable as it is dependent on the solar output. That is, as energy output increases, the Credit will increase, thereby increasing fuel clause costs for all customers. This increase will be largely mitigated as increases in solar energy output will displace non-solar generation, thereby saving fuel costs for all customers.

QUESTION:

Please refer to paragraph 21 of the Petition. Explain FPL's process for determining generation resources for its resource planning. As part of this response, explain why FPL did not consider solar facilities in evaluating alternative generation resources in the "No ST Plan," given that solar units were included in its 2018 and 2019 Ten-Year Site Plan outside of the SoBRA or SolarTogether mechanisms.

RESPONSE:

FPL's Integrated Resource Planning (IRP) process consists of several steps. The first step determines the magnitude and timing of new resource needs and is based on FPL's latest load forecast. The second step identifies the resource options and plans that can meet the identified resource need. In the third step, FPL evaluates the competing options. In the fourth and final step, FPL selects the resource plan.

This IRP process was followed in the development of FPL's 2019 Ten Year Power Plant Site Plan, which evaluated a number of types of generation options, including combined cycle units, combustion turbines, solar, and batteries, that could address FPL's projected resource needs through the year 2030 absent any incremental DSM additions from 2020-on. The intent was to develop a Supply Only resource plan to which DSM could then be compared to. This IRP work was performed using EPRI's EGEAS optimization model. The most economic plan that resulted from these EGEAS analyses, shown in the FPL Ten Year Power Plant Site Plan 2019-2028 ("2019 TYSP"), included a 2026 combined cycle unit in the year 2026. It also included 7,152 MW (nameplate) of solar projects from 2019 to 2028, which includes 596 MW of SoBRA projects in 2019 and 2020.

The 2019 TYSP was the starting point in the development of the resource plans described in paragraph 21 of the Petition and used in evaluating the FPL SolarTogether project. First, all future solar resources not in-service by 2019 were removed as potential options to meet future resource needs. The EGEAS model was used to develop a new resource plan without future solar projects, which was called the No SolarTogether ("No ST") Plan. A second resource plan, called the FPL SolarTogether Plan, was developed by adding the FPL SolarTogether Projects as a future resource. The EGEAS model was again used to develop this Plan. The only assumption/input difference used in the development of the two plans described in the petition was the availability of the FPL SolarTogether Projects.

In this docket, FPL is asking for approval of the FPL SolarTogether project only, not for approval of a larger solar portfolio, FPL did not include future solar projects in the resource plans beyond the projects under consideration for approval. This is the same process that FPL has used in the economic analyses for previous solar projects, including the 2017, 2018, and 2019 SoBRA Projects.

QUESTION:

Please refer to paragraphs 21 and 22 of the Petition. Complete the table below for each scenarios listed (a) through (d). Provide the annual revenue requirement of each Plan, the “No ST Plan” and “FPL SolarTogether Plan,” by category. These include SolarTogether costs for generation, transmission, and O&M, as well as FPL’s remainder of system costs for generation, transmission, fuel, fuel transportation, O&M, emissions (excluding CO2 and CO2 only). Provide a version of this table in nominal and present value dollars for each scenario.

- A. Base Case scenario
- B. Low Fuel scenario.
- C. High Fuel scenario.
- D. No CO2 Cost scenario.

[Scenario Name] – [No ST Plan / FPL SolarTogether Plan] – ([Nominal / NPV] \$ millions)														
Year	SolarTogether				Remainder of System									System Total
	Generation	Transmission	O&M	Total	Generation	Transmission	Fuel	Purchases	Fuel Transportation	O&M	Emissions (Non-carbon)	Emissions (Carbon-only)	Total	
2020														
...														
Total														

RESPONSE:

Please see Attachment No. 1 to this amended response that provides the annual revenue requirement in nominal and present values dollars, as well as CPVRR, for nine natural gas and CO2 price scenarios. The CO2 price scenarios considered included a low (i.e., zero) price scenario, as well as mid and high band CO2 price scenarios.

QUESTION:

Please refer to paragraphs 21 and 22 and Exhibits B and C. Complete the table below for each scenarios listed (a) through (d). Provide the annual and total value for the net system savings between the "No ST Plan" and the "FPL Solar Together Plan," the total SolarTogether Charges, the SolarTogether Credits, and the remaining net system benefits to the general body of ratepayers. Provide a version of this table in nominal and present value dollars.

- A. Base Case scenario.
- B. Low Fuel scenario.
- C. High Fuel scenario.
- D. No CO₂ Cost scenario.

System Benefits and SolarTogether Program Impacts - [Nominal \$] or [NPV \$]				
Year	Net System Savings	SolarTogether Charges	SolarTogether Credits	Remaining Net System Savings
2020				
...				
Total				

RESPONSE:

Please see Attachment No. 1 to this amended response, that provides the total (tab 1) and annual (tab 2) value for the net system savings in nominal and present values dollars for the Base Case scenario (Mid Fuel and Mid CO₂), Low Fuel scenario, High Fuel scenario, and the No CO₂ Cost scenario (the Low CO₂ scenario represents No CO₂ Costs). Along with these scenarios, FPL also provided a High CO₂ scenario.

QUESTION:

Please refer to paragraph 22 of the Petition where it states that “Based on the economic analysis, the addition of the SolarTogether Centers is projected to be cost-effective, saving approximately \$139 million CPVRR.” Given that the SolarTogether facilities are projected to be FPL’s least cost alternative generation addition, does FPL believe these are a prudent capacity addition? If so, please explain why FPL is proposing a voluntary cost recovery program for the SolarTogether project sites.

RESPONSE:

Yes, FPL believes the FPL SolarTogether facilities are prudent capacity additions as they reduce overall system costs, thus benefiting all customers. These solar projects are in line with FPL’s 2019 Ten Year Site Plan which showed that solar was expected to be the most cost-effective generation for the next several years.

FPL is proposing a voluntary cost recovery program to meet the interest and needs of customers who wish to directly participate in solar and renewable generation. Many customers cannot or do not wish to install solar on their rooftop. FPL SolarTogether provides them with a viable participation alternative, expanding access to solar. FPL SolarTogether is designed to meet FPL customers’ demand for programs that help achieve their environmental, emissions reductions, and sustainability goals, while offering energy bill savings over time.

Please refer to FPL’s response to Interrogatory No. 49 for detail on solar participation and Interrogatory No. 53 for additional detail on the barriers to rooftop solar.

QUESTION:

Please refer to paragraphs 24 and 25 of the Petition. Provide a numerical example of how the FPL SolarTogether Charge Subscription Rate of \$6.76 and Credit's Benefit Rate were calculated.

RESPONSE:

The tables below lay out the calculation of the Subscription Rate and Benefit Rate. The tables, in Excel format, are provided in Attachment No. 1 to this Interrogatory.

Calculation of the FPL SolarTogether Subscription Rate

$$\begin{aligned}\text{CPVRR Costs} &= \$1,321,343,647 \\ \text{Subscription Rate} &= \text{CPVRR Costs} / \text{Sum of Annual (Discount Factor} \times \text{Total MWs} \times 1000) / 12 \text{ months} \\ &= \text{CPVRR Costs} / \text{Sum of Annual (A} \times \text{G} \times 1000) / 12 \text{ months} \\ &= \$1,321,343,647 / 16,288,753 / 12 \text{ months} = \$6.76/\text{kW-month}\end{aligned}$$

	A	B	C	D	E	F	G	H	CPVRR->	\$1,321.3
Calendar Year	Discount Factor	ST Proj 1	ST Proj 2	ST Proj 3	ST Proj 4	ST Proj 5	Total	Sum of A x G	Subscription Rate \$/kW-Month	Annual Subscription Charge (\$MMs)
		223.5	223.5	447.0	298.0	298.0	1,490.0	16,288.8		
2020	0.93	204.9	204.9	0.0	0.0	0.0	409.8	382.7	\$6.76	\$33.2
2021	0.87	223.5	223.5	447.0	223.5	223.5	1,341.0	1,162.5	\$6.76	\$108.8
2022	0.80	223.5	223.5	447.0	298.0	298.0	1,490.0	1,199.0	\$6.76	\$120.9
2023	0.75	223.5	223.5	447.0	298.0	298.0	1,490.0	1,112.9	\$6.76	\$120.9
2024	0.69	223.5	223.5	447.0	298.0	298.0	1,490.0	1,032.8	\$6.76	\$120.9

Calculation of the FPL SolarTogether Benefit Rate

$$\begin{aligned}\text{CPVRR System Benefits} &= \$1,432,320,931 \\ \text{Benefit Rate} &= \text{CPVRR System Benefits} / \text{Sum of Annual (Discount Factor} \times \text{Generation} \times \text{Wgtd. Avg. Esc. Factor}) \times 100 \\ &= \text{CPVRR System Benefits} / \text{Sum of Annual (A} \times \text{B} \times \text{D}) \times 100 \text{ [where 100 = convert } \$/\text{kWh to } \text{¢/kWh}] \\ &= \$1,432,320,931 / 41,773,064,069,801 \times 100 = 3.42881 \text{ ¢/kWh}\end{aligned}$$

	A	B	C	D	E	CPVRR->	\$1,432.3
Calendar Year	Discount Factor	Total Generation in kWh	Wgtd. Avg. Benefit Rate Escalation	Wgtd. Avg. Escalation Factor	Sum of: A x B x D = 41,773,064,070	Wgtd. Avg. Benefit Rate ¢/kWh	Subscription (Credits) (Millions)
2020	0.93	932,564,120	0.00%	1.0000	870,944,786	3.42881	\$32.0
2021	0.87	3,074,671,843	0.44%	1.0044	2,677,211,882	3.44400	\$105.9
2022	0.80	3,408,692,157	1.26%	1.0171	2,789,738,836	3.48740	\$118.9
2023	0.75	3,398,466,081	1.45%	1.0318	2,619,172,157	3.53796	\$120.2
2024	0.69	3,397,553,616	1.45%	1.0468	2,465,268,021	3.58926	\$121.9

QUESTION:

Please refer to paragraphs 24 and 25 of the Petition. Identify where in the tariff the formulas used to establish monthly charges and credits are included.

RESPONSE:

The formulas used to establish the monthly charges and credits can be found in the Petition; Exhibit B - Subscription Rate and Participant Monthly Subscription Charge, and Exhibit C - Benefit Rate and Participant Monthly Subscription Credit. See also FPL's answer to Staff's First Set of Interrogatories No. 81. The formulas are not embedded in the Tariff.

QUESTION:

Please refer to paragraph 25 of the Petition. Explain how the escalation rate of 1.45% for the Benefit Rate was determined.

RESPONSE:

The Benefit Rate escalation was determined through an iterative process that targeted a simple payback within 7 years, which is the period sought by C&I customers who participate in similar programs. As the Subscription Rate of \$6.76/kW-month that participants pay is fixed and does not escalate, the Benefit Rate and the escalation rate were varied such that participants achieved the targeted payback. The 1.45% escalation rate achieved this goal while providing participants approximately 80% of the overall project benefits.

QUESTION:

Please refer to paragraph 27 of the Petition. Explain whether FPL is seeking approval of some or all of these facilities for inclusion in rate base. As part of this response, explain whether they will be fully included in rate base or if FPL is removing portions from rate base because of subscriptions.

RESPONSE:

FPL is seeking inclusion of all FPL SolarTogether centers in rate base as they benefit all FPL customers by providing cost-effective solar and displacing higher cost fossil-fuel generation, which lowers fuel expenses for all customers. FPL will recover the program revenue requirements from the participants through the levelized subscription fees in base rates. Although the subscription fees will not cover the entire declining revenue requirement at the program onset, over time, when fully subscribed, the subscription fees will exceed the declining revenue requirements and FPL will recover 96.4% of the program revenue requirements from the participants through the levelized subscription fees. However, it is important to note that there will be no change in base rates associated with these additions to rate base until the next base rate review. All Program costs and expenses will be reflected as base rate recoverable costs, and subscription fees will be reflected as base revenues offsetting program costs. Accordingly, the FPL SolarTogether costs and expenses will be reflected in FPL's monthly earnings surveillance report.

QUESTION:

Please refer to paragraphs 27 and 28(c) of the Petition. Reconcile the difference between attributing all costs to rate base in paragraph 28(c) but stating only unsubscribed portions be included in rate base in paragraph 27.

RESPONSE:

Paragraph 27 refers to unsubscribed FPL SolarTogether capacity that will benefit the general body of customers, while paragraph 28(c) addresses how FPL SolarTogether program costs will be recovered. The FPL SolarTogether Program is designed such that, over the life of the Program, FPL will recover the Program revenue requirements from the participants through the levelized subscription fees. At the time of FPL's next base rate review, the difference between the levelized and declining revenue requirement as well as any unsubscribed capacity would then be recovered through base rates.

QUESTION:

Please refer to paragraphs 27 and 28(c) of the Petition. If one or more of the SolarTogether project sites were damaged (for example, from a Hurricane), how would FPL seek cost recovery for the repairs performed?

RESPONSE:

FPL solar energy centers are designed to meet or exceed the local and state building codes, including extreme wind loading associated with hurricane events. If any damage to an FPL SolarTogether site nevertheless results, repair costs would be recovered through insurance to the extent it exceeds FPL's deductibles. Any costs not covered by insurance would be recovered from the general body of customers consistent with Rule No. 25-6.0143, Use of Accumulated Provision Accounts 228.1, 228.2, and 228.4, or through the storm cost recovery mechanism set forth in FPL's current base rate settlement agreement (PSC-2016-0560-AS-EI), as may be applicable.

QUESTION:

Please refer to paragraph 28(b) of the Petition, which states that proposed SolarTogether Credit will be recovered through the Fuel Clause.

- A. How will this be allocated among residential, C/I, and government customers?
- B. Will Credit costs be allocated to the same customer class in the Fuel Clause in same proportion they receive them in the Program?
- C. Will both participants and non-participants pay for this Credit in the Fuel Clause?

RESPONSE:

- A. The cost of the credits will be included in total fuel costs and allocated to all customers on the basis of kWh sales.
- B. No. As explained in response to subsection (A) above, credit costs are allocated to all customers based on kWh sales. Participants receive credits based on their subscription.
- C. Yes.

QUESTION:

Please refer to the FPL's proposed SolarTogether Rider tariff sheet 8.932 under the heading Limitation of Service. How does FPL intend to monitor and enforce the requirement that the customer "supports continuity of the program"?

RESPONSE:

FPL has considered the input provided by the Commission Staff, and it agrees to remove the customer eligibility requirement to support continuity of the program.

QUESTION:

Please refer to Exhibit C of the Petition. Provide the monthly generation estimated for each of the SolarTogether project sites over the life of the projects. As part of this response, explain how the energy production projections of the facilities were developed.

RESPONSE:

Please see Attachment No. 1 to this Interrogatory, which provides the monthly generation estimated for each of the SolarTogether project sites over the life of the projects.

Energy production projections of the facilities were developed using industry-accepted PVsyst software. Windlogics (NextEra Analytics) utilized 20+ years of historical satellite irradiance data, including the layout specifications (module type, inverter type, ratio of total module capacity to the point of interconnection capacity (DC/AC ratio), and ground coverage ratio) as inputs for energy production modeling using PVsyst.

QUESTION:

As part of the SolarTogether Program, FPL is proposing to offer customers a fixed stream of credits for up to 30 years for recovery through the Fuel Clause. Has FPL offered fixed pricing options to third party developers of solar facilities in the past? If not, explain why not and why the two situations require different treatments.

RESPONSE:

Third party developers of solar facilities that are Qualifying Facilities may obtain fixed pricing through FPL's Standard Offer Contract. The Standard Offer Contract provides the option of fixed energy prices for all or a portion of the energy deliveries throughout the term of the contract, at the QF's selection. This is stated as Option D on tariff Sheet No. 10.304, which reads as follows:

Option D- Fixed Firm Energy Payments Starting as early as the In-Service Date of the QS Facility

The calculation of payments to the QS for energy delivered to FPL may include an adjustment at the election of the QS in order to implement the provisions of Rule 25-17.250 (6) (b), F.A.C. Subsequent to the determination of full avoided cost and subject to the provisions of Rule 25-17.0832(3) (a) through (d), F.A.C., a portion of the base energy costs associated with the avoided unit, mutually agreed upon by the utility and renewable energy generator, shall be fixed and amortized on a present value basis over the term of the contract starting, at the election of the QS, as early as the in-service date of the QS. "Base energy costs associated with the avoided unit" means the energy costs of the avoided unit to the extent the unit would have operated. The portion of the base energy costs mutually agreed to by the Company and the QS shall be specified in Appendix E. The Company will provide the QS with a schedule of "Fixed Energy Payments" over the term of the Standard Offer Contract based on the applicable information specified in Appendix E.

FPL also has agreed to fixed energy prices with renewable energy providers under Power Purchase Agreements. For example, in Docket No. 110018-EU, the Commission approved a PPA between FPL and the Solid Waste Authority of Palm Beach County (SWA) for the output of a new waste to energy facility. The SWA chose to fix 50% of their energy payment rates throughout the life of the contract (22 years), based upon the following clause in the contract:

6.2.1 The fraction of the energy rates to be fixed ("Fixed Fraction" or "FF") shall be the product of the Annual Capacity Factor as of the end of the previous calendar year and [] TBD [] %. *[The Authority, in its discretion, shall choose and insert the percentage, not to exceed 50%, prior to execution of this Agreement.]* For each month of the calendar year, the payment for the FF shall be the total net generation for each hour of each month times the FF times the forecast energy rate shown in Appendix C summed over all hours of the month. For the purpose of calculating the FF, and up until such time as an entire calendar year has elapsed since the Commercial Operation Date, each then complete calendar month shall be included in a cumulative average of the partial calendar year.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 29, for the following questions.

- a. Please provide FPL's rationale for assuming the company's non-zero CO₂ emission cost value (price forecast) occurs in 2026 for purpose of developing FPL's CPVRR Base Case (Mid CO₂ price, Mid Fuel cost) scenario.
- b. Please refer to FPL's response to Staff's First Set of Interrogatories, No. 27, in Docket No. 20170123-EI (Petition for approval of arrangement to mitigate unfavorable impact of St. John River Power Park, by Florida Power & Light Company) in which FPL indicated that "FPL's base case also assumed that CO₂ prices would start in 2028." Please explain in detail why FPL, and its consultant ICF, changed the forecast of initial non-zero CO₂ emission price to 2026 rather than 2028 in developing the CPVRR Base Case scenario in this docket.
- c. Please provide alternative responses to Staff's First Data Request, Nos. 28 and 78 (for Base Case only) using the same CO₂ price forecast that FPL assumed in Docket No. 20170123-EI.

RESPONSE:

- a. FPL uses the CO₂ emission price forecast developed by ICF. ICF determines the start year for CO₂ emissions prices as well as the level of the prices. In developing their forecast, ICF bases the start year of the forecast on its assessment of the likelihood of various scenarios of federal legislation and regulation of CO₂ prices.

There was no significant difference in ICF's assessment of the probability of federal action in this area between their forecast used in Docket No. 20170123-EI and the current CO₂ forecast used by FPL in the economic analysis of the FPL SolarTogether Program. In both forecasts, ICF assigned a low probability for action in 2026 and 2027 resulting in CO₂ emission prices of less than \$1 per ton. Because the values were so low, ICF did not include them in the 2026 and 2027 forecast used in Docket No. 20170123-EI. In the current forecast, however, ICF did include these low 2026 and 2027 values. Because the 2026 and 2027 values are so low, 0.52 and 0.84 dollars per ton in the current forecast, respectively, the decision to include the cost for these two years has a small impact (approximately \$1 million) on the CPVRR of FPL SolarTogether Program.

The important difference between the two forecasts is that CO₂ emission prices were significantly higher in the forecast used in Docket No. 20170123-EI. As a result, the FPL SolarTogether Program would have increased customer (CPVRR) savings of \$117 million if the Docket No. 20170123-EI CO₂ emission price forecast is used.

- b. Please see response to subpart (a) above.
- c. See the tables provided in Attachments Nos. 1 – 3 to this response.

Florida Power & Light Company
Docket No. 20190061-EI
Staff's First Set of Interrogatories
Interrogatory No. 1
Attachment No. 1
Tab 1 of 2

Fuel Cost Forecast -----	Environmental Compliance Cost Forecast -----	No Solar Together Plan (Millions) -----	FPL Solar Together Plan (Millions) -----	Net Difference (Millions) -----	Difference from Base Case Scenario (Millions) -----	
Mid Fuel Cost	Mid CO ₂	\$53,393	\$53,137	(\$256)	\$0	<--- Base Case Scenario

- Negative () Indicates Savings to FPL Customers.
CO2 forecast assumed in 20170123-EI Docket

No ST Plan - Mid Fuel & Mid CO₂

		Solar Revenue Requirements					Non-Solar Generation Costs Avoided							System Costs Avoided					
Year	Discount Factor	Program Admin Costs (Millions)	Generation Capital (Millions)	Transmission Interconnection (Millions)	Fixed O&M (Millions)	Land (Millions)	Generation Capital (Millions)	Fixed O&M (Millions)	Transmission Interconnection (Millions)	Capital Replacement (Millions)	Incremental Gas Transport (Millions)	Short-Term Purchases (Millions)	System Net Fuel (Millions)	Startup+ VOM (Millions)	CO ₂ Emission (Millions)	NO _x Emission (Millions)	SO ₂ Emission (Millions)	Total Rev/Req	
2019	1.01	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,092	\$25	\$0	\$1	\$0	\$2,118	
2020	0.93	\$0	\$0	\$0	\$0	\$0	\$2	\$4	\$0	\$0	\$0	\$0	\$1,807	\$24	\$0	\$1	\$0	\$1,837	
2021	0.87	\$0	\$0	\$0	\$0	\$0	\$31	\$7	\$0	\$0	\$0	\$0	\$1,819	\$24	\$0	\$1	\$0	\$1,882	
2022	0.80	\$0	\$0	\$0	\$0	\$0	\$70	\$15	\$1	\$0	\$0	\$0	\$1,851	\$26	\$0	\$1	\$0	\$1,964	
2023	0.75	\$0	\$0	\$0	\$0	\$0	\$138	\$13	\$3	\$0	\$0	\$0	\$1,995	\$28	\$0	\$1	\$0	\$2,177	
2024	0.69	\$0	\$0	\$0	\$0	\$0	\$234	\$23	\$8	\$0	\$0	\$0	\$2,211	\$32	\$0	\$1	\$0	\$2,509	
2025	0.64	\$0	\$0	\$0	\$0	\$0	\$286	\$23	\$11	\$0	\$0	\$0	\$2,391	\$38	\$0	\$1	\$0	\$2,750	
2026	0.60	\$0	\$0	\$0	\$0	\$0	\$273	\$24	\$11	\$0	\$0	\$0	\$2,605	\$39	\$0	\$1	\$0	\$2,953	
2027	0.55	\$0	\$0	\$0	\$0	\$0	\$365	\$25	\$11	\$10	\$0	\$0	\$2,771	\$37	\$0	\$1	\$0	\$3,116	
2028	0.51	\$0	\$0	\$0	\$0	\$0	\$419	\$38	\$16	\$12	\$0	\$0	\$2,897	\$51	\$124	\$1	\$0	\$3,505	
2029	0.48	\$0	\$0	\$0	\$0	\$0	\$419	\$38	\$19	\$11	\$0	\$0	\$3,033	\$61	\$148	\$1	\$0	\$3,729	
2030	0.44	\$0	\$0	\$0	\$0	\$0	\$413	\$41	\$19	\$12	\$0	\$0	\$3,146	\$65	\$259	\$1	\$0	\$3,955	
2031	0.41	\$0	\$0	\$0	\$0	\$0	\$444	\$44	\$22	\$26	\$0	\$0	\$3,254	\$58	\$360	\$1	\$0	\$4,210	
2032	0.38	\$0	\$0	\$0	\$0	\$0	\$484	\$54	\$25	\$35	\$0	\$0	\$3,418	\$64	\$486	\$1	\$0	\$4,567	
2033	0.35	\$0	\$0	\$0	\$0	\$0	\$553	\$58	\$30	\$53	\$0	\$0	\$3,521	\$70	\$620	\$1	\$0	\$4,886	
2034	0.33	\$0	\$0	\$0	\$0	\$0	\$638	\$62	\$34	\$52	\$0	\$0	\$3,628	\$81	\$776	\$1	\$0	\$5,271	
2035	0.31	\$0	\$0	\$0	\$0	\$0	\$722	\$79	\$38	\$79	\$0	\$0	\$3,786	\$88	\$959	\$1	\$0	\$5,752	
2036	0.28	\$0	\$0	\$0	\$0	\$0	\$806	\$79	\$42	\$87	\$0	\$0	\$4,081	\$97	\$1,156	\$1	\$0	\$6,349	
2037	0.26	\$0	\$0	\$0	\$0	\$0	\$890	\$89	\$46	\$96	\$0	\$0	\$4,232	\$103	\$1,318	\$1	\$0	\$6,774	
2038	0.24	\$0	\$0	\$0	\$0	\$0	\$973	\$97	\$51	\$120	\$0	\$0	\$4,371	\$112	\$1,493	\$1	\$0	\$7,216	
2039	0.23	\$0	\$0	\$0	\$0	\$0	\$984	\$112	\$51	\$135	\$0	\$0	\$4,486	\$119	\$1,674	\$1	\$0	\$7,561	
2040	0.21	\$0	\$0	\$0	\$0	\$0	\$1,027	\$106	\$53	\$137	\$0	\$0	\$4,632	\$127	\$1,890	\$1	\$0	\$7,973	
2041	0.20	\$0	\$0	\$0	\$0	\$0	\$1,130	\$125	\$57	\$160	\$0	\$0	\$4,790	\$144	\$2,080	\$1	\$0	\$8,488	
2042	0.18	\$0	\$0	\$0	\$0	\$0	\$1,159	\$120	\$58	\$185	\$0	\$0	\$4,905	\$151	\$2,255	\$1	\$0	\$8,834	
2043	0.17	\$0	\$0	\$0	\$0	\$0	\$1,301	\$144	\$64	\$206	\$0	\$0	\$5,170	\$158	\$2,562	\$1	\$0	\$9,605	
2044	0.16	\$0	\$0	\$0	\$0	\$0	\$1,347	\$139	\$66	\$245	\$0	\$0	\$5,371	\$172	\$2,847	\$1	\$0	\$10,189	
2045	0.14	\$0	\$0	\$0	\$0	\$0	\$1,382	\$155	\$68	\$266	\$0	\$0	\$5,460	\$180	\$3,075	\$1	\$0	\$10,587	
2046	0.13	\$0	\$0	\$0	\$0	\$0	\$1,383	\$159	\$69	\$299	\$0	\$0	\$5,584	\$187	\$3,346	\$1	\$0	\$11,026	
2047	0.12	\$0	\$0	\$0	\$0	\$0	\$1,419	\$187	\$71	\$299	\$0	\$0	\$5,723	\$197	\$3,654	\$1	\$0	\$11,551	
2048	0.12	\$0	\$0	\$0	\$0	\$0	\$1,420	\$173	\$71	\$346	\$0	\$0	\$5,845	\$205	\$3,967	\$1	\$0	\$12,028	
2049	0.11	\$0	\$0	\$0	\$0	\$0	\$1,439	\$201	\$73	\$354	\$0	\$0	\$5,951	\$206	\$4,304	\$1	\$0	\$12,549	
2050	0.10	\$0	\$0	\$0	\$0	\$0	\$1,460	\$188	\$73	\$365	\$0	\$0	\$6,035	\$212	\$4,394	\$1	\$0	\$12,727	
2051	0.09	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
CPVRR Thru 2051		\$0	\$0	\$0	\$0	\$0	\$5,437	\$588	\$260	\$606	\$0	\$0	\$38,124	\$799	\$7,570	\$9	\$0	\$53,393	

- Negative () Indicates Savings to FPL Customers.

FPL SolarTogether Plan - Mid Fuel & Mid CO₂

Year	Solar Revenue Requirements			Non-Solar Generation Costs Avoided						System Costs Avoided					Total RevReq (Millions)	
	Program Admin. Costs (Millions)	Generation Capital (Millions)	Transmission Interconnection (Millions)	Fixed O&M (Millions)	Land (Millions)	Generation Capital (Millions)	Transmission Interconnection (Millions)	Capital Replacement (Millions)	Incremental Gas Transport (Millions)	Short-Term Purchases (Millions)	System Net Fuel (Millions)	Start-up + VOM (Millions)	CO ₂ Emission (Millions)	NO _x Emission (Millions)		SO ₂ Emission (Millions)
2019	1.01	\$2	\$0	\$0	\$4	\$0	\$0	\$0	\$0	\$0	\$2,092	\$25	\$0	\$1	\$0	\$2,124
2020	0.93	\$2	\$6	\$1	\$11	\$1	\$0	\$0	\$0	\$0	\$1,787	\$24	\$0	\$1	\$0	\$1,888
2021	0.87	\$2	\$21	\$5	\$12	\$9	\$0	\$0	\$0	\$0	\$1,759	\$23	\$0	\$1	\$0	\$2,002
2022	0.80	\$2	\$22	\$6	\$12	\$13	\$0	\$0	\$0	\$0	\$1,785	\$24	\$0	\$1	\$0	\$2,049
2023	0.75	\$1	\$165	\$21	\$6	\$12	\$55	\$5	\$0	\$0	\$1,922	\$27	\$0	\$1	\$0	\$2,216
2024	0.69	\$1	\$156	\$20	\$7	\$12	\$183	\$17	\$8	\$0	\$2,133	\$30	\$0	\$1	\$0	\$2,568
2025	0.64	\$0	\$149	\$20	\$8	\$12	\$237	\$17	\$11	\$0	\$2,307	\$35	\$0	\$1	\$0	\$2,797
2026	0.60	\$0	\$142	\$19	\$8	\$12	\$238	\$18	\$10	\$0	\$2,516	\$37	\$0	\$1	\$0	\$2,992
2027	0.55	\$0	\$137	\$18	\$9	\$12	\$219	\$18	\$10	\$10	\$2,674	\$41	\$0	\$1	\$0	\$3,091
2028	0.51	\$0	\$133	\$17	\$9	\$12	\$326	\$17	\$16	\$12	\$2,804	\$53	\$119	\$1	\$0	\$3,476
2029	0.48	\$0	\$129	\$17	\$9	\$12	\$382	\$31	\$19	\$11	\$2,949	\$57	\$144	\$1	\$0	\$3,702
2030	0.44	\$0	\$124	\$16	\$9	\$12	\$379	\$34	\$19	\$12	\$3,060	\$61	\$252	\$1	\$0	\$3,920
2031	0.41	\$0	\$120	\$15	\$9	\$12	\$421	\$37	\$22	\$26	\$3,149	\$56	\$348	\$1	\$0	\$4,159
2032	0.38	\$0	\$115	\$15	\$10	\$12	\$479	\$47	\$25	\$35	\$3,310	\$61	\$470	\$1	\$0	\$4,523
2033	0.35	\$0	\$111	\$14	\$10	\$12	\$547	\$51	\$29	\$33	\$3,411	\$69	\$600	\$1	\$0	\$4,832
2034	0.33	\$0	\$106	\$13	\$10	\$12	\$633	\$55	\$34	\$52	\$3,514	\$80	\$750	\$1	\$0	\$5,203
2035	0.31	\$0	\$102	\$13	\$10	\$12	\$718	\$72	\$38	\$69	\$3,671	\$84	\$928	\$1	\$0	\$5,660
2036	0.28	\$0	\$98	\$12	\$11	\$12	\$802	\$72	\$42	\$76	\$3,962	\$93	\$1,121	\$1	\$0	\$6,245
2037	0.26	\$0	\$93	\$11	\$11	\$12	\$885	\$82	\$46	\$92	\$4,112	\$100	\$1,280	\$1	\$0	\$6,669
2038	0.24	\$0	\$98	\$11	\$11	\$12	\$968	\$89	\$50	\$118	\$4,248	\$111	\$1,450	\$1	\$0	\$7,112
2039	0.23	\$0	\$93	\$10	\$11	\$12	\$980	\$102	\$51	\$118	\$4,362	\$117	\$1,627	\$1	\$0	\$7,442
2040	0.21	\$0	\$88	\$10	\$11	\$12	\$1,022	\$98	\$53	\$135	\$4,502	\$126	\$1,836	\$1	\$0	\$7,839
2041	0.20	\$0	\$82	\$10	\$11	\$12	\$1,112	\$114	\$57	\$159	\$4,661	\$140	\$2,023	\$1	\$0	\$8,329
2042	0.18	\$0	\$77	\$9	\$12	\$12	\$1,124	\$114	\$58	\$184	\$4,776	\$146	\$2,194	\$1	\$0	\$8,652
2043	0.17	\$0	\$72	\$9	\$13	\$12	\$1,268	\$141	\$64	\$205	\$5,035	\$156	\$2,494	\$1	\$0	\$9,414
2044	0.16	\$0	\$67	\$8	\$13	\$12	\$1,317	\$132	\$66	\$249	\$5,236	\$168	\$2,775	\$1	\$0	\$9,990
2045	0.14	\$1	\$62	\$8	\$12	\$13	\$1,354	\$146	\$68	\$271	\$5,325	\$174	\$2,999	\$1	\$0	\$10,378
2046	0.13	\$1	\$58	\$7	\$13	\$13	\$1,357	\$149	\$68	\$300	\$5,444	\$185	\$3,262	\$1	\$0	\$10,802
2047	0.12	\$1	\$54	\$7	\$13	\$13	\$1,395	\$176	\$71	\$309	\$5,585	\$189	\$3,566	\$1	\$0	\$11,313
2048	0.12	\$1	\$49	\$6	\$12	\$13	\$1,397	\$162	\$71	\$345	\$5,703	\$200	\$3,870	\$1	\$0	\$11,777
2049	0.11	\$1	\$45	\$6	\$12	\$13	\$1,437	\$189	\$73	\$348	\$5,810	\$202	\$4,201	\$1	\$0	\$12,284
2050	0.10	\$0	\$32	\$4	\$9	\$12	\$1,440	\$174	\$73	\$357	\$5,892	\$207	\$4,289	\$1	\$0	\$12,437
2051	0.09	(\$0)	\$6	\$1	\$5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13
CPVRR Thru 2051		\$11	\$1,417	\$178	\$96	\$146	\$5,079	\$508	\$255	\$597	\$37,066	\$778	\$7,364	\$9	\$0	\$53,137

Net Difference - Mid Fuel & Mid CO₂

Year	Discount Factor	Solar Revenue Requirements					Non-Solar Generation Costs Avoided					System Costs Avoided					Total RevReq (Millions)
		Program Admin Costs (Millions)	Generation Capital (Millions)	Transmission Interconnection (Millions)	Fixed O&M (Millions)	Land (Millions)	Generation Capital (Millions)	Fixed O&M (Millions)	Transmission Interconnection (Millions)	Capital Replacement (Millions)	Incremental Gas Transport (Millions)	Short-Term Purchases (Millions)	System Net Fuel (Millions)	Startup + VOM (Millions)	CO ₂ Emission (Millions)	NO _x Emission (Millions)	
2019	1.01	\$2	\$0	\$0	\$0	\$4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6
2020	0.93	\$2	\$54	\$6	\$1	\$11	\$11	\$31	\$0	\$0	\$0	\$0	\$19	\$0	\$0	\$0	\$51
2021	0.87	\$2	\$170	\$21	\$5	\$21	\$22	\$66	\$0	\$0	\$0	\$0	\$60	\$1	\$0	\$0	\$120
2022	0.80	\$2	\$176	\$22	\$6	\$12	\$27	\$81	\$1	\$0	\$0	\$0	\$65	\$2	\$0	\$0	\$85
2023	0.75	\$1	\$165	\$21	\$6	\$12	\$33	\$81	\$3	\$0	\$0	\$0	\$73	\$1	\$0	\$0	\$39
2024	0.69	\$1	\$156	\$20	\$7	\$12	\$32	\$86	\$0	\$0	\$0	\$0	\$77	\$2	\$0	\$0	\$59
2025	0.64	\$0	\$149	\$20	\$8	\$12	\$48	\$66	\$0	\$0	\$0	\$0	\$84	\$3	\$0	\$0	\$46
2026	0.60	\$0	\$142	\$19	\$8	\$12	\$45	\$71	\$0	\$0	\$0	\$0	\$89	\$2	\$0	\$0	\$39
2027	0.55	\$0	\$137	\$18	\$9	\$12	\$42	\$71	\$0	\$0	\$0	\$0	\$91	\$4	\$0	\$0	\$25
2028	0.51	\$0	\$133	\$17	\$9	\$12	\$39	\$71	\$0	\$0	\$0	\$0	\$93	\$2	\$0	\$0	\$29
2029	0.48	\$0	\$129	\$17	\$9	\$12	\$37	\$71	\$0	\$0	\$0	\$0	\$83	\$4	\$0	\$0	\$27
2030	0.44	\$0	\$124	\$16	\$9	\$12	\$34	\$71	\$0	\$0	\$0	\$0	\$86	\$4	\$0	\$0	\$25
2031	0.41	\$0	\$120	\$15	\$9	\$12	\$32	\$71	\$0	\$0	\$0	\$0	\$105	\$2	\$0	\$0	\$21
2032	0.38	\$0	\$115	\$15	\$10	\$12	\$30	\$71	\$0	\$0	\$0	\$0	\$108	\$2	\$0	\$0	\$44
2033	0.35	\$0	\$111	\$14	\$10	\$12	\$31	\$66	\$0	\$0	\$0	\$0	\$110	\$1	\$0	\$0	\$54
2034	0.33	\$0	\$106	\$13	\$10	\$12	\$31	\$66	\$0	\$0	\$0	\$0	\$114	\$1	\$0	\$0	\$68
2035	0.31	\$0	\$102	\$13	\$10	\$12	\$31	\$66	\$0	\$0	\$0	\$0	\$115	\$4	\$0	\$0	\$92
2036	0.28	\$0	\$98	\$12	\$11	\$12	\$31	\$66	\$0	\$0	\$0	\$0	\$118	\$4	\$0	\$0	\$104
2037	0.26	\$0	\$93	\$11	\$11	\$12	\$31	\$66	\$0	\$0	\$0	\$0	\$120	\$3	\$0	\$0	\$105
2038	0.24	\$0	\$98	\$11	\$11	\$12	\$31	\$66	\$0	\$0	\$0	\$0	\$123	\$1	\$0	\$0	\$105
2039	0.23	\$0	\$93	\$10	\$11	\$12	\$31	\$66	\$0	\$0	\$0	\$0	\$124	\$3	\$0	\$0	\$119
2040	0.21	\$0	\$88	\$10	\$11	\$12	\$31	\$66	\$0	\$0	\$0	\$0	\$130	\$1	\$0	\$0	\$134
2041	0.20	\$0	\$82	\$10	\$11	\$12	\$31	\$66	\$0	\$0	\$0	\$0	\$129	\$3	\$0	\$0	\$159
2042	0.18	\$0	\$77	\$9	\$12	\$12	\$35	\$71	\$0	\$0	\$0	\$0	\$129	\$5	\$0	\$0	\$182
2043	0.17	\$0	\$72	\$9	\$13	\$12	\$33	\$71	\$0	\$0	\$0	\$0	\$135	\$3	\$0	\$0	\$190
2044	0.16	\$0	\$67	\$8	\$13	\$12	\$30	\$71	\$0	\$5	\$0	\$0	\$135	\$4	\$0	\$0	\$199
2045	0.14	\$1	\$62	\$8	\$12	\$13	\$28	\$81	\$0	\$5	\$0	\$0	\$135	\$6	\$0	\$0	\$209
2046	0.13	\$1	\$58	\$7	\$13	\$13	\$26	\$101	\$0	\$1	\$0	\$0	\$140	\$2	\$0	\$0	\$225
2047	0.12	\$1	\$54	\$7	\$13	\$13	\$25	\$111	\$0	\$0	\$0	\$0	\$138	\$8	\$0	\$0	\$238
2048	0.12	\$1	\$49	\$6	\$12	\$13	\$23	\$111	\$0	\$2	\$0	\$0	\$141	\$5	\$0	\$0	\$251
2049	0.11	\$1	\$45	\$6	\$12	\$12	\$22	\$121	\$0	\$6	\$0	\$0	\$141	\$4	\$0	\$0	\$265
2050	0.10	\$0	\$32	\$4	\$9	\$12	\$20	\$131	\$0	\$8	\$0	\$0	\$143	\$4	\$0	\$0	\$290
2051	0.09	\$0	\$6	\$1	\$1	\$5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13
CPVRR Thru 2051		\$11	\$1,417	\$178	\$96	\$146	\$358	\$80	\$5	\$9	\$368	\$0	\$1,058	\$21	\$207	\$0	\$756

Florida Power & Light Company
Docket No. 20190061-EI
Staff's First Set of Interrogatories
Interrogatory No. 1
Attachment No. 2
Tab 1 of 1

CO2 forecast assumed in 20170123-EI

Year	No ST Plan			
	CO ₂ Emission (Tons)	NO _x Emission (Tons)	SO ₂ Emission (Tons)	Total Emission (Tons)
2019	37,922,074	7,393	1,975	37,931,441
2020	36,999,697	6,702	1,172	37,007,571
2021	37,300,289	6,739	1,308	37,308,335
2022	36,599,892	6,307	1,161	36,607,360
2023	36,959,008	6,337	1,286	36,966,630
2024	36,982,948	5,783	1,160	36,989,891
2025	36,931,382	5,652	1,293	36,938,327
2026	37,374,181	5,672	1,224	37,381,076
2027	38,108,566	5,811	1,380	38,115,757
2028	38,084,462	5,651	1,383	38,091,495
2029	38,570,578	5,656	1,369	38,577,603
2030	38,712,447	5,555	1,338	38,719,340
2031	38,994,581	5,106	1,256	39,000,943
2032	40,111,976	5,245	1,249	40,118,470
2033	40,355,165	5,251	1,223	40,361,639
2034	40,811,217	5,192	1,211	40,817,620
2035	41,495,024	5,267	1,208	41,501,498
2036	44,750,402	5,706	1,230	44,757,337
2037	45,689,616	5,832	1,231	45,696,679
2038	46,375,028	5,870	1,230	46,382,128
2039	46,620,244	5,859	1,233	46,627,335
2040	47,230,154	5,912	1,242	47,237,308
2041	48,306,891	5,871	1,246	48,314,008
2042	48,656,397	5,887	1,246	48,663,529
2043	51,360,079	6,137	1,262	51,367,478
2044	53,039,213	6,288	1,270	53,046,770
2045	53,234,259	6,285	1,265	53,241,808
2046	53,821,086	6,322	1,270	53,828,678
2047	54,618,414	6,368	1,272	54,626,054
2048	55,087,181	6,389	1,274	55,094,844
2049	55,534,056	6,833	1,325	55,542,214
2050	56,700,271	6,976	1,353	56,708,600
2051	0	0	0	0

Year	FPL SolarTogether Plan			
	CO ₂ Emission (Tons)	NO _x Emission (Tons)	SO ₂ Emission (Tons)	Total Emission (Tons)
2019	37,922,074	7,393	1,975	37,931,441
2020	36,570,916	6,630	1,168	36,578,714
2021	35,966,455	6,449	1,280	35,974,184
2022	35,196,793	6,069	1,146	35,204,008
2023	35,512,328	6,058	1,262	35,519,648
2024	35,596,895	5,571	1,147	35,603,612
2025	35,563,201	5,417	1,283	35,569,901
2026	36,026,678	5,477	1,216	36,033,370
2027	36,697,205	5,620	1,356	36,704,181
2028	36,831,665	5,579	1,399	36,838,643
2029	37,490,639	5,686	1,388	37,497,713
2030	37,671,473	5,584	1,388	37,678,445
2031	37,676,849	4,910	1,253	37,683,012
2032	38,787,011	5,066	1,236	38,793,312
2033	39,027,813	5,078	1,207	39,034,098
2034	39,468,375	5,034	1,200	39,474,608
2035	40,169,188	5,121	1,195	40,175,504
2036	43,419,129	5,592	1,221	43,425,941
2037	44,363,525	5,718	1,220	44,370,463
2038	45,048,494	5,751	1,224	45,055,469
2039	45,300,194	5,758	1,226	45,307,177
2040	45,880,059	5,837	1,233	45,887,129
2041	46,984,577	5,776	1,238	46,991,590
2042	47,343,591	5,787	1,237	47,350,614
2043	50,010,457	6,083	1,253	50,017,792
2044	51,698,650	6,215	1,260	51,706,125
2045	51,909,149	6,224	1,258	51,916,631
2046	52,463,335	6,259	1,258	52,470,852
2047	53,294,395	6,342	1,261	53,301,998
2048	53,745,661	6,338	1,267	53,753,265
2049	54,206,398	6,770	1,318	54,214,485
2050	55,344,732	6,912	1,346	55,352,989
2051	0	0	0	0

Year	Difference			
	CO ₂ Emission (Tons)	NO _x Emission (Tons)	SO ₂ Emission (Tons)	Total Emission (Tons)
2019	0	0	0	0
2020	(428,781)	(73)	(4)	(428,857)
2021	(1,333,834)	(291)	(28)	(1,334,152)
2022	(1,403,099)	(238)	(16)	(1,403,352)
2023	(1,446,680)	(279)	(24)	(1,446,982)
2024	(1,386,053)	(212)	(14)	(1,386,279)
2025	(1,368,181)	(235)	(11)	(1,368,426)
2026	(1,347,503)	(195)	(8)	(1,347,706)
2027	(1,411,361)	(191)	(24)	(1,411,576)
2028	(1,252,797)	(72)	16	(1,252,853)
2029	(1,079,939)	30	19	(1,079,890)
2030	(1,040,974)	30	50	(1,040,895)
2031	(1,317,733)	(196)	(3)	(1,317,931)
2032	(1,324,965)	(180)	(13)	(1,325,158)
2033	(1,327,352)	(173)	(16)	(1,327,541)
2034	(1,342,843)	(158)	(12)	(1,343,012)
2035	(1,325,837)	(146)	(13)	(1,325,995)
2036	(1,331,273)	(114)	(9)	(1,331,396)
2037	(1,326,091)	(114)	(11)	(1,326,216)
2038	(1,326,534)	(119)	(7)	(1,326,659)
2039	(1,320,050)	(101)	(8)	(1,320,159)
2040	(1,350,095)	(75)	(9)	(1,350,179)
2041	(1,322,314)	(96)	(9)	(1,322,418)
2042	(1,312,806)	(101)	(9)	(1,312,915)
2043	(1,349,622)	(55)	(10)	(1,349,686)
2044	(1,340,563)	(73)	(10)	(1,340,645)
2045	(1,325,111)	(61)	(7)	(1,325,178)
2046	(1,357,751)	(64)	(12)	(1,357,827)
2047	(1,324,019)	(26)	(11)	(1,324,056)
2048	(1,341,521)	(52)	(8)	(1,341,580)
2049	(1,327,658)	(64)	(7)	(1,327,729)
2050	(1,355,539)	(65)	(7)	(1,355,611)
2051	0	0	0	0

- Negative () Indicates Savings to FPL Customers.

Florida Power & Light Company
Docket No. 20190061-EI
Staff's First Set of Interrogatories
Interrogatory No. 95
Attachment No. 3
Tab 1 of 1

CO2 forecast assumed in 20170123-EI Docket

Year	Discount Factor	No ST Plan				FPL SolarTogether Plan				Difference			
		CO ₂ Emission (Millions)	NO _x Emission (Millions)	SO ₂ Emission (Millions)	Total Emission (Millions)	CO ₂ Emission (Millions)	NO _x Emission (Millions)	SO ₂ Emission (Millions)	Total Emission (Millions)	CO ₂ Emission (Millions)	NO _x Emission (Millions)	SO ₂ Emission (Millions)	Total Emission (Millions)
2019	1.01	\$0	\$1	\$0	\$1	\$0	\$1	\$0	\$1	\$0	\$0.00	\$0	\$0
2020	0.93	\$0	\$1	\$0	\$1	\$0	\$1	\$0	\$1	\$0	(\$0.01)	\$0	(\$0)
2021	0.87	\$0	\$1	\$0	\$1	\$0	\$1	\$0	\$1	\$0	(\$0.04)	\$0	(\$0)
2022	0.80	\$0	\$1	\$0	\$1	\$0	\$1	\$0	\$1	\$0	(\$0.03)	\$0	(\$0)
2023	0.75	\$0	\$1	\$0	\$1	\$0	\$1	\$0	\$1	\$0	(\$0.03)	\$0	(\$0)
2024	0.69	\$0	\$1	\$0	\$1	\$0	\$1	\$0	\$1	\$0	(\$0.02)	\$0	(\$0)
2025	0.64	\$0	\$1	\$0	\$1	\$0	\$1	\$0	\$1	\$0	(\$0.02)	\$0	(\$0)
2026	0.60	\$0	\$1	\$0	\$1	\$0	\$1	\$0	\$1	\$0	(\$0.02)	\$0	(\$0)
2027	0.55	\$0	\$1	\$0	\$1	\$0	\$1	\$0	\$1	\$0	(\$0.02)	\$0	(\$0)
2028	0.51	\$124	\$1	\$0	\$124	\$119	\$1	\$0	\$120	(\$4)	(\$0.01)	\$0	(\$4)
2029	0.48	\$148	\$1	\$0	\$148	\$144	\$1	\$0	\$144	(\$4)	\$0.01	\$0	(\$4)
2030	0.44	\$259	\$1	\$0	\$260	\$252	\$1	\$0	\$253	(\$7)	\$0.01	\$0	(\$7)
2031	0.41	\$360	\$1	\$0	\$361	\$348	\$1	\$0	\$349	(\$12)	(\$0.02)	\$0	(\$12)
2032	0.38	\$486	\$1	\$0	\$487	\$470	\$1	\$0	\$471	(\$16)	(\$0.03)	\$0	(\$16)
2033	0.35	\$620	\$1	\$0	\$621	\$600	\$1	\$0	\$600	(\$20)	(\$0.02)	\$0	(\$20)
2034	0.33	\$776	\$1	\$0	\$776	\$750	\$1	\$0	\$751	(\$26)	(\$0.02)	\$0	(\$26)
2035	0.31	\$959	\$1	\$0	\$959	\$928	\$1	\$0	\$929	(\$31)	(\$0.02)	\$0	(\$31)
2036	0.28	\$1,156	\$1	\$0	\$1,156	\$1,121	\$1	\$0	\$1,122	(\$34)	(\$0.02)	\$0	(\$34)
2037	0.26	\$1,318	\$1	\$0	\$1,319	\$1,280	\$1	\$0	\$1,280	(\$38)	(\$0.02)	\$0	(\$38)
2038	0.24	\$1,493	\$1	\$0	\$1,494	\$1,450	\$1	\$0	\$1,451	(\$43)	(\$0.02)	\$0	(\$43)
2039	0.23	\$1,674	\$1	\$0	\$1,675	\$1,627	\$1	\$0	\$1,627	(\$47)	(\$0.02)	\$0	(\$47)
2040	0.21	\$1,890	\$1	\$0	\$1,891	\$1,836	\$1	\$0	\$1,837	(\$54)	(\$0.01)	\$0	(\$54)
2041	0.20	\$2,080	\$1	\$0	\$2,081	\$2,023	\$1	\$0	\$2,024	(\$57)	(\$0.01)	\$0	(\$57)
2042	0.18	\$2,255	\$1	\$0	\$2,256	\$2,194	\$1	\$0	\$2,195	(\$61)	(\$0.01)	\$0	(\$61)
2043	0.17	\$2,562	\$1	\$0	\$2,562	\$2,494	\$1	\$0	\$2,495	(\$67)	(\$0.00)	\$0	(\$67)
2044	0.16	\$2,847	\$1	\$0	\$2,848	\$2,775	\$1	\$0	\$2,776	(\$72)	(\$0.01)	\$0	(\$72)
2045	0.14	\$3,075	\$1	\$0	\$3,076	\$2,999	\$1	\$0	\$2,999	(\$77)	(\$0.02)	\$0	(\$77)
2046	0.13	\$3,346	\$1	\$0	\$3,347	\$3,262	\$1	\$0	\$3,262	(\$84)	(\$0.01)	\$0	(\$84)
2047	0.12	\$3,654	\$1	\$0	\$3,655	\$3,566	\$1	\$0	\$3,567	(\$89)	(\$0.01)	\$0	(\$89)
2048	0.12	\$3,967	\$1	\$0	\$3,967	\$3,870	\$1	\$0	\$3,871	(\$97)	(\$0.02)	\$0	(\$97)
2049	0.11	\$4,304	\$1	\$0	\$4,305	\$4,201	\$1	\$0	\$4,202	(\$103)	(\$0.01)	\$0	(\$103)
2050	0.10	\$4,394	\$1	\$0	\$4,395	\$4,289	\$1	\$0	\$4,290	(\$105)	(\$0.01)	\$0	(\$105)
2051	0.09	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00	\$0	\$0
CPVRR Thru 2051		\$7,570	\$9	\$0	\$7,580	\$7,364	\$9	\$0	\$7,373	(\$207)	(\$0)	\$0	(\$207)

- Negative () Indicates Savings to FPL Customers.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 30, for the following questions.

- a. Please provide the discussed "annual probability values" for "high" and "middle" CO₂ emission compliance cost projections.
- b. Please explain why specifically a 2.1% factor was used in converting ICF's compliance cost values to nominal dollars in this docket.

RESPONSE:

- a. Please see confidential Attachment No. 1 to this response.
- b. ICF provides its CO₂ emissions price forecast in real dollars. FPL's economic analysis is performed using nominal dollars. Therefore, the values provided by ICF have to be converted to nominal values by applying an inflation factor. FPL used a 2.1% inflation factor, also provided by ICF, to convert the real prices to nominal prices.

**FPL's responses to
Staff's First Set of Interrogatories**

**No. 96a – Attachment No. 1
Bates No. 000012**

is confidential in its entirety

QUESTION:

If the SolarTogether petition is not approved, would FPL still construct the SolarTogether solar project sites? If not, please explain why not and provide a resource plan for that scenario. As part of your response, identify unit additions, retirements, and changes for each year.

RESPONSE:

See FPL's response to OPC's Second Set of Interrogatories No. 8. If the FPL SolarTogether Program is not approved, FPL will continue with the construction of Project 1 and Project 2 described in its Petition. FPL will reevaluate the amount and timing of additional solar capacity to be installed beyond these three projects as part of its late 2019/early 2020 integrated resource planning work. The results of those analyses will be accounted for in FPL's 2020 Ten-Year Site Plan filing.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 52. Is FPL adding solar resources based upon customer demand for solar generation as a consideration, instead of based on reliability needs or economics? If customer demand is a component, explain how this process for resource planning and generation additions is consistent with the current regulatory structure as stated in response to No. 52.

RESPONSE:

FPL developed this program to address a specific customer demand. The program also meets the same economic and reliability requirements as FPL's other solar projects approved by the Commission. As with the previous solar projects, the FPL SolarTogether Program is cost-effective and contributes to meeting FPL's reliability requirements. The resource planning process used is consistent with FPL's resource planning practices used for previous solar projects and all other generation additions and improvements.

Because FPL will add solar generation under the FPL SolarTogether Program only if it is cost-effective, FPL believes that the Program is consistent with and works within the current regulatory structure as stated in response to Staff's First Set of Interrogatories No. 52 and does not represent a policy shift. FPL will continue to add cost-effective generation to meet the reliability and economic needs of all customers.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 75. Please explain whether FPL's third reserve margin criteria, the 10 percent Generation only Reserve Margin, was the controlling factor in any unit additions. As part of your response, identify which unit(s), if any, were impacted and the size of the impact.

RESPONSE

No, FPL's 10% generation only reserve margin was not the controlling factor in any unit additions in the No ST Plan or the FPL SolarTogether Plan. The 20% reserve margin was the controlling factor in all of the unit additions.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 72. Please provide the annual and total expenses for administrative costs for the SolarTogether sites if the company constructed the sites outside of the petition.

RESPONSE:

FPL budgeted administrative costs for the FPL SolarTogether sites because the administrative costs will be incurred specific to the program. If the FPL SolarTogether sites were constructed outside of the program presented in the petition, no incremental administrative costs would be incurred.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, Nos. 75 and 83.

- a. Please provide the calculation used to generate the \$479 million avoided generation savings.
- b. What would the non-participant savings be for the scenario in which participants pay the full program costs?
- c. Please explain the discrepancy between the avoided generation savings value provided in DR 83 of \$479 million, and the sum of avoided generation capital, fixed O&M, transmission interconnection, and capital replacement costs of \$453 million in DR 75, Mid Fuel - Mid CO2 case.
- d. What would be the amount of the SolarTogether Charge based on \$453 million in avoided generation savings?

RESPONSE:

The reference above to Staff's First Set of Interrogatories No. 75 relates to the resource plans and not the avoided generation savings. The following responses are based on Staff's First Set of Interrogatories No. 78.

- a. The \$479 MM in avoided generation savings is summarized in the following table.

Items Included in "System Impacts - Avoided Generation Savings"	CPVRR \$ millions
Non-Solar Generation Costs Avoided	
Generation Capital	(\$358)
Fixed O&M	(\$80)
Transmission Interconnection	(\$5)
Capital Replacement	(\$9)
Total Non-Solar Generation Costs Avoided	(\$453)
System Costs Avoided	
Startup & VOM	(\$26)
Total System Impacts - Avoided Generation Savings	(\$479)

- b. In the scenario where participants pay the full program CPVRR cost of \$1.37 billion (SolarTogether CPVRR cost of \$1.849 billion less \$0.479 billion of avoided generation savings), the credit participants receive will also increase in order to achieve a 7 year payback. As such, participants will receive approximately 83% of the total program savings and the non-participant savings decrease from \$27.7 MM to \$23.7 MM.
- c. The \$479 million in avoided generation savings includes Startup & VOM ("Variable O&M") of \$26 million. Startup & VOM, although variable in nature, are recovered

through base rates and were therefore included in the avoided generation savings when calculating the SolarTogether Subscription Rate.

- d. The SolarTogether Charge includes those items that are part of base rates. Accordingly, the Startup & VOM savings of \$26 million should remain as part of the avoided generation savings outlined in items (a) and (c) above.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 78, Attachment No. 1, Tab Mid Fuel - Mid CO2. Please explain the reason for the variation between the \$1.79 million quoted in the Petition and the \$1,849M CPVRR included for Program Costs and Solar Revenue Requirement. As part of your response, please determine the amount of the \$1,849M CPVRR that would be covered by the FPL SolarTogether Charges.

RESPONSE:

The \$1.79 billion in paragraph 19 of the petition refers to the total costs required to bring the 20 solar sites into service whereas the \$1.849 billion CPVRR includes the annual revenue requirements on the \$1.79 billion in project costs, O&M of the 20 solar sites, and program administration costs.

Excluding the avoided generation savings, the Subscription Charges would cover 71.5% of the \$1.894 billion CPVRR.

CPVRR in \$ millions	Avoided Generation Savings:	
	Included (As Filed)	Excluded 3rd DR No. 10
Total Program Costs	\$1,849.2	\$1,849.2
System Impacts - Avoided Generation Savings	(479.0)	na
Net Revenue Requirements	\$1,370.2	\$1,849.2
Subscription Revenues	\$1,321.3	\$1,321.3
Subscription Revenues as a % of Net Revenue Requirements	96.4%	71.5%

QUESTION:

Please refer to the Company's testimony of witness Sim, pages 8 through 40, filed in Docket 20190015, regarding eight drivers of system costs that impact the value of DSM. Please explain whether any of these factors impact the need for or cost-effectiveness of solar generation. If yes, please explain each driver's impact on the expansion of solar generation between the Company's 2018 TYSP and the 2019 TYSP.

RESPONSE:

In FPL witness Sim's direct testimony filed in Docket 20190015, he described eight factors that impact the value of DSM. The impact of these factors on the cost-effectiveness of solar generation is discussed below:

(1) Fuel cost forecast: the forecast of natural gas prices directly impacts the fuel saving benefit of solar generation. The gas price forecast used in the 2019 TYSP is lower than the price forecast used in the 2018 TYSP. All other assumptions being equal, this reduction in the gas price forecast reduces the fuel savings benefits of solar generation.

(2) Environmental compliance cost forecasts: the environmental compliance cost forecast for CO₂ directly impacts the environmental compliance cost savings of solar generation. The CO₂ environmental compliance cost forecast used in the 2019 TYSP is lower than the forecast used in the 2018 TYSP. All other factors being equal, this results in a reduction in the environmental compliance cost savings of solar generation.

(3) Efficiency with which fuel is converted into electricity by FPL's generating units: The efficiency of the fossil generation system impacts both the fuel cost and environmental compliance cost savings of solar generation, with higher efficiency, *i.e.*, lower heat rate, resulting in lower solar fuel and environmental compliance cost savings. The projected system efficiency of FPL's fleet improved from the 2018 TYSP to the 2019 TYSP. This results in lower fuel and environmental cost savings for solar generation all other factors being equal.

(4) Forecasted growth in the utility's sales projected as net energy for load (NEL): The 2019 forecast for NEL was higher than the 2018 forecast (although significantly lower than forecast in the 2014 DSM Goals docket). Higher NEL will result in higher fuel and environmental cost savings for solar generation all other factors being equal.

(5) Capital cost of new generating units: The 2019 projected cost of combined cycle units is lower than the cost projected in 2018. Lower combined cycle costs result in lower avoided capacity savings for solar generation, all other factors being equal.

(6) System firm gas transportation costs: The projected need for additional firm gas, and therefore, the cost of additional firm gas is lower now than projected in 2014 when DSM Goals were last set. However, the current 2019 projection is little changed from the 2018 projection.

(7) Capital costs of new system T&D facilities: In the cost-effectiveness analysis of solar generation, only T&D facilities that are impacted are transmission interconnection facilities at the solar sites. The transmission interconnection costs for each solar facility are included in the capital cost of each. There were no additional transmission integration costs or any other transmission system impacts associated with the SolarTogether program. All the individual solar facilities in the program are interconnected at the transmission system level, and therefore there is no impact on the costs of the distribution system.

(8) Forecasted growth in the utility's peak load (MW): The 2019 summer peak load forecast is lower than the 2018 forecast for the years 2020-2029. Starting in 2030 and through the rest of the analysis, the 2019 summer peak forecast is higher. Therefore, the impact of the change in the system peak forecast on the cost-effectiveness of long-life resource options such solar generation is mixed and cannot be readily be determined.

The majority of the changes in forecasts discussed above will make solar less cost-effective than it otherwise would be. However, other factors need to be considered. The most important of these factors is the projected cost of solar generation. FPL's projections of the cost of solar capacity used in the 2019 TYSP is lower than the cost used in the 2018 TYSP. FPL's 2019 TYSP analysis shows that, using the most current assumptions, an increased amount of solar generation is cost-effective on FPL's system.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, Nos. 79 and 84.

- a. Please explain why FPL decided to select fixed credits for participants, given that owners of net metering or rooftop systems are subject to variable savings.
- b. Please explain the selection of the 7 year payback period for participants.

RESPONSE:

- a. FPL SolarTogether was designed to expand access to solar, as customers were expressing an interest in a community solar program that would allow them to lower their energy bills with renewable energy produced in the areas where they live and do business every day¹. For FPL's largest customers, such as cities, counties, major universities, hospitals, national retailers and large industrials, it is a program that enables these entities to meet their renewable energy goals in a way that was previously not possible. As proposed, the FPL SolarTogether benefit rate schedule is fixed as defined by Petition Exhibits A and C, but the monthly and annual bill savings are variable and dependent on actual generation, similar to net metering bill savings. FPL treated the system benefits that result for the addition of the twenty (20) new solar energy centers in the same way that FPL has evaluated resource planning for the past several decades; that is, the economics of a generation asset are based on the best view of costs and benefits at the time the decision is made. FPL SolarTogether is no different, except in this case the majority of benefits and costs are allocated to a subset of all customers. The method utilized to develop the benefit rate schedule is such that it approximates the system benefits attributable to the solar generation being added and thus on a CPVRR basis is equal to the CPVRR of forecasted system benefits. See also FPL's response to Staff's First Set of Interrogatories No. 59, subpart A and No. 131.
- b. The 7-year payback period is the result of numerous discussions with large FPL customers, who, when making financial decisions or comparing operational investment alternatives, are evaluating these choices based on the period in which they will recover their financial investment. On a daily basis, these customers are making financially driven choices whether to invest in Light-emitting diode (LED) lighting projects, build rooftop solar, or construct a new facility, among other considerations, and they do so using the payback period as one of their financial measures. On average, residential customers consider six to seven years a reasonable payback period on their investment in solar. This is consistent with a typical solar payback period in the U.S. According to a report from the National Renewable Energy Laboratory, the average payback period in the United States is between 6 and 8 years².

¹ Solar Energy Industries Association defines community solar as "local solar facilities shared by multiple community subscribers who receive credit on their electricity bills for their share of the power produced. See "Solar Energy Industries Association: Community Solar" at <https://seia.org/initiatives/community-solar> (viewed on July 1, 2019).

² National Renewable Energy Laboratory: <https://www.nrel.gov/docs/fy17osti/68425.pdf>

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 79 and 84. Please verify that non-participants only experience positive remaining net system savings on a cumulative net present value basis in the Mid-Fuel & Mid-CO₂ scenario in year 30 (2049). If that is not correct, please provide the proper value and explain how it was derived.

RESPONSE:

See Attachment No. 1 to this response for the annual revenue requirements for the Mid-Fuel & Mid-CO₂ scenario that are part of Staff's First Set of Interrogatories No. 79. Columns were added to include the running CPVRR for the Total Project, Participants and Non-Participants.

It is important to note that beginning in 2027 non-participants will begin to see annual savings, continuing through 2050. The net result is \$28 million of CPVRR savings over the life of FPL SolarTogether Phase 1. On a running CPVRR basis, the non-participant CPVRR goes from a net cost to net savings in the year 2049.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, Nos. 79.

- a. Please verify that in the Mid Fuel - Mid CO₂ scenario that non-participating customers would realize a net benefit of \$28 million. If that is not correct, please provide the proper value and explain how it was derived.
- b. Please verify that in the Mid Fuel - Low CO₂ scenario that non-participating customers would realize a net cost of \$64 million. If that is not correct, please provide the proper value and explain how it was derived.

RESPONSE:

- a. Yes. In the Mid Fuel – Mid CO₂ scenario, the non-participating customers would realize a net benefit of \$28 million.
- b. Yes. In the Mid Fuel – Low CO₂ scenario, the non-participating customers would realize a net cost of \$64 million.

QUESTION:

Please refer to Staff's First Request, Nos. 59 and 87. In No. 87, FPL states that if the solar facilities were damaged in anyway, that "any costs not covered by insurance would be recovered from the general body of ratepayers." In No. 59, FPL states that the program "is designed to recover 96.4 percent of the program revenue requirements from the participants." If participants are funding the majority of the projects, please explain why they should not be responsible for the majority of costs for any repairs in the future.

RESPONSE:

As stated in FPL's response to Staff's First Set of Interrogatories No. 59, the FPL SolarTogether program is designed for FPL to recover 96.4% of the program revenue requirements from the participants through levelized subscription fees. This levelized charge includes an insurance premium factor calculated as 0.053% of the net book value of the FPL SolarTogether assets, which is intended to cover the participants' portion of expected losses over the life of SolarTogether assets. However, the program is also currently designed such that non-participants pay only 3.6% of the program revenue requirements, but receive approximately 20% of the forecasted system benefits to protect them from unforeseen cost impacts versus the forecast utilized in the analysis

In addition, as referenced in FPL's response to Staff's First Set of Interrogatories No. 87, damages to an FPL SolarTogether site resulting in repair costs would be recovered through insurance to the extent the total cost of damage to all of FPL's insured assets for each storm event exceeds FPL's deductible. Currently, FPL aggregates all storm damage costs related to its assets per storm event, excluding transmission and distribution, and if the aggregate cost exceeds its deductible of \$25 million, then it would submit an insurance claim for the excess. Any insurance proceeds received by FPL would be applied on a proportional basis to each of the assets which incurred damage during the storm event. Due to the typical low amount of generation-related storm damage, especially with respect to solar generating facilities, FPL has not met its deductible nor submitted a claim in recent years. As an example, FPL's operating solar sites incurred only \$134,000 of storm damage costs from the impact of Hurricane Irma in comparison to FPL's total costs incurred for Hurricane Irma of approximately \$1.4 billion. The insurance program for all of FPL's generation assets, including the SolarTogether assets, benefits from size, geographic, and technological diversity resulting in a lower premium than would otherwise be available. This benefits all customers.

Typically, costs incurred to repair FPL's damaged assets are capital in nature and therefore, not recoverable through FPL's storm reserve or a storm cost recovery mechanism. Capital costs are recorded as base rate recoverable and collected from all customers through base rates. For incremental, non-capital costs related to a storm event, FPL recovers those costs from all customers consistent with Rule No. 25-6.0143, F.A.C., Use of Accumulated Provision Accounts 228.1, 228.2, and 228.4, or through the storm cost recovery mechanism set forth in FPL's current base rate settlement agreement (PSC-2016-0560-AS-EI), as may be applicable. The costs recovered through a storm recovery mechanism are included as a separate line item on customer bills.

It is important to note that storm costs charged to the storm reserve or collected through a storm cost recovery mechanism are currently shared across all of FPL's customers. This means FPL SolarTogether participants would be treated the same as the rest of the customers in their rate class (*i.e.*, commercial, industrial, residential, etc.), as SolarTogether participants remain part of their rate class and rates for storm cost recovery would be developed based on each customer rate class. In addition, FPL does not currently isolate or track storm restoration storm costs at the asset level or based on where the costs were incurred in FPL's territory, nor does it bill customers based on the proportion of storm costs incurred in their local service area. Doing so for FPL SolarTogether participants would be a departure from base rate recovery and storm cost recovery mechanisms approved by the Commission in recent years for both FPL and other Florida IOUs, and administratively burdensome to implement, as FPL believes the cost for implementing this would more than outweigh cost recovery FPL would be seeking from SolarTogether participants due to the typical low amount of generation-related storm damage.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 58 and No. 79. Please provide the percentage of savings for non-participants compared to their contribution for each scenario.

RESPONSE:

See the table below for the percentage of savings for non-participants compared to their contribution for each scenario. Please note that while non-participant customers will naturally benefit from lower bills under the low fuel-cost scenario due to the lower gas prices, they will receive significantly higher fuel savings, and lower bills, under the high fuel-cost scenario as seen in the table below.

Fuel Cost Forecast	Environmental Compliance Cost Forecast	Net System Savings (Millions)	Participant Net Benefit (Millions)	Remaining Net System Savings (Millions)	Non-Participant Contributions (Savings)				
					Contributions (Millions)	Clause (Savings) Cost (Millions)	Net (Savings) Cost (Millions)	Contribution as a % of:	
								Clause Savings	Net Savings
High Fuel Cost	Low CO2	(\$216)	\$111	(\$105)	\$49.9	(\$155.0)	(\$105.1)	-32%	-47%
High Fuel Cost	Mid CO2	(\$305)	\$111	(\$194)	\$51.9	(\$245.8)	(\$193.9)	-21%	-27%
High Fuel Cost	High CO2	(\$456)	\$111	(\$345)	\$53.2	(\$398.1)	(\$344.8)	-13%	-15%
Mid Fuel Cost	Low CO2	(\$46)	\$111	\$64	\$52.1	\$12.4	\$64.5	421%	81%
Mid Fuel Cost	Mid CO2	(\$139)	\$111	(\$28)	\$48.9	(\$76.6)	(\$27.7)	-64%	-176%
Mid Fuel Cost	High CO2	(\$290)	\$111	(\$179)	\$56.0	(\$235.1)	(\$179.0)	-24%	-31%
Low Fuel Cost	Low CO2	\$121	\$111	\$232	\$49.7	\$181.8	\$231.5	27%	21%
Low Fuel Cost	Mid CO2	\$27	\$111	\$138	\$54.2	\$84.1	\$138.3	64%	39%
Low Fuel Cost	High CO2	(\$123)	\$111	(\$12)	\$56.4	(\$68.6)	(\$12.2)	-82%	-464%

QUESTION:

Please refer to FPL's response to OPC's First Set of Interrogatories, No. 3.

- a. Will the subscription credit be based on the performance of the ST Project(s) the customer is assigned to or the performance of all the ST Projects together?
- b. Will residential customers have to wait until all the pre-registered C&I reservations have been filled before they can participate?

RESPONSE:

- a. Monthly bill credits will be based on the actual generation of the Phase to which the customer is enrolled, not the specific ST Projects. In doing so, the subscription is diversified geographically and less susceptible to net capacity factor differences among the projects, localized weather, and natural irradiance differences that occur across the state, then they would have been if they were assigned to a specific ST Project. Table 1 below, from Staff's First Set of Interrogatories No. 57 has been updated to show which sites' generation will be used to calculate the credits over the ST Project implementation timeline. After ST Project 5 is completed, the calculations for Phase 1 will remain based on the actual generation produced by the entire Phase. See also, Petition Exhibit C, Monthly Subscription Credit Calculation, which presents the subscription credit formula.
- b. No. See Staff's First Set of Interrogatories No. 133 and 142 for more details.

Table 1

	Project Size	Comm. Operation Date (Est.)	Billing Start Date (Est.)	Subscription Credit Based on Actual Generation from	Program Capacity
ST Project 1	223.5 MW	2/1/2020	3/1/2020	ST Project 1+2	447.0 MW
ST Project 2	223.5 MW	2/1/2020	3/1/2020	ST Project 1+2	447.0 MW
ST Project 3	447 MW	1/1/2021	2/1/2021	ST Project 1+2+3	894 MW
ST Project 4	298 MW	4/1/2021	5/1/2021	ST Project 1+2+3+4+5	1,490 MW
ST Project 5	298 MW	4/1/2021	5/1/2021	ST Project 1+2+3+4+-5	1,490 MW

QUESTION:

Please refer to FPL's response to Staff's First Data Requests, Nos. 48(b) and 55. Net metering customers are restricted to a two (2) megawatt installation. Would SolarTogether subscriptions be limited to the same 2 megawatts limitation that a net metering customer is restricted to? If not, explain why not. As part of your response, also identify preregistration customers, if any, that would exceed the 2 megawatt net metering limitation.

RESPONSE:

Under the FPL SolarTogether program, the generation is not owned by the participant nor will it be located on a participant's premise. Thus, FPL SolarTogether subscriptions are not subject to the 2 MW net metering cap. There are 8 pre-registered customers who have a subscription size that is greater than 2 MW per meter. As denoted in Staff's First Set of Interrogatories No. 131, FPL SolarTogether was designed to expand access to solar based on feedback from customers interested in solar programs that function like community solar offerings that allow customers to lower their energy bills with renewable energy produced in the areas in which they live and do business every day.¹ Net metering, as defined by Section 366.91, Florida Statutes, legislatively mandates utilities to provide net metering programs in a manner that includes "customer-owned" renewable generation "located on a customer's premise". See FPL's response to Staff's Interrogatory No. 125, Attachment No. 1 Column H.

¹ SEIA defines community solar as "local solar facilities shared by multiple community subscribers who receive credit on their electricity bills for their share of the power produced." See Solar Energy Industries Association, "Community Solar" at <https://seia.org/initiatives/community-solar> (viewed on June 28, 2019).

QUESTION:

Customers & Metering

Please refer to FPL's response to Staff's First Data Request, No. 55.

- a. Please provide a copy of the original response in Excel format.
- b. Please specify whether customers will be allowed to combine their energy usage across multiple sites for purposes of the SolarTogether program.
- c. Please provide the number of meters for each of the customers listed, and note whether they would exceed the 2 MW Net Metering limitation.
- d. Please verify if the top ten largest customers listed in this response represent 50.5 percent of the program installed capacity. If so, please verify whether these ten customers would receive 40 percent of the benefits in the base case scenario.
- e. Please verify if the top four largest customers subscription amounts would exceed the Power Plant Siting Act if constructed contiguously.

RESPONSE:

- A. See FPL's response to Staff's Interrogatory No. 125, Attachment No. 1.
- B. FPL interprets this to ask whether, for billing purposes, customers will be allowed to combine their energy usage across multiple sites. No, customers who enroll will not combine their energy usage across multiple sites for bill purposes. Each enrolled metered account will be limited to 100% of its previous 12-month usage limit and will be billed for the FPL SolarTogether subscription charge and credit individually at the metered account level.
- C. See Staff's First Set of Interrogatories No. 125, Attachment 1. Based on Column H, there are eight (8) pre-registered customers who have a subscription size per meter that is greater than 2 MW.
- D. The top 10 largest subscribers have a total combined subscription of 752,229 MW, which is approximately 50.5% of the Phase 1 capacity and would earn approximately 40% of the expected 30-year net benefits of the program while paying for approximately 49% or \$667 million of total program costs (see Table 1 below).
- E. Yes, the top four (4) largest subscribers each requested individual subscription reservations that exceed the 75 MW threshold in the Power Plant Siting Act if the units needed to serve those customers were constructed contiguously.

Table 1

Top 10 Customers 752.23 MW
Total MWs 1,490
Top 10 % of Total MWs 50.5%

	Revenue Requirements (fav) unfav			
	Base	Clause	Net	
Participant Revenue Requirements	\$1,321.3	(\$1,432.3)	(\$111.0)	A
Non-Participant Revenue Requirements	\$48.9	(\$76.6)	(\$27.7)	B
Total Revenue Requirements	\$1,370.2	(\$1,509.0)	(\$138.7)	C
Top 10 Participants %	50.5%	50.5%	50.5%	D
Top 10 Participants Revenue Requiement	\$667.1	(\$723.1)	(\$56.0)	E=A * D
Top 10 % of Total Revenue Requirements	48.7%	47.9%	40.4%	F=E/C

QUESTION:

Please refer to FPL's response to Staff's First Data Request, Nos. 54 and 55.

a. Please verify that all commercial, governmental, and industrial customers have subscribed for a Reserved Subscription (measured in kW) that does not exceed the quotient of a customer's Previous 12 month Energy Usage (measured in kWh) divided by 2,535 (units of kWh/kW). As part of your response, please provide a completed version of the table below in Microsoft Excel format with formulas intact.

Customer	Reserved Subscription (kW)	Previous 12 mo. Energy Usage (kWh)	Calculated Reserved Subscription Maximum (kW)	Notes
	(a)	(b)	(b) / (a)	

b. If any customers have subscribed for excess capacity, please explain why. As part of your response, please identify those customers and explain what modifications, if any, are necessary to the amount of pre-registered capacity and what happens to the additional freed capacity, if any.

RESPONSE:

a. See Attachment No. 1 to this response. Note: the "Calculated Reserved Subscription Maximum" is calculated as "Previous 12 months Energy Usage"/2,535 kWh per kW.

b. Reservation levels for all pre-registered customers will be reviewed and validated by FPL prior to enrollment in the Program. This process will include confirming whether the requested reservation amount exceeds the quotient of the customer's previous 12-month energy usage divided by 2,278 kWh/kW. See FPL's response to Staff's First Set of Interrogatories Nos. 124 and 128 for an explanation regarding the subscription conversion value. "Freed capacity" at the time of enrollment, if any, would be used to fulfill additional Commercial and Industrial-Governmental subscriptions within the capacity allocated to that group.

There are 2 customers whose current Reserved Subscription exceeds the previous 12-month usage maximum. The first, Commercial 78 (see Attachment No. 1 to this response), was permitted to subscribe for more than its 12 month energy usage during pre-registration due to anticipated business expansion that would significantly increase its energy consumption. The anticipated increased energy consumption has now materialized for this customer. The second customer, Commercial 142 (see Attachment No. 1 to this response) oversubscribed by 1 kW due to a calculation error during preregistration. For both of these customers, as with all customers who pre-registered, subscription levels will be adjusted downward if they are found to have requested more than the allowed maximum.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, Nos. 55 and 66. Given that the four customers reserved approximately 37 percent of the program capacity, what would represent an unreasonable share of the Program Capacity?

RESPONSE:

Four pre-registered customers have a cumulative combined reservation size of 546,263 kW or 37% of the total capacity proposed in Phase 1. The average subscription size per customer is only 136,566 kW or 9% and just one of the four exceeds 10% of the total capacity for Phase 1. FPL does not believe that a subscriber with 9% to 13% of the program size is unreasonable given this amount is reflective of their individual energy usage. These types of customers represent entire cities, counties, major universities, hospitals and national retailers with more than fifty big box storefronts, thus customers who serve the general public and also have significant clean energy goals. Further, as FPL discussed in Staff's First Set of Interrogatories No. 66, FPL will look to benchmark subscription caps by examining reports on other community solar programs. The most notable of which is the 2019 National Renewable Energy Lab study, "Focusing the Sun: State Considerations for Designing Community Solar Policy" reports that as of 2017 "ten states have limited the ability of certain large customers to procure majority interests in the output of facilities, including six states that have prohibited participants from subscribing to more than 40% of a project's capacity."¹

¹ Cook, Jeffrey J., and Monisha Shah. 2018. Focusing the Sun: State Considerations for Designing Community Solar Policy. Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-70663.
<https://www.nrel.gov/docs/fy18osti/70663.pdf>.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 82. If the formulas are not established in the tariff, are they subject to change without prior approval of the Commission? If so, would the Company be required to notify the Commission before implementing a change to the formulas?

RESPONSE:

The formulas used to establish the FPL SolarTogether tariff pricing presented in the instant Petition are not subject to change without Commission approval.

FPL will petition the Commission for approval of any additional program capacity and the addition of future Phases. In doing so, the new Phases' revenue requirements, system benefits, and the formulas used to establish the proposed pricing will be presented for review and approval. Upon approval, tariff sheet 8.934 will be amended to document the added Phases' pricing.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 65. Explain if approval of FPL's petition would give FPL the right to allocate 100 percent of SolarTogether capacity to large Commercial/Industrial customers without prior Commission review. If so, can FPL explain why it should decide how to allocate capacity to customers without Commission review and approval for modifications?

RESPONSE:

Approval of the Program would include approval of FPL's right to reallocate capacity among the customer groups to better provide all customers who are interested in participating the opportunity to do so. It is important to note that FPL would only seek to reassign program capacity only after it became clear that FPL could not fill that capacity with enough demand from that customer class. It could also be possible that the Commercial/Industrial capacity is not fully subscribed in which case FPL could shift that capacity to Residential & Small Business. While FPL intends to notify the Commission of a change, reallocation would not require additional Commission approval. Any reallocation would be fair and reasonable and for the benefit of the participants, to expand participation in FPL SolarTogether, and ensure unsubscribed capacity does not remain unused.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 48.

- a. Is it true that net metering customers must either purchase or lease solar arrays, whereas the SolarTogether participants have neither of these up-front financial requirements. If not, please explain why not.
- b. Is it true that net metering customer's net benefits are dependent on fuel prices whereas SolarTogether participant's benefits/payback are fixed, excluding based on production. If not, please explain why not.
- c. Please explain if the SolarTogether program could satisfy the legislative mandate to create a net metering program.

RESPONSE:

- a. It is true that FPL SolarTogether participants will not have any up-front financial commitment. FPL SolarTogether was designed to expand access to solar for those who cannot or do not wish to make the upfront financial investment and commitment needed to purchase or lease solar equipment for their home or business. Since capacity in FPL SolarTogether is fungible – it can be resold if a participant leaves the program or that capacity could go back to non-participants if unsubscribed. FPL SolarTogether subscription charges include the cost to build the facilities and is billed monthly compared to imposing a large upfront cost.
- b. FPL SolarTogether customer bill credits will be paid per the fixed benefit rate schedule provided in Exhibits A and C to FPL's Petition, and, as stated in the petition, this benefit is predominantly avoided fuel but also includes gas transport, short term purchases, and emissions savings. Net metering customers' net benefits are only partially dependent on fuel prices, as net metering customers earn bill credits at full retail rates, which in addition to fuel costs include fixed system costs such as distribution, and transmission system costs (poles, lines, transformers, etc.). As a result, non-net metering customers are burdened with a higher, disproportionate share of the fixed system costs. By contrast FPL SolarTogether participant's benefits are purely system benefits that result from the addition of the new solar to the system (predominantly fuel) and they continue to pay for their share of the fixed system costs.
- c. FPL SolarTogether was designed to expand access to solar and was created based on feedback from customers interested in community solar programs that would allow them to lower their energy bills over a number of years with renewable energy produced in the areas in which they live and do business every day.¹ Net metering, as defined by Section 366.91, Florida Statutes, legislatively mandates utilities to provide net metering programs in a manner that includes "customer-owned" renewable generation "located on a customer's premise." Under the SolarTogether program, the generation is not owned by the participant

¹ SEIA defines community solar as "local solar facilities shared by multiple community subscribers who receive credit on their electricity bills for their share of the power produced." See Solar Energy Industries Association, "Community Solar" at <https://seia.org/initiatives/community-solar> (viewed on June 28, 2019).

nor will it be located on a participant's premise; therefore, while FPL SolarTogether certainly provides tangible benefits of solar power and meets the needs and interests of many who cannot or prefer not to install solar panels on their property, FPL SolarTogether does not technically meet the legislative mandate specified in Florida Statutes for net metering.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 51.

- a. Please provide the status of the enrollment website for residential customers. As part of the response, explain whether the payback estimator will be part of the enrollment website.
- b. Please provide an estimate of when these tools will be available.
- c. Please explain how FPL will notify residential customers of the process for enrolling.
- d. Please explain what actions FPL has taken to prevent potential issues similar to those experienced when in prior rebate offerings. As part of this response, state whether FPL can guarantee that the website will not have these problems during the SolarTogether registration opening period.

RESPONSE:

- a. The enrollment website is in development, and FPL is working on the final design of the self-service engagement tool. FPL anticipates completing the site in October to facilitate open enrollment as early as November 2019, pending PSC approval. The enrollment website will include a link to the Clean Power Research® Watt Plan Calculator®, which includes a pay-back estimator for both rooftop solar and FPL SolarTogether.
- b. The tools are currently on track for completion in October 2019 to facilitate open enrollment as early as November 2019.
- c. Currently, interested customers can sign up on the program website to receive updates and program registration information. FPL will notify all customers of the program open enrollment dates through its mass communication channels such as news releases, website banners, and social media. In addition, FPL will utilize targeted messaging for residential and small business customers using internal marketing communication channels such as eNewsletters, bill inserts, and email.
- d. FPL is conducting critical performance testing and implementing a successful industry standard website management system for the new portals for the FPL SolarTogether Program to ensure a positive customer experience.

External Portal: For customers using the self-service portal at fpl.com. FPL will be leveraging services from Queue-it, a virtual waiting room system, to manage portal traffic. The external portal will be performance tested to handle 100,000 transactions in one hour, establishing the "peak" the portal can handle. If a peak traffic event occurs Queue-it will redirect the customers to a virtual waiting room. The waiting room has functionality to keep customers informed of their position and wait time and will redirect customers back to the portal on a first in, first out basis. The Queue-it platform has been successfully used by 800 customers and over 3 billion users, including TicketMaster and AT&T.

Internal Portal: For customers using the call center for assistance (guided by account advisors that use the FPL SolarTogether Internal Portal). The internal portal will be performance tested to handle 1,000 concurrent users.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 54.

- a. Explain how FPL will determine which customers as to which will begin billing for the SolarTogether Charges/Credits first, and how they will be notified.
- b. Explain whether the preregistered Commercial/Industrial customers will be billed for the SolarTogether Charges/Credits prior to the program being offered residential customers.

RESPONSE:

- a. Upon PSC approval of the program, FPL will open enrollment allowing all customers, including those commercial, industrial and governmental (C&I-G) customers who elected not to pre-register, the opportunity to place a reservation. At this point in time, FPL expects open enrollment will begin as early as January 2020 (subject to approval), approximately two months prior to the first SolarTogether billing date. The program is first-come, first-served and participants' reservations, including pre-registrants, are time-stamped. Participants will be assigned to the Projects as they become operationally available based on their reservation time stamp and customer group allocation. Billing will then begin after one full calendar month operation. For example, for Project 1, FPL will assign 167 MW to the C&I-G customers with the earliest reservations and will assign 55 MW to the residential and small business (Resi-SMB) customers with the earliest reservations. Both C&I-G and Resi-SMB customers assigned to Project 1 will receive their first bill on March 1. Table 1 below outlines the subscription allocations and assignments. See also Staff's Third Data Request No. 121 and 133, and OPC's First Set of Interrogatories, No. 3.
- b. No. The pre-registered C&I-G customers will not be billed prior to the program being offered to Resi-SMB customers.

TABLE 1

	Project Size	Comm. Operation Date (Est.)	Billing Start Date (Est.)	Subscription Credit Based on Actual Generation from	Program Capacity	Subscriptions Allocated to C&I-G	Subscriptions Allocated to Resi-SMB
ST Project 1	223.5 MW	2/1/2020	3/1/2020	ST Project 1	223.5 MW	167.625 MW	55.875 MW
ST Project 2	223.5 MW	2/1/2020	3/1/2020	ST Project 1+2	447.0 MW	335.250 MW	111.750 MW
ST Project 3	447 MW	1/1/2021	2/1/2021	ST Project 1+2+3	894 MW	670.500 MW	223.500 MW
ST Project 4	298 MW	4/1/2021	5/1/2021	ST Project 1+2+3+4	1,192 MW	894.000 MW	298.000 MW
ST Project 5	298 MW	4/1/2021	5/1/2021	ST Project 1+2+3+4+-5	1,490 MW	1,117.500 MW	372.500 MW

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 90.

- a. Please list the types of "actions" a participant could take that demonstrate to FPL disapproval of the Program that could lead to termination.
- b. Please explain how FPL will monitor participants' actions.
- c. Please explain if customers seeking to enroll in the Program will be made aware that not supporting continuity of the Program could lead to termination in the Program. If yes, please explain how customers will be notified.
- d. Please provide the amount of administrative costs associated with this monitoring and review and if FPL would intend to seek cost recovery, and if so, how.

RESPONSE:

FPL has considered the input provided by the Commission Staff, and it agrees to remove the customer eligibility requirement to support continuity of the program.

QUESTION:

Please explain whether the increased charges in the Fuel Clause to recover the SolarTogether Credits will be voluntary to non-participants. If not, explain how it is consistent with the rate case settlement approved by Order PSC-16-0560-AS-EI.

RESPONSE:

It is not accurate to categorize the Fuel Clause charges as increased charges to the non-participants. More correctly put these charges represent fuel savings that are credited to the participant in exchange for their subscription. As designed, the non-participants receive 20% of this system savings.

Recovery of the SolarTogether Credit through the Fuel Clause is consistent with the rate case settlement approved by Order PSC-16-0560-AS-EI because the approved settlement authorizes the Commission to determine that incremental costs are clause recoverable. Further, the types of costs being recovered through the SolarTogether Credit are in the nature of avoided fuel costs and emission costs (not generation, transmission, etc.), thus not "types or categories . . . that have been, and traditionally, historically, and ordinarily would be, recovered through base rates."

QUESTION:

If FPL were to build 1,490 MW of combustion turbine capacity, please explain if it would have to wait until the units were in-service to request a prudence review and/or cost recovery. If not, please explain why not.

a. Please compare and contrast the risk to the participants, non-participants, and FPL under the proposed SolarTogether tariff offering versus if the solar facilities were built and then allocated to all customers under traditional ratemaking processes.

RESPONSE:

If FPL were to build 1,490 MW of combustion turbine capacity, it would have the option of requesting an advanced prudence determination prior to construction. Absent an advanced prudence determination, FPL's decision to build the 1,490 MW of combustion turbine (CT) capacity would result in FPL recording the investment as plant in-service upon commercial operation of the CT units. The investment would be subject to prudence review when FPL next set base rates following the in-service date.

A. Under traditional ratemaking processes, the cost of new generation is recovered from the general body of customers as a rate increase that is offset by the benefits (typically avoided costs that result from the addition of the new generation) that decrease rates over the life of the new generating asset. Under FPL SolarTogether, the costs and benefits are shared between the participants and non-participants. Non-participants are paying only 3.6% or \$48.9 million on CPVRR basis of the program revenue requirements and receiving \$76.6 million on a CPVRR basis of the clause benefits, yielding a CPVRR of \$28 million or 20% of the total program benefits. While participants will pay 96.4% or \$1,321.3 million on a CPVRR basis of the revenue requirements and are expected to earn approximately \$1,432.3 million in of the clause benefits, yielding a CPVRR of \$111 million or 80% of the total program benefits. See Staff's First Set of Interrogatories No. 140 for discussion on the risks to participants and non-participants

QUESTION:

If the proposed SolarTogether tariff is approved, please explain what FPL would consider approved in terms of the prudence of its generation investments at the SolarTogether project sites. As part of this discussion, please explain what impact this would have on the ability to review the prudence of the SolarTogether projects in a future rate case proceeding. As part of your response, please discuss whether an audit would be necessary and how costs in excess of those estimated in this docket would be treated.

RESPONSE:

FPL petitioned for approval of its SolarTogether Program, which consists of 1,490 MW of generation capacity. In this docket, the Commission is evaluating not only the design of the program but also the construction costs. Approval of FPL's petition would result in approval of FPL's construction of that capacity at the projected cost. Thus, FPL's decision to build and operate the 1,490 MW of capacity would not be subject to a subsequent prudence review so long as FPL's actual costs do not exceed the projected amount. If, however, (i) FPL's actual construction costs exceed the projected amount and (ii) FPL sought to recover those additional costs, the differential amount between the projected and actual costs would be subject to a prudence review in a future rate case or other appropriate proceeding, at which time the Commission may evaluate the excess cost incurred.

As described in OPC's First Set of Interrogatories No. 1, FPL has exercised – and will continue to exercise – cost-control measures to ensure that the FPL SolarTogether Centers are constructed at or below projected budgets. Absent the FPL SolarTogether program, any cost changes for the construction of each solar energy center, including the benefits of completing the project below budget, would flow to the general body of customers. Inclusion in the FPL SolarTogether program does not change this basic concept; any cost changes (both under and over runs) would flow to the general body of customers. FPL has an outstanding record of controlling project costs, completing early and under budget.

QUESTION:

Please describe and distinguish the risks and benefits under the ST Program between participants and non-participants.

RESPONSE:

FPL SolarTogether is a cost effective program offering for both participants and non-participants and is expected to provide a total of \$139 million in bills savings for all customers. The economic analysis for FPL SolarTogether follows the precedent established in the analysis provided to support FPL's SoBRA and other generation expansion investments, where the economic benefits are dependent on a number of variables including fuel and carbon pricing, new generation additions, production, capital spend, and O&M costs. The upside and downside risk associated with these variables is borne by all customers, and this risk exists regardless of FPL SolarTogether.

Due to the FPL SolarTogether pricing methodology, FPL recognizes the potential for the future benefits to vary from the forecast. That risk is symmetrical since participant pricing is locked in and non-participants receive the credit or charge whether the actual benefits are higher or lower than the forecast. For this reason, FPL allocated more of the program benefits to non-participants than their proportional share based on costs, *i.e.*, non-participants contribute 3.6% of the total project costs but will benefit from 20% of the \$139 million in total program benefits.

Risks	Non-Participant	Participants
System Benefits	Variable	Fixed
Capital and O&M	Non-participant pays 3.6%	Participant pays 96.4%.
Solar Production	Variable	Variable

QUESTION:

Please explain why participants are guaranteed, subject to production rates of the proposed solar projects, fixed benefits with a payback of approximately seven years, while non-participants will bear risk associated with capital, fuel, and O&M prices.

- a. Please compare and contrast this practice with fuel hedging. As part of your response, please explain whether fuel hedging guarantees benefits to participants.
- b. Please explain why this is not unduly discriminatory treatment of customers within the same customer classes.

RESPONSE:

The economic analysis for FPL SolarTogether follows the precedent established for FPL's SoBRA and other generation expansion investments. The economic benefits are dependent on a number of variables including fuel and carbon pricing, new generation additions, production, capital spend, and O&M costs. The upside and downside risks associated with these variables is borne by all customers; this risk exists regardless of FPL SolarTogether. FPL does not believe it appropriate to set a different standard for FPL SolarTogether.

Participants in FPL SolarTogether are receiving a fixed benefit because they are opting to pay a fixed charge that accounts for 96.4% of the program costs. Non-participants on the other hand are paying 3.6% of the costs. FPL recognized the downside risk associated with these variables for non-participants and allocated 20% of the forecasted system benefits to the non-participants, a disproportionate share of benefits when compared to the 3.6% of the total costs they contribute.

- a. FPL does not believe that fixing benefits for SolarTogether participants is comparable to the fuel hedging program that FPL conducted from 2001 to 2016, because participation in FPL's SolarTogether program is voluntary.

The objective of FPL's fuel hedging program was to reduce fuel price volatility and provide greater price certainty for customers. The fuel hedging program was not designed to provide cost savings as a benefit. Under the fuel hedging program, all customers could experience "gains" or "losses" based on actual settlement prices relative to the prices at which hedges were placed. These "gains" or "losses" were a by-product of hedging, providing the benefits of reduced fuel price volatility and greater price certainty for all customers. The SolarTogether program is designed to provide benefits in the form of cost savings to all customers, both participants and non-participants. The benefit rates for SolarTogether participants are fixed and do not fluctuate with actual fuel costs but rather by the actual solar generation output. If fuel prices are higher than forecasted, there will be more avoided costs and the fuel savings will be higher than expected. Under this scenario, participants will continue to be paid per the benefit schedule and non-participants will benefit from the increased fuel savings. If fuel prices are lower than forecasted, there will be less avoided costs and the fuel savings will be lower than expected. Under this scenario, non-participants will be burdened by the lower fuel savings as participants will continue to be paid per the benefit schedule.

- b. Customers who elect to participate (participants) pay a fixed charge that accounts for 96.4% of the program costs, in return they receive a fixed benefit rate schedule that equates to an estimated seven-year simple payback. Customers who do not elect to participate (non-participants) pay 3.6% of the costs and are allocated 20% of the forecasted system benefits, which equates to an 18-20 year simple payback. The non-participant simple payback and variable pricing risk follows the precedent set by SoBRA.

QUESTION:

Please verify whether large commercial, governmental, and industrial customers were solicited and allowed to pre-subscribe to the program and that small commercial and residential customers will have to wait until program is rolled out and then register on a first come, first serve basis. If so, please explain why this is not undue discrimination. If not, please explain how FPL is treating rate classes equally in this tariff offering, especially to the extent all customers have an equally timely opportunity to participate.

RESPONSE:

No. Large commercial, governmental, and industrial customers were provided the opportunity to pre-register on a first come, first served basis for a portion of the program capacity. FPL ran a pre-registration process over approximately two months to better gauge overall demand with a specific set of terms and pricing. Upon PSC approval of the program, FPL will open enrollment allowing all customers, including residential and small business customers, the opportunity to place a reservation on a first come, first served basis. At this point in time, FPL expects open enrollment will begin as early as January 2020 (subject to program approval), which provides small commercial and residential customers an opportunity to enroll approximately two months prior to the first SolarTogether billing date. All customers and rate classes have an equal opportunity to participate, and all reservations will be filled in the order in which they were received, per the customer group allocations and as the Projects become operational, as described in detail in FPL's response to Staff's First Set of Interrogatories Nos. 121 and 133. Also, please see FPL's response to OPC's First Set of Interrogatories No. 3.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 49. Please provide the annual number of net metered customers, by customer class and in total, from 2002 to 2018.

RESPONSE:

See the tables below for annual number of net metered customers by customer class. The data is available beginning in 2008, the year in which Rule 25-6.065 (net metering) was adopted.

Participant Counts - 2008				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	235	27		262
Net Metering - Wind				0
Net Metering - Biomass				0
Total Capacity	235	27	0	262

Participant Counts - 2009				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	574	72		646
Net Metering - Wind				0
Net Metering - Biomass				0
Total Capacity	574	72	0	646

Participant Counts - 2010				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	932	129		1,061
Net Metering - Wind	3			3
Net Metering - Biomass				0
Total Capacity	935	129	0	1,064

Participant Counts - 2011				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	1,344	235		1,579
Net Metering - Wind	5	1		6
Net Metering - Biomass				0
Total Capacity	1,349	236	0	1,585

Participant Counts - 2012				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	1,663	452		2,115
Net Metering - Wind	5	4		9
Net Metering - Biomass				0
Total Capacity	1,668	456	0	2,124

Participant Counts - 2013				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	2,001	561		2,562
Net Metering - Wind	5	5		10
Net Metering - Biomass	0	1		1
Total Capacity	2,006	567	0	2,573

Participant Counts - 2014				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	2,530	704		3,234
Net Metering - Wind	5	7		12
Net Metering - Biomass	0	3		3
Total Capacity	2,535	714	0	3,249

Participant Counts - 2015				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	3,466	784		4,250
Net Metering - Wind	5	7		12
Net Metering - Biomass	0	3		3
Total Capacity	3,471	794	0	4,265

Participant Counts - 2016				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	4,606	805		5,411
Net Metering - Wind	3	7		10
Net Metering - Biomass	0	4		4
Total Capacity	4,609	816	0	5,425

Participant Counts - 2017				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	6,673	831	14	7,518
Net Metering - Wind	3	7	0	10
Net Metering - Biomass	0	1	3	4
Total Capacity	6,676	839	17	7,532

Participant Counts - 2018				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	10,304	887	14	11,205
Net Metering - Wind	3	7	0	10
Net Metering - Biomass	0	1	3	4
Total Capacity	10,307	895	17	11,219

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 49. Please provide the annual installed net metering capacity (MWAC), by customer class and in total, from 2002 to 2018.

RESPONSE:

See tables below for annual installed net metering capacity by customer class and in total. The data is only available beginning in 2008, the year in which Rule 25-6.065 (net metering) was adopted.

Installed Capacity (MWAC) - As of 2008				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	0.829	0.262		1.091
Net Metering - Wind				0
Net Metering - Biomass				0
Total Capacity	0.829	0.262	0	1.091

Installed Capacity (MWAC) - As of 2009				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	2.088	1.255		3.343
Net Metering - Wind				0
Net Metering - Biomass				0
Total Capacity	2.088	1.255	0	3.343

Installed Capacity (MWAC) - As of 2010				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	3.772	4.01		7.782
Net Metering - Wind	0.007			0.007
Net Metering - Biomass				0
Total Capacity	3.779	4.010	0	7.789

Installed Capacity (MWAC) - As of 2011				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	7.038	7.014		14.052
Net Metering - Wind	0.016	0.002		0.018
Net Metering - Biomass				0
Total Capacity	7.054	7.016	0	14.070

Installed Capacity (MWAC) - As of 2012				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	7.912	8.289		16.201
Net Metering - Wind	0.014	0.012		0.026
Net Metering - Biomass				0
Total Capacity	7.926	8.301	0	16.227

Installed Capacity (MWAC) - As of 2013				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	10.153	12.544		22.697
Net Metering - Wind	0.013	0.016		0.029
Net Metering - Biomass	0	0.75		0.75
Total Capacity	10.166	13.310	0	23.476

Installed Capacity (MWAC) - As of 2014				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	13.543	16.039		29.582
Net Metering - Wind	0.013	0.049		0.062
Net Metering - Biomass	0	3.95		3.95
Total Capacity	13.556	20.038	0	33.594

Installed Capacity (MWAC) - As of 2015				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	20.11	19.801		39.911
Net Metering - Wind	0.013	0.05		0.063
Net Metering - Biomass	0	3.95		3.95
Total Capacity	20.123	23.801	0	43.924

Installed Capacity (MWAC) - As of 2016				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	27.139	21.856		48.995
Net Metering - Wind	0.007	0.05		0.057
Net Metering - Biomass	0	5.949		5.949
Total Capacity	27.146	27.855	0	55.001

Installed Capacity (MWAC) - As of 2017				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	41.269	25.333	1.219	67.821
Net Metering - Wind	0.007	0.05	0	0.057
Net Metering - Biomass	0	0.75	5.199	5.949
Total Capacity	41.276	26.133	6.418	73.827

Installed Capacity (MWAC) - As of 2018				
	Residential	Commercial	Industrial	Total
Net Metering - Solar	69.158	27.855	1.233	98.246
Net Metering - Wind	0.007	0.05	0	0.057
Net Metering - Biomass	0	0.75	5.199	5.949
Total Capacity	69.165	28.655	6.432	104.252

QUESTION:

Please refer to FPL's response to Staff's First Data Request, Nos. 41-44. How does FPL project and include net metering impacts in its forecasts of load and customers?

RESPONSE:

In developing the impact of private solar (net metering), FPL assumes there will be no impact on the forecast number of customers. The methodology below describes how FPL develops the private solar impacts on FPL's peak and energy forecasts.

1. Actual installed MW for the residential and commercial classes are obtained for the most recent year.
2. Private solar forecasts are obtained from Greentech Media (GTM) for the state of Florida. This forecast is broken out by the residential and commercial classes. GTM's forecast extends out to 2023. GTM annual growth rates, by class, are calculated and applied to FPL's most recent year of actual installed MW. Beyond 2023, growth rates from EIA's U.S. Solar Forecast for the residential and commercial sectors are used.
3. Assumptions regarding hours in the year, capacity factors, degradation factors, along with the installed capacity forecast from step 2, are used to develop annual MWh for the residential and commercial classes. This methodology breaks down the commercial class into demand and non-demand.
4. The total annual MWh from step 3 and hourly solar profiles by month developed separately for the residential and commercial classes are used to develop hourly solar forecasts through 2040. Hourly values are adjusted for losses.
5. Summer peak and winter peak, private solar impacts are derived based on the solar forecast at the hour of the summer and winter peaks. For the summer peak, hour ending 17:00 for the month of August was used. For the winter peak, hour ending 08:00 for the month of January was used.
6. Net Energy for Load (NEL) impacts are derived by summing the hourly solar forecasts by month. The NEL impacts are incremental from September 2017 to August 2018. For example, September 2018 is incremental from September 2017, October 2017 is incremental from October 2018, etc.

QUESTION:

What is FPL's projection of annual net metered customers, demand, and energy, by rate class and in total, for all years available?

RESPONSE:

Please see Attachment No. 1 to this Interrogatory. FPL does not forecast private solar by rate class. The attached file includes annual installed MW_{DC} and associated MWh forecasts for residential, commercial, and total customers. Therefore, this does not represent private solar's impact on FPL peaks and energy.

FPL does not forecast the number of private solar customers directly. FPL estimates the number of residential and commercial customers by dividing the forecasted installed MW by the most recent year actual kW per customer for residential and commercial customers. This forecast is produced through 2028.

QUESTION:

Please provide all studies and reports FPL has created or has otherwise relied upon in preparing its forecast of customers and load that discusses or measures the migration of FPL customers and load to non-FPL-owned solar generating facilities due to net metering.

RESPONSE:

Please see Attachments Nos. 1 and 2 to this Interrogatory. Confidential Attachment No. 1 includes data obtained from Greentech Media (GTM). This forecast is dated Q2 2018. Attachment No. 2 is from EIA's 2018 Annual Energy Outlook.

**FPL's responses to
Staff's First Set of Interrogatories**

**No. 147 – Attachment No. 1
Bates No. 000009-000011**

is confidential in its entirety

QUESTION:

Please refer to FPL's response to Staff's First Data Request, Nos. 41-44. Is FPL's SolarTogether Program expected to allow the Company to retain customers or load during the 30 year forecast horizon that may otherwise migrate to non-FPL-owned solar generating facilities due to availability of net metering? Please explain.

RESPONSE:

FPL did not adjust its forecast of non-FPL owned solar generation facilities as a result of the SolarTogether Program. FPL developed this program to address a specific customer demand, not to retain customers or load.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, Nos. 28 and 79. Given that non-participants would receive no benefits without CO₂ costs projected to be avoided in 2026, has FPL considered reducing the amount of the credit if CO₂ costs do not occur as projected? If not, please explain why.

RESPONSE:

FPL has documented through various analyses and sensitivities presented in this and previous data requests that the FPL SolarTogether is cost effective for both participants and non-participants. The economic analysis for FPL SolarTogether follows the precedent established in the analysis provided to support FPL's SoBRA and other generation expansion investments, where the economic benefits are dependent on a number of variables including fuel and carbon pricing, new generation additions, production, capital spend, and O&M costs. This analysis, like all others before it, relies on the best forecasts of CO₂ costs at the time of the analysis. The upside and downside risk associated with these variables and forecasts is borne by all customers, and this risk exists regardless of FPL SolarTogether. FPL does not believe it appropriate to set a different standard for FPL SolarTogether.

QUESTION:

Please refer to FPL's response to Staff's First Data Requests, No. 48(a). Has FPL considered similar requirements as the SolarNow program, such as no remaining cost for facilities being borne by non-participants and the generation benefits provided to the system as a whole, for the SolarTogether program? If not, please explain why.

RESPONSE:

FPL's SolarNow program was designed as an initial foray into voluntary solar programs by voluntary participation in the construction of small scale solar projects in communities throughout FPL's service territory that would reflect participants' commitment to solar energy. Unlike the SolarTogether program, the SolarNow program was not intended to bring large scale, cost-effective universal solar facilities that would substantially benefit both participants and non-participants nor was it designed to meet the demand of a substantial segment of the FPL customer base desiring an alternative to rooftop solar.

FPL SolarTogether, in contrast, was designed to be a voluntary alternative to rooftop solar, to give customers a chance to participate in the solar expansion occurring in Florida. The program is modeled after other successful community solar programs in place today across the country whose key tenet to success is that they provide a positive value proposition to the customer. FPL customers have expressed an interest in a program that would:

- i) allow customers who cannot afford rooftop solar a chance to participate,
- ii) allow customers who cannot access rooftop solar a chance to participate,
- iii) allow customers to lower their energy bills (bill credits),
- iv) help customers achieve their Green House Gas and sustainability goals (RECs), and
- v) support construction of new renewable generation in the areas where customers live and do business every day

As proposed, FPL has received favorable feedback from customers that the program's subscription charge, credit, and REC retirement attributes meet or exceed customer's energy savings and renewable generation needs and expectations for a community solar program. In addition, the program's cost and benefit sharing design yields a program that is cost effective for both the participant and non-participant. In this regard, the program is fundamentally different than SolarNow, and for those reasons FPL did not consider a similar construct to that of SolarNow.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 59(a). FPL states it designed the program to allow 20 percent of the benefits to non-participants to protect from potential forecasting error. Has FPL considered providing a guarantee to non-participants for the remaining net system savings of \$27.7 million? If not, please explain why.

RESPONSE:

FPL has not considered providing a savings guarantee to either participants or non-participants. It is important to note that participants remain in the general body of customers, and thus are still exposed to both upside and downside risks that may exist with the solar projects. The economic analysis for FPL SolarTogether follows the precedent established in the analysis provided to support FPL's SoBRA and other generation expansion investments, where the economic benefits are dependent on a number of variables including fuel and carbon pricing, new generation additions, production, capital spend, and O&M costs. The upside and downside risk associated with these variables is borne by all customers and this risk exists regardless of FPL SolarTogether. FPL does not believe it is appropriate to set a different standard for FPL SolarTogether. Instead of a guarantee for non-participants, FPL allocated more of the benefits to non-participants than their proportional share based on costs, i.e., non-participants contribute 3.6% of the total project costs but will benefit from 20% of the \$139 million in total program benefits.

QUESTION:

Please refer to FPL's response to Staff's First Data Request, No. 90. Has FPL considered removing the customer eligibility requirement to support continuity of the program? If not, please explain why.

RESPONSE:

Yes, FPL has considered the input provided by the Commission Staff, and it agrees to remove the customer eligibility requirement to support continuity of the program.

QUESTION:

Has FPL considered booking administrative costs solely to participants or below the line? If not, please explain why.

RESPONSE:

FPL has evaluated collecting administrative costs solely from FPL SolarTogether participants. However, it has not considered recording these costs below-the-line as it believes these are prudently incurred costs required in order to implement and monitor the FPL SolarTogether program. As with all costs, if the program is 100% subscribed, FPL would collect 96.4% of the administrative costs through the \$6.76/kW subscription fee. Non-participants would be responsible for 3.6% of the costs, including the administrative costs, while receiving 20% of the total program savings.

QUESTION:

Has FPL considered removing the SolarTogether Credits and reducing SolarTogether Charges to reflect the cost of RECs? If not, please explain why.

RESPONSE:

FPL interprets Staff's proposed modification to suggest FPL provide a "green tariff" program where customers pay a premium for renewable energy. FPL SolarTogether was designed to be a voluntary alternative to rooftop solar, to give customers a chance to participate in the solar expansion occurring in Florida. The FPL SolarTogether program is modeled after other successful community solar programs in place today across the country whose key tenet to success is that they provide a positive value proposition to the customer. FPL customers have expressed an interest in a program that would:

- i) allow customers who cannot afford rooftop solar a chance to participate
- ii) allow customers who cannot access rooftop solar a chance to participate
- iii) allow customers to lower their energy bills (bill credits)
- iv) help customers achieve their Green House Gas and sustainability goals (RECs), and
- v) support construction of new renewable generation in the areas where customers live and do business every day

As proposed, FPL has received favorable feedback from customers that the program's subscription charge, credit, and REC retirement attributes meet or exceed customer's energy savings and renewable generation needs and expectations for a community solar program, while maintaining cost effectiveness for both the participant and non-participant. The suggested alteration would not meet the customers' needs as defined and would not expand access to solar as it would favor only those who can afford to pay a premium. In addition, as a voluntary market, the price of RECs in Florida is low and would not cover the FPL SolarTogether program costs. For those reasons, FPL did not consider a program design removing the SolarTogether Credits and reducing SolarTogether Charges to reflect the cost of RECs.

QUESTION:

Please refer to Florida Power & Light's (FPL or Company) Responses to Staff's First Data Request, No. 40.

- a. In the paragraph headlined "Net Energy for Load ('NEL')," FPL wrote "[s]econd, there is a smaller impact of Codes & Standards in the 2019 TYSP [Ten-Year Site Plan] compared with the 2018 TYSP." Further down on the same page, under the headline "Summer Peak and Winter Peak," FPL wrote "[s]econd, there is a larger impact of Codes & Standards in the 2019 TYSP model compared with the 2018 TYSP model." Please further discuss the underlying factors or interplay which lead both these statements to be true.
- b. Please generally discuss some key differences (e.g. advantages/disadvantages) with daily modeling, as opposed to monthly modeling of NEL.

RESPONSE:

- a. On an annual basis, as data is updated and models revised, model coefficients change. Such was the case with the coefficient for the Codes & Standards variable in FPL's 2019 TYSP NEL and summer peak models. The coefficient on the Codes & Standards variable in our NEL model was smaller in the 2019 TYSP model than in the 2018 TYSP model. The lower coefficient implies a larger rebound effect. Therefore, the Codes & Standards impact on the NEL forecast is smaller. In the summer peak model, the opposite was true. The coefficient was larger, meaning a smaller rebound effect. In this case the Codes & Standards impact on the summer peak is larger.

In most years, the rebound effect is larger for NEL than for the summer peak. Since the rebound effect estimates behavioral changes, one would expect more behavioral changes over the year, due to the installation of energy efficiency measures, than for one hour during the summer peak. Last year this was not the case. There was less of a rebound effect for NEL than for the summer peak based on last year's models. In part, the changing coefficients this year is due not only to the updated data and model specification, but also are a return to the typical relationship between the two model coefficients.

- b. A daily model is more responsive to the impact of day to day temperature fluctuations on energy use. To elaborate, Florida weather can change dramatically from day to day, particularly during the winter months. A cold front moving through Florida can require heating loads for a few days which may then be followed by hot weather requiring the need for air conditioning. However, this is not always the case. Sometimes cold fronts are followed by warmer weather requiring neither heating nor air conditioning. In order to capture these different weather patterns, FPL developed a daily model. A daily model, by its nature, can model these daily weather fluctuations. With a monthly model, the temperature/load relationship is based on monthly averages. Averages can mask daily swings in temperature.

A disadvantage of using a daily model is a daily model is more data intensive, requiring daily temperature and load data. Since our experience with the daily NEL model is limited, all of the potential advantages and/or disadvantages are not yet apparent.

QUESTION:

Proposed Modifications

Please refer to FPL's Responses to Staff's First Data Request, No. 46. Please expound on this response. As in, please detail how the Company "trended" its forecasts and why it chose to trend its forecasts from 2041-2051.

RESPONSE:

FPL has chosen to trend its forecasts beyond 2040 due to the uncertainty of long term economic forecasts, as well as the uncertainty that far into the future of other inputs used in FPL's regression models.

For the summer peak, a compound annual growth rate (CAGR) for summer peak per customer is calculated for the 2010-2040 time period. All adjustments, such as the impact of electric vehicles, wholesale contracts, and private solar are removed from both the history and the forecast prior to calculating the CAGR. Beginning in 2041, this growth rate is applied each year to the predicted peak per customer. Simpler methods are applied when trending the winter peak and Net Energy for Load. For the winter peak, the trend variable is included as a variable in the model. For Net Energy for Load, the trend is based on the number of days in the month.

QUESTION:

Please provide the percent error in FPL's delivered natural gas price forecasts 3 to 5 years out using data which supported FPL's 2011 through 2015 Ten-Year Site Plans, per the following tables. Please provide an explanation for any forecast error rate in excess of 20 percent.

Accuracy of Natural Gas Price Forecasts

Year	Natural Gas Price Annual Forecast Error Rate (%)		
	Years Prior		
	5	4	3
2016			
2017			
2018			
Average			

Natural Gas Price Forecasts

Year	Natural Gas Price Annual Forecast (\$/MMbtu)		
	Years Prior		
	5	4	3
2016			
2017			
2018			
Average			

Natural Gas Price

Year	Natural Gas Price Annual Actuals (\$/MMbtu)		
	Years Prior		
	5	4	3
2016			
2017			
2018			
Average			

RESPONSE:

Natural Gas Price Forecast Variances

Year	Natural Gas Price Annual Variance		
	Years Prior		
	5	4	3
2016	61%	56%	45%
2017	51%	38%	36%
2018	47%	48%	28%
Average	53%	48%	37%

Natural Gas Price Forecasts

Year	Natural Gas Price Annual Forecast (\$/MMBtu)		
	Years Prior		
	5	4	3
2016	\$6.57	\$5.88	\$4.68
2017	\$6.39	\$5.03	\$4.93
2018	\$5.86	\$5.99	\$4.34
Average	\$6.27	\$5.63	\$4.65

Natural Gas Price

Year	Natural Gas Price Annual Actuals (\$/MMBtu)		
	Years Prior		
	5	4	3
2016	\$2.58	\$2.58	\$2.58
2017	\$3.14	\$3.14	\$3.14
2018	\$3.12	\$3.12	\$3.12
Average	\$2.95	\$2.95	\$2.95

FPL's short-term and medium-term forecast methodology relies upon forecast data provided by the natural gas market and leading industry experts. Future natural gas prices can be uncertain due to a number of drivers that influence the short-term and long-term prices. These drivers include, but are not limited to, U.S. and worldwide demand, production capacity, economic growth, environmental requirements, and politics.

QUESTION:

Proposed Modifications

Please provide the percent error in FPL's delivered coal price forecasts 3 to 5 years out using data which supported FPL's 2011 through 2015 Ten-Year Site Plans, per the following tables. Please provide an explanation for any forecast error rate in excess of 15 percent.

Accuracy of Coal Price Forecasts

Year	Coal Price Annual Forecast Error Rate (%)		
	Years Prior		
	5	4	3
2016			
2017			
2018			
Average			

Coal Price Forecasts

Year	Coal Price Annual Forecast (\$/MMbtu)		
	Years Prior		
	5	4	3
2016			
2017			
2018			
Average			

Coal Price

Year	Coal Price Annual Actuals (\$/MMbtu)		
	Years Prior		
	5	4	3
2016			
2017			
2018			
Average			

RESPONSE:

Coal Price Forecast Variances

Year	Coal Price Annual Variance		
	Years Prior		
	5	4	3
2016	0.3%	2.9%	4.2%
2017	6.6%	8.6%	27.3%
2018	9.4%	28.1%	21.5%
Average	5.4%	14.7%	18.7%

Coal Price Forecasts

Year	Coal Price Annual Forecast (\$/MMbtu)		
	Years Prior		
	5	4	3
2016	\$2.458	\$2.538	\$2.574
2017	\$2.579	\$2.638	\$3.314
2018	\$2.701	\$3.403	\$3.115
Average	\$2.579	\$2.860	\$3.001

Coal Price

Year	Coal Price Annual Actuals (\$/MMbtu)		
	Years Prior		
	5	4	3
2016	\$2.465	\$2.465	\$2.465
2017	\$2.410	\$2.410	\$2.410
2018	\$2.446	\$2.446	\$2.446
Average	\$2.440	\$2.440	\$2.440

FPL's forecast methodology relies upon forecast data provided by J. D. Energy, Inc., an industry expert, and mine-mouth commodity contracts already in place. Future coal prices can be uncertain due to a number of drivers that influence the short-term and long-term prices. These drivers include, but are not limited to, U.S. and worldwide demand, production capacity, economic growth, environmental requirements, US imports / US exports, and politics.

DECLARATION

I sponsored the answers to Interrogatory Nos. 1-3, 25-26, 48-57, 60-71, 80, 90-91, 111-112, 120-137, 139-144, 148-153, 155 and co-sponsored Nos. 100-101, 105, 116, 138, 145-146, and 154 from Staff's First Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.

Matt Valle

Date: _____

DECLARATION

I sponsored the answers to Interrogatory Nos. 4-23 from Staff's First Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.


William F. Brannen

Date: _____

DECLARATION

I sponsored the answers to Interrogatory Nos. 58, 72, 74, 81-89, 93, 97, and 117 and co-sponsored Nos. 59, 98, 105, 107-108, 110, 113, 116, 118-119, 138 and 154 from Staff's First Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



Scott Bores


Date: _____

7/16/2019

DECLARATION

I sponsored the answers to Interrogatory Nos. 24, 27-47, 73, 75-79, 92, 94-96, 99, 102-104, 106, 109, 114-115, 147 and 156-159 and co-sponsored Nos. 59, 98, 100, 101, 107-108, 110, 113, 118-119, 138 and 145-146 from Staff's First Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



Juan E. Enjamio

Date: _____


FPL's Response to Staff's Second Set of Interrogatories
Nos. 161-162, 164, 166, 169-177, 181, 183, 185, 188-193,
195-196, 198.

**Additional files contained on Staff Hearing Exhibits
CD/USB for Nos. 181, 190, 198**

(Amended Nos. 181, 189, 190, 195, 198)

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 39
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Valle (161-162, 164, 166,
169-173, 176, 185,
188-189)Brannen(173-175)Bores (170,
183)*Enjamio(177, 1...

QUESTION:

Please refer to witness Valle's direct testimony, page 7, lines 13 through 15, which states "After filing its petition for approval of FPL SolarTogether in March of this year, FPL began initial marketing of the Program to all customers." Please reconcile this statement with the statements made in paragraph 5 of the Petition in this docket.

RESPONSE:

Following the March 13, 2019 FPL SolarTogether petition filing, FPL launched a broad communication campaign and general website allowing customers the opportunity to self-identify as interested in the program and to be placed on the program mailing list for future updates. These efforts utilized social media, email, and electronic bill inserts to drive early awareness of the program and direct interested customers to the program website (www.fpl.com/solartogether) where they can register for the program mail list to receive program updates. As of August 16, 2019, just over 50,000 customers, mostly residential, have self-identified as interested in the program. This campaign is different from the statements made in paragraph 5 of the Petition, which was specific to the Pre-registration of Commercial, Industrial, and Governmental (C&I-G) customers.

QUESTION:

Please refer to witness Valle's direct testimony, page 8, lines 19 through 22. Please provide whether all ratepayers receive sustainability and economic benefits from solar facilities that are built in the traditional regulatory framework or through the SoBRA mechanism. As part of your response, explain how the SolarTogether Program is different from each of those.

RESPONSE:

Yes, when FPL builds solar facilities, whether in the traditional regulatory framework or through the SoBRA mechanism, all customers receive the sustainability and economic benefits associated with the reduction in the amount of generation from traditional fossil-fueled plants, the reduction in greenhouse gases, and the substantial increase in fuel diversity. FPL SolarTogether is a voluntary solar tariff that FPL proposes be open to all customers per the STR Tariff 8.932. Under SolarTogether, the general body of customers will continue to receive the sustainability benefits associated with the reduction in the amount of generation from traditional fossil-fueled plants, the reduction in greenhouse gases, and the substantial increase in fuel diversity. The general body of customers will continue to receive economic benefits, as the FPL SolarTogether Program is projected to generate system savings that exceed the costs on a CPVRR basis. Unlike in the traditional regulatory framework and SoBRA mechanism, customers that elect to participate in SolarTogether will:

- (i) directly participate in the costs and benefits of solar,
- (ii) have the ability to offset up to 100% of their energy usage with solar, and
- (iii) be able to achieve their Green House Gas and sustainability goals through the retirement of RECs.

QUESTION:

Please refer to witness Valle's direct testimony, page 10, lines 7 through 8. Please explain whether there would be a risk, in the event of new phases provide greater benefits, of older phases being abandoned by participants. As part of your explanation, specify whether current participants in Phase 1 would be allowed to participate in later Phases.

RESPONSE:

The FPL SolarTogether program is designed to allow participants flexibility, as such they may terminate their participation in the program at any time for any reason. Upon termination, participants are prohibited from re-enrolling in the program for 12-months. If a participant elects to re-enroll, they are subject to subscription availability, and the participant's new subscription will restart at the Participant Program Year 1 Subscription Credit Rate as defined in the then-applicable tariff sheet. See FPL's response to Staff's First Set of Interrogatories No. 91. These mechanisms were designed to deter participants from manipulating the Program by transferring between Phases or subscribing for only the high solar production months. FPL would only build future Phases if it were cost effective to do so and customer interest justified expansion, see FPL's response to Staff's First Set of Interrogatories No. 3. In the event a phase is undersubscribed, any unsubscribed capacity defaults to the general body, and as cost effective solar would further lower the general body's rates.

Participants may subscribe up to a capacity that would produce up to 100% of their annual usage; a participant that subscribed to a 50% offset in Phase 1, for example, would thus be allowed to subscribe to future Phases up to the participant's maximum subscription amount.

QUESTION:

Please refer to Witness Valle's direct testimony, page 12, lines 4 through 5. Please provide dates for these discussions, along with a list of attendees, customers, and method of communication (in-person, telephonic).

RESPONSE:

A detailed list of customer meetings is not available. FPL has received numerous requests and had many discussions about solar with our customers over the years. The primary efforts and discussions FPL undertook to create FPL SolarTogether are described below.

In the early design phases of the program, FPL conducted numerous in-person discussions with customers at the Edison Electric Institute Spring National Key Accounts Workshop, April 9-12, 2017. FPL did not retain detailed documentation on the specific customer meetings, but the registration list for the workshops is available at the following link: https://www.eei.org/about/meetings/Meeting_Documents/Registrants.pdf

In fall 2018, just prior to the C&I-G pre-registration, FPL conducted numerous in-person discussions with customers at the Smart Energy Decisions Renewable Energy Sourcing Forum ("Forum"), October 1-3, 2018 and the Edison Electric Institute Fall National Key Accounts Workshop, October 21-24, 2018. . See Table 1 below for the list of customer.

The purpose of these meetings was to test the program's value proposition, test marketing and messaging materials, understand program viability, gauge customer interest level, and identify common questions and/or concerns.

Table 1

Customer Name
[REDACTED]

See also Staff's First Request for Production of Documents No. 2.

QUESTION:

Please refer to Witness Valle's direct testimony, page 14, lines 19 through 20. Please explain why FPL elected to use a fixed sharing percentage as a safeguard versus using a non-fixed Subscription Credit?

RESPONSE:

FPL SolarTogether's design allows for the sharing of both costs and benefits between the general body of customers and the participants. This is a unique attribute not common in other community solar programs. The intent of this feature is to allow both participants and the general body of customers to benefit from the environmental and financial benefits that result from the addition of new solar generation to the FPL system.

Specifically, with respect to the to the Program's design, the Subscription Credit is not fixed, but rather a function of the Benefit Rate multiplied by the actual generation produced by the share to which the participant is subscribed. The fixed Benefit Rate schedule defined by STR tariff sheet 8.934 is derived from the forecasted system benefits that are a result of the 20 new solar energy centers being added to the FPL system, as described in detail in FPL's response to Staff's First Set of Interrogatories No. 81. In doing so, FPL was able to establish a schedule that offered the program participants a simplified mechanism for understanding their potential savings and that allowed for a simple payback that met the market needs, as described in witness Valle's testimony page 12 lines 3-20.

Recognizing the variable nature of fuel pricing and forecasting, FPL allocated a percentage of the forecasted benefits to the general body of customers. The FPL SolarTogether Program allows the general body to share in the benefits while protecting them from the unknown potential decline in future fuel prices versus the forecast utilized in the analysis. It is important to recognize that fuel prices could increase above forecasted levels, in which case the participants' benefits would be unchanged and general body of customers' benefits would increase. In addition, the savings associated with any unsubscribed capacity flows to the general body of customers.

See also FPL's response to Staff's Second Set of Interrogatories No. 167.

QUESTION:

Please refer to Witness Valle's direct testimony, page 15, lines 1-6.

- a. Please explain why FPL identifies timing and cost of new generation additions to be a variable customer economic benefit.
- b. As part of your explanation, please explain why FPL does not list this benefit with the net benefits to ratepayers in determining the Subscription Credit.
- c. Given that the net savings for Avoided Generation Savings is built into the Subscription Charge calculation, please state whether FPL would increase or decrease the Subscription Charge to reflect changes in Avoided Generation Savings? If not, why not?

RESPONSE:

- a. In previous filings and analyses, FPL has often used the term "variable costs" to refer to system costs as costs that change as a function of unit dispatch, while costs associated with new generation such as capital costs and fixed O&M were referred to as "fixed costs". Witness Valle uses a different definition of variable costs in his testimony. To clarify, the term "variables" in witness Valle's direct testimony, page 15, lines 3-6, includes the costs or savings associated with the addition of new generation. The costs and savings of new generation depend on when the generation is added, the type of generation, and the forecasted cost of the generator. These elements are part of the avoided generation savings that reduce the base revenue requirements that are collected through the Subscription Charge and general body of customers.
- b. The Subscription Credit includes clause related items such as fuel and emissions whereas the avoided generation savings include items that typically flow through base rates such as the capital costs of constructing a new plant, non-fuel O&M costs and transmission interconnection costs. The benefit associated with the avoided generation savings is netted against the project costs when calculating the Subscription Charge.
- c. Changes in Avoided Generation Savings would not increase or decrease the Subscription Charge. As described in FPL's response to Staff's Second Set of Interrogatories No. 169, FPL established the Subscription Charge and Subscription Benefit Rate to offer the program participants a simplified mechanism for understanding their costs and potential savings and that allowed for a simple payback that met the market needs, as described in witness Valle's testimony on page 12 lines 3-20. When Participants enroll in the program and make a subscription commitment, they are doing so based on known pricing parameters (*i.e.*, the Subscription Charge and Subscription Benefit Rate).

QUESTION:

Please refer to Witness Valle's direct testimony, page 20, lines 10 through 11. If achieving customer sustainability and renewable energy goals is essential to the SolarTogether Program, please explain why the retirement of Renewable Energy Credits is an Opt-In feature.

RESPONSE:

Achieving sustainability and renewable energy goals is essential to many customers interested in this type of program but is not essential to all customers. For example, while many government entities and corporations have mandated goals that require Renewable Energy Credits ("RECs") to meet their mandates, some customers want to contribute to the growth of solar but have no need for the RECs. To avoid creating unnecessary administrative work by retiring all RECs, FPL provided this program attribute as a flexible option elected at the participant's request.

QUESTION:

Please refer to Witness Valle's direct testimony, page 22, lines 15 through 19. Please provide a timeline of the outreach conducted. As part of this response, please identify attendees from the educational webinars.

RESPONSE:

FPL initiated the pre-registration outreach beginning the week of November 12, 2018; pre-registration began on November 29, 2018 and closed at midnight on January 25, 2019.

See also FPL's response to Staff's Second Set of Interrogatories No. 166, Staff's First Request for Production of Documents No. 2, and OPC's Third Request for Production of Documents No. 6 (file name "Webinar_List of Registrants_Redacted.pdf").

QUESTION:

Please refer to Witness Brannen's direct testimony, page 10, lines 7 through 20. Has FPL issued an RFP for Solar Energy and/or Capacity in a similar quantity? If so, please provide the date and explain which responses, if any, were selected. If not, please explain why not.

RESPONSE:

FPL has not issued an RFP for solar energy and/or capacity. As described in the direct testimony of Bill Brannen, FPL solicits proposals for major equipment, design, and construction services for each project such that 98% of the construction costs are the result of competitive RFP solicitations. These construction costs and the initial capital cost to place in-service are the primary cost factors in determining the overall level of cost, and ultimate cost-effectiveness, of a solar project. Combined with FPL's capabilities in design and operations of solar projects as the largest developer, owner, and operator of solar projects in Florida, FPL is confident that the proposed projects are some of the most cost-effective available in the state. Additionally, with respect to SolarTogether, the units' profile for capacity factors and energy production, as well as in-service dates, are integral to the development of the Program's charge and credit calculation. Accordingly, it is necessary for FPL to have significant experience with and control over the installation and operation of the solar resources that will be used in order to develop pricing that will most closely reflect cost and production. While FPL has not specifically issued an RFP for solar power purchases, the long-standing availability of FPL's Standard Offer Contract is a mechanism by which solar project developers are able to offer solar power proposals to FPL at any time. See FPL's response to OPC's Sixth Set of Interrogatories No. 29.

QUESTION:

Please refer to FPL's response to Staff's First Set of Interrogatories, Nos. 4 through 23, which states in part: "The site selection for individual FPL SolarTogether Projects is preliminary and subject to be changed in favor of a site currently assigned to a future project based on factors or risks that could adversely impact the timing for the commercial operation date. Additionally, an individual Site's cost may vary either upward or downward."

- a. Please explain how the Commission can determine the prudence of a project for which the site has not yet been selected.
- b. Please provide the list of potential future project sites and capacities noted in FPL's response, including their economic data.
- c. Describe the types of factors or risks that could adversely impact the timing of the commercial operation date of the Project Sites.
- d. Was each Project Site acquired specifically for the SolarTogether Program?

RESPONSE:

- a. FPL has selected specific sites for each of the 20 FPL SolarTogether Centers that comprise the five SolarTogether Projects ("Projects"). The cost of the components, engineering and construction estimated for the Projects is based on the individual characteristics of each site, including unique site layouts. FPL will change a site if an issue, such as a delay in the permitting timeline, is projected to adversely impact the construction schedule and another SolarTogether site can be used to meet the plan. In the event of such an occurrence, a change will be made only to the extent that it results in equal or greater benefit to FPL's customers. Accordingly, the cost estimate will not exceed the total amount projected for the SolarTogether Program, and Commission therefore has sufficient, reliable cost information for determining prudence.
- b. There are two ways a site may be changed. The first is simply reordering the sites among the 20 designated for SolarTogether Projects 1 through 5. The second would be to use one of three sites not currently among the 20 identified sites. These three sites are parcels located in Manatee County, St. Lucie County and Okeechobee County. Each of these sites would have a capacity of 74.5 MWac. Economic data will be developed based on the facts and circumstances that would exist if and when such a change becomes necessary. As noted above, such a change will be made only to the extent that it results in equal or greater benefit to FPL's customers.

- c. The primary risks factors that could adversely impact the timing of commercial operation dates for the Projects are the discovery of unknown significant detrimental site conditions or unexpected delays in the permitting. The sites designated for the 20 FPL SolarTogether Centers have been thoroughly evaluated. Accordingly, the likelihood of a delay resulting from unknown conditions is low. In addition, permitting for 18 of the 20 sites is either complete or nearing completion. The remaining two sites are located in jurisdictions with well-established permitting processes where FPL has successfully permitted generation projects. Therefore, the risk of material delays due to permitting considerations or site conditions is minimal.
- d. No, none of the Project Sites were acquired specifically for the SolarTogether Program.

QUESTION:

Please explain the process FPL uses to determine the AC/DC ratio for each project site. As part of your response, provide the necessary ratio to account for losses from the inverter, and if the final ratio selected is higher than this, explain why and provide the amount of solar spillage that occurs.

RESPONSE:

The process FPL used to determine DC/AC ratios was structured to maximize benefit to FPL's customers. Using a proxy site, FPL performed iterative energy production calculations based on a number of layout scenarios with varying combinations of DC/AC ratios and ground coverage ratios ("GCR"). These are the two primary parameters that drive solar facility energy production. Construction costs were also developed for each scenario. Using the energy production results and cost estimates, FPL determined the CPVRR for each scenario and identified the range of DC/AC ratios that provided the greatest benefit to FPL's customers. The range of DC/AC ratios was used as one of the inputs in developing specific layouts to accommodate the unique characteristics for each site.

The DC/AC ratio necessary to account for the electrical losses from the PV modules to the point of interconnection and deliver exactly 74.5 MWac for a typical SolarTogether Center is 1.1. This DC/AC ratio accounts for electrical losses from the DC collection system, the inverters, the medium voltage transformers, the AC collection system, and the main transformer. However, it would be non-economic to use this DC/AC ratio in the design of a solar facility. A higher DC/AC ratio is required to maximize value over the life of the facility to account for factors such as module degradation and daily/seasonal variations in solar irradiance. The DC/AC ratios FPL used for the SolarTogether Centers provides a balance between construction costs and energy production to maximize value to FPL's customers. Accordingly, the concept of "spillage" is not applicable to PV facilities when the DC/AC ratios have been developed as outlined above.

QUESTION:

Please refer to FPL's response to Staff's First Set of Interrogatories, No. 138. Please provide a list of Orders and corresponding docket names and numbers where the Commission has made an advanced prudence determination.

RESPONSE:

- Docket No. 19980693, In re: Petition by Tampa Electric Company for approval of cost recovery for a new environmental program, the Big Bend Units 1 & 2 Flue Gas Desulfurization System. Order No. PSC-1999-0075-FOF-EI.
- Docket No. 20130198, In re: Petition for prudence determination regarding new pipeline system by Florida Power & Light Company. Order No. PSC-2013-0505-PAA-EI.
- Docket No. 20130208, In re: Petition for limited proceeding to approve revised and restated stipulation and settlement agreement by Duke Energy Florida, Inc. d/b/a Duke Energy. Order No. PSC-2013-0598-FOF-EI.
- Docket No. 20140001/20150001, In re: Fuel and purchased power cost recovery clause with generating performance incentive factor. Order No. PSC-2015-0038-FOF-EI.

QUESTION:

Please refer to FPL's response to Staff's First Set of Interrogatories, No. 150. Please provide the amount of savings estimated as compared to the next most cost-effective alternative for the Company's last five Power Plant Siting Act requests with and without Carbon Emissions.

RESPONSE:

Please see table below:

	Alternative Resource Plan	CPVRR Period	CPVRR Savings vs. Other Option	
			With CO2 (M\$)	Without CO2 (M\$)
Dania Beach Clean Energy Center	No Modernization	2017-2061	337	265
Okeechobee Clean Energy Center	Other CC Location	2014-2049	65	65
Port Everglades Clean Energy Center	No Modernization	2011-2048	469	102
Cape Canaveral Clean Energy Center*	No Modernization	2008-2040	457	338
Riviera Beach Clean Energy Center*				

*Cape Canaveral Clean Energy Center and Riviera Beach Clean Energy Center were filed together, and therefore the CPVRR savings listed are for both projects.

QUESTION:

Please refer to FPL's response to Staff's First Set of Interrogatories, Nos. 79. For each Plan (SolarTogether and No ST), please provide the following (in electronic Excel format):

- a. An estimate of annual customer bills for a residential non-participating customer using 1,000 kWh/mo (in nominal and real values) excluding the proposed SolarTogether Charges and Credits and the difference between the plans.
- b. An estimate of annual customer bills for a residential non-participating customer using 1,000 kWh/mo (in nominal and real values) including the proposed SolarTogether Charges and Credits and the difference between the plans.

RESPONSE:

- a. Please see Attachment No. 1 to this amended interrogatory response.
- b. Please see Attachment No. 2 to this amended interrogatory response.

QUESTION:

Please complete the table below for 2018 energy consumption by customer class.

Customer Class	Average Number of Customers	Percent of Total Customers (%)	Energy Consumption (GWh)	Percent of Total Consumption (%)	Average Consumption per Customer (kWh)
Residential					
Small Commercial					
Large Commercial					
Governmental					
Industrial					
All Other Types					
Total					

RESPONSE:

Customer Class	Average Number of Customers	Percent of Total Customers (%)	Energy Consumption (GWh)	Percent of Total Consumption (%)	Average Consumption per Customer (kWh)
Residential	4,391,832	88.5%	59,096	50.6%	13,456
Small Commercial	445,510	9.0%	6,465	5.5%	14,512
Large Commercial	108,052	2.2%	40,929	35.0%	378,789
Governmental	N/A	N/A	N/A	N/A	N/A
Industrial	11,601	0.2%	3,013	2.6%	259,728
All Other Types	4,334	0.1%	7,340	6.3%	1,693,358
Total	4,961,330	100.0%	116,843	100.0%	23,551

Notes:

Small Commercial customers include lighting and small commercial

Large Commercial customers include medium and large commercial

FPL does not track sales and/or customers for Governmental accounts separately

QUESTION:

Please explain how FPL intends to report generation from the SolarTogether Projects in its Ten-Year Site Plan and other reporting to the Commission or advertising if participants are claiming the renewable attributes of the energy. As part of your response, explain if energy will be reported as Solar, Other, or another category. If it will be reported as Solar, explain whether FPL is claiming the benefit it is selling to customers.

RESPONSE:

FPL interprets Staff's statement "renewable attributes of the energy" to mean renewable energy certificates (RECs). FPL SolarTogether Projects will be reported in the Ten Year Site Plan as "solar" generation. FPL does not discuss RECs in its Ten Year Site Plan reporting. FPL will not be claiming the renewable attributes of RECs in FPL's corporate sustainability reporting.

QUESTION:

Please refer to FPL's response to Staff's First Set of Interrogatories, No. 52. Please provide a comparison of the community solar programs that FPL reviewed to FPL's proposed SolarTogether Rider. At a minimum, please compare the participant charges, participant credits, project size limits, customer eligibility requirements, administrative cost responsibility, and whether the solar units would be cost-effective additions without the community program.

RESPONSE:

Please see Attachment No. 1 to this response and FPL's response to OPC's Third Request for Production of Documents No. 6.

Utility	Participant Charges	Participant Credits	Project Size Limits	Customer Eligibility Req.	Administrative Cost Responsibility	Cost-effective w/o Community Program
Duke Energy Florida (DEF)	\$7.75 per 50 kWh block	\$0.0247 per 50 kWh block – credit based on annual avoided cost avg. & recovered through fuel clause.	N/A	DEF customers (certain limitations)	Charge designed to cover costs.	Settlement agreement does not determine cost-effectiveness for this program
Gulf Power Company (Gulf)	\$99 per year or \$89 per year for 5-yr	Monthly \$2.11 estimated bill credit (based on PV output, avoided costs, and no. of subscriptions)	1 MW	Gulf customers (certain limitations)	Charge designed to cover costs at full subscription.	Program assets were not considered cost-effective at the time of approval
Jacksonville Electric Authority (JEA)	\$0.075 per kWh	In lieu of \$0.0325 per kWh (current fuel rate & Exempt from environmental charge)	36.5 /50 MW goal)	JE A customers in good standing (certain limitations)	NM - Municipal program	NM - Municipal program
Orlando Utilities Commission (OUC)	\$0.06 per kWh	In lieu of \$0.05418 kWh (or current fuel rate)	13 MW	OUC residential or commercial (GSD) electric customer (certain limitations)	NM - Municipal program	NM - Municipal program
City of Tallahassee (COT)	\$0.05 per kWh	In lieu of \$0.035 per kWh (current fuel rate)	20 (60 MW goal)	COT Residential and commercial customers	NM - Municipal program	NM - Municipal program
Tampa Electric Company (TECO)	\$0.063 per kWh	In lieu of the current fuel rate (\$0.02913 per kWh)	17.5 MW	TECO customers (certain limitations)	Charge designed to cover costs at full subscription.	A SOBRA portion (cost-effective) based on settlement
Duke North Carolina - (Duke Energy Carolina – DEC & Duke Energy Progress – DEP)	TBD (RFP Summer 2019)	TBD (RFP Summer 2019)	20 MW each subsidiary (40 MW total) (DEC & DEP)	DEC or DEP customer in good standing	Recovery of admin. costs in next general base rate case.	NM - No cost-effective standard

Utility	Participant Charges	Participant Credits	Project Size Limits	Customer Eligibility Req.	Administrative Cost Responsibility	Cost-effective w/o Community Program
Duke South Carolina - Duke Energy Carolina - DEC & Duke Energy Progress - DEP	Monthly fee \$6.00 (DEC) \$6.25 (DEP) x kW with a one-time \$20 application fee and \$45 x kW (RS) and \$90 x kW (Non-RS)	(\$0.0604/kwh DEC/\$0.06341/kWh DEP)	3 MW - DEC & 1 MW - DEP (4 MW total)	DEC or DEP customer in good standing	The cost of the program is subsidized.	NM - No cost-effective standard
Georgia Power Company (Georgia Power)	\$24.99 per 1 kW block per month	Credit at Georgia Power's solar avoided cost	10 MW (limited to 3,000 kW blocks)	Georgia Power residential customers	Charge designed to cover costs.	NM - No cost-effective standard
Pacific Gas & Electric (PG&E)	Solar charge \$0.0648/kWh, Program charge \$0.0296/kWh	Generation credit \$0.1078 per kWh	227 MW	PG&E electric customers (generation)	Charge designed to cover costs.	NM - No cost-effective standard
Puget Sound	\$5.00 per 150 kWh block	\$0.0470009 per kW	75 MW	Puget Sound customers	Charge designed to cover costs	NM - No cost-effective standard
Xcel Minnesota (Xcel MN)	\$3.60 per block (lower for multi-yr. plans)	In lieu of the avg. fuel cost - credit is 2.73 per block	75 MW (50 MW wind, 25 MW solar)	Xcel MN customers	Charge designed to covers costs	NM - No cost-effective standard

NM - Not mentioned
TBD - To be determined

QUESTION:

Please refer to FPL's response to Staff's First Set of Interrogatories, No. 151.

- a. Does the SolarTogether Program provide a preference to customers who cannot afford rooftop solar?
- b. Does the SolarTogether Program provide a preference to customers who cannot access rooftop solar?
- c. Does FPL believe that the desire to lower energy bills is a universal desire of all of FPL's customers?
- d. Can customers achieve their greenhouse gas emission and sustainability goals through self-service renewable generation, the purchase of renewable generation, the purchase of renewable energy credits, or a combination of these items?
- e. Please describe how each of the proposed SolarTogether Project sites are in areas where customers live and do business every day.

RESPONSE:

FPL is filing this amended response to reflect changes to subsections d and e.

- d. Self-service renewable generation, the purchase of renewable generation, the purchase of renewable energy credits ("RECs"), or a combination of these items will enable some but not all customers to achieve their greenhouse gas emission and sustainability goals. Each offering can be limited within the context of a customer's overall sustainability needs. For instance, purchasing unbundled RECs is typically the minimum a customer can do to accomplish their sustainability goals, but many customers are looking to do more and have additional requirements or desires such as proximity, additionality, supporting the economy and ensuring the acceleration of renewables. In addition, self-service renewable generation and the purchase of renewable generation might not be accessible or affordable to all customers. Many C&I customers use a mix of onsite generation, RECs and offsite generation or community solar to meet their needs. Customers' goals vary, and there is not one solution; this is why SolarTogether is intended to expand access to renewable energy, not replace the existing mechanisms. The overwhelming demand for SolarTogether during pre-registration is evidence that the current available mechanisms do not meet the goals of all customers.

- e. FPL SolarTogether Projects are all sited in Florida, ensuring the solar generation is part of the Florida energy mix that powers customers' homes and businesses. Local government customers, as well as large national businesses have expressed that it is important to them solar program involve Florida-based generation, help the state advance solar, and improve the Florida environment. FPL's response to Staff's Second Set of Interrogatories No. 184 provides details on how the projects are spread across the counties in FPL's service territory.

QUESTION:

Please develop revised versions of the SolarTogether Plan and No ST Plan resource plans including the company's proposed demand-side management (DSM) goals from Docket No. 20190015-EG, additional incremental DSM after the end of the goals period. Also, include the 2020 SoBRA Project in both cases as a committed project. Please also answer the following questions using these revised plans, providing electronic copies (in Excel format) of tables or charts:

- a. Please provide the resource plans for each of the Plans discussed. As part of this response, please provide annual reserve margin data similar to Schedule 7 of the Ten-Year Site Plan, and for each unit identified in the resource plans please provide information similar to Schedule 9 of the Ten-Year Site Plan.
- b. Please complete the table below for each scenario for each sensitivity, and the difference between them. Provide the annual revenue requirement of each plan by category. Provide a version of this table in nominal and present value dollars for each scenario.

[Scenario Name] – ([Nominal / NPV] \$ millions)														
Year	SolarTogether				Remainder of System									
	Generation	Transmission	O&M	Total	Generation	Transmission	Fuel	Purchases	Fuel	Transportation	O&M	Emissions (Non-carbon)	Emissions (Carbon-only)	Total
2020														
...														
Total														

- c. Complete the table below for each scenario for each sensitivity. Provide the annual and total value for the net system savings between the Plans, the total SolarTogether Charges, the SolarTogether Credits, and the remaining net system benefits to the general body of ratepayers. Provide a version of this table in nominal and present value dollars.

Net Impacts - [Scenario Name] – ([Nominal / NPV] \$ millions)				
Year	Net System Savings	SolarTogether Charges	SolarTogether Credits	Remaining Net System Savings
2020				
...				
Total				

- d. For each plan, please provide an estimate of annual customer bills for a non-participating residential customer using 1,000 kWh/mo (in nominal and real values) excluding the proposed SolarTogether Charges and Credits.
- e. For each plan, please provide an estimate of annual customer bills for a non-participating residential customer using 1,000 kWh/mo (in nominal and real values) including the proposed SolarTogether Charges and Credits.

RESPONSE:

- a. See Attachment Nos. 1, 2 and 3 to this amended interrogatory response.
- b. See Attachment No. 4 to this amended interrogatory response.
- c. See Attachment No. 5 to this amended interrogatory response.
- d. See Attachment No. 6 to this amended interrogatory response.
- e. See Attachment No. 7 to this amended interrogatory response.

QUESTION:

If the SolarTogether Program and tariff are not approved, is FPL claiming that the No SolarTogether Plan is the next best least cost alternative? If not, please explain why not.

RESPONSE:

No, FPL is not claiming that the No-SolarTogether Plan is the next best most cost-effective alternative. FPL measures cost-effectiveness on the basis of lower rate impact to FPL's customers, not least cost. If FPL's SolarTogether Program is not approved, another resource plan with incremental solar will be more cost-effective to customers than the No-SolarTogether Plan. Please see FPL's response to Staff's First Set of Interrogatories, No. 100.

QUESTION:

Does the Company's proposed SolarTogether Program represent the least cost plan to serve the general body of ratepayers? If not, please explain why not.

RESPONSE:

Yes, the FPL SolarTogether Plan represents the most cost-effective (*i.e.*, lowest cost on a cumulative present value of revenue requirements (CPVRR) basis) resource plan based on the study assumptions. The EGEAS model was used to identify the lowest CPVRR resource plan given the available options. The available options, as well as all other system assumptions, were the same as used in the development of FPL's 2019 TYSP, with the exception that incremental DSM was not included in the development of the FPL Solar Together resource plan. Please see FPL's response to Staff's First Set of Interrogatories No. 99 for an explanation of why incremental DSM was not included.

QUESTION:

Does the Company's 2019 Ten-Year Site Plan represent the least cost plan to serve the general body of ratepayers? If not, why not?

RESPONSE:

Yes, FPL's 2019 Ten Year Site Plan ("TYSP") is the resource plan with the best electric rate impact to FPL's general body of customers. As explained on page 60, and again on page 348, of FPL's 2019 TYSP, FPL bases its integrated resource planning work on comparisons of the relative impacts competing resource plans have on FPL's electric rates. The general objective is to minimize FPL's projected levelized system average electric rate (*i.e.*, a Rate Impact Measure or RIM methodology). The resource plan presented in FPL's 2019 TYSP was developed by first determining FPL's most cost-effective supply-only resource plan, which was then compared to a resource plan which included cost-effective Demand Side Management (DSM). The resource plan which included the cost-effective DSM is the plan that results in the lowest electric rates for FPL's customers, and it is presented in the 2019 TYSP.

QUESTION:

Please refer to FPL's responses to Staff's First Set of Interrogatories, No. 99(b)(ii). For the No ST Plan, please answer the following questions regarding the resource plan.

- a. For 2020, explain the inclusion of 300 MW of batteries that results in excess capacity above FPL's 20 percent reserve margin requirement of 108 MW. As part of this response, explain whether FPL considered a potential short term PPA or other resource in that year.
- b. For 2021, explain the inclusion of 300 MW of batteries that results in excess capacity above FPL's 20 percent reserve margin requirement of 168 MW. As part of this response, explain whether FPL considered a potential short term PPA or other resource in that year.
- c. For 2022, explain the inclusion of a 704 MW Greenfield CT Unit that results in excess capacity above FPL's 20 percent reserve margin requirement of 724 MW. As part of this response, explain whether FPL considered a potential short term PPA or other resource in that year.
- d. For 2024, explain the inclusion of a 1,886 MW Greenfield CC Unit that results in excess capacity above FPL's 20 percent reserve margin requirement of 1,796 MW. As part of this response, explain whether FPL considered a potential short term PPA or other resource in that year.

RESPONSE:

- a. FPL did not consider short term PPAs as options in the resource planning analysis of FPL's SolarTogether program as the use of PPAs was not necessary with the emergence of batteries as cost-effective options that can be deployed relatively quickly. This approach was taken with both the SolarTogether and No ST Resource plans. See FPL's response to OPC's Sixth Set of Interrogatories No. 29.
- b. Please see response to subpart (a).
- c. and d. The combustion turbines and combined cycle additions were selected as the most economic options available in constructing a resource plan for the 2019-2050 period by FPL's EGEAS optimization model. Please see FPL's amended response to Staff's Interrogatory No. 198 (f).

QUESTION:

Please refer to FPL's responses to Staff's First Set of Interrogatories, No. 99(b)(ii). Please explain why the Filler Units selected are approximately half the prior Greenfield CC Units, and provide the economic resource data requested in the original interrogatory. As part of your explanation, detail whether the financial assumptions for these units were included in the model.

RESPONSE:

In all its resource planning work, FPL prefers to use a filler unit which is smaller in size than a full 3x1 combined cycle unit, as it is FPL's experience that smaller units are better suited for this purpose. Smaller filler units reduce the impact of changing the timing of filler units in the economics of the decisions under consideration. The capital cost of these filler units is based on the \$/kW cost of a 3x1 green-field combined cycle unit. The cost and performance information for these filler units was included in the analysis. Please see Attachment No. 1 to this Interrogatory for the economic resource data for the filler unit requested.

QUESTION:

Please refer to FPL's response to Staff's Interrogatories, No. 75 and 99.

- a. Please explain how batteries were modeled as a resource option and what assumptions were made for unit dispatch and/or savings, such as the efficiency of the battery storage.
- b. Provide the assumed annual benefits from the batteries installed for the period 2020 through 2051, in nominal and net present value.
- c. Provide the annual fixed cost and, if any, variable costs, associated with each of the batteries for the period 2020 through 2051, by category (capital, O&M, VO&M), in nominal and net present value.
- d. Explain the long term capital replenishment value provided for each battery, including how it was calculated and how it effects the fixed costs.
- e. Explain how each of the projected unit financial data figures for the batteries were determined, including the 40-year book life, total installed cost, etc.
- f. Explain the selection of batteries over traditional peaking units such as a natural gas-fired combustion turbines. As part of this discussion, provide a levelized cost of electricity analysis comparing a similarly sized combustion turbine and a battery unit, at various capacity factors for the combustion turbine, ranging from 0 percent to 50 percent capacity factor, in 5 percent increments.

RESPONSE:

- a. Batteries were included as a potential resource option in both the EGEAS resource plan optimization model and the UPLAN production costing model. In both models, the parameters used to model the dispatch of the batteries were: capacity (MW) energy storage capacity (MWh) and energy conversion efficiency. The models dispatched the battery based on these parameters whenever it was economic to do so within the generation dispatch. Please see response to (f), below.
- b. The modeling did not isolate the individual benefits of the batteries. EGEAS selected batteries as part of the most economic resource plans for both the SolarTogether and No SolarTogether cases, and their dispatch was modeled as described in (a) above. To identify the benefits of the batteries, FPL would have to develop resource plans without batteries, and this analysis was not performed as it was not deemed to be necessary in order to compare the SolarTogether Plan to the No ST Plan as determining the cost-effectiveness of batteries was not the purpose of the analysis.

- c. See Attachment 1 to this Interrogatory.
- d. When evaluating batteries as potential generation options for its resource plan, FPL developed a projection of initial on-going capital and O&M costs required to keep the battery operating at its nameplate rating over a forty-year operating life. While the book life of batteries is set at 10 years, the operating time frame of 40 years was chosen because batteries have to compete against combined cycle and combustion turbines that have a book life of 40 years and solar units that have a book life of 30 years.

The on-going costs for a battery consist of the following three components: annual O&M, annual capital expenditures and capital replenishment costs. The O&M expenses are the annual expenses associated with maintaining the batteries, consisting primarily of payroll, preventive and corrective maintenance of all equipment, such as, inverters, medium and high voltage and balance of plant. Annual capital costs are equipment costs associated with replacing inverters and battery thermal management system (HVAC). Capital replenishment costs consist primarily of battery cell replacements which are expected to take place on annual basis for the 40 year operating period. These annual expenditures ensure that the performance of the battery is maintained at the original level of performance.

- e. The financial information for the batteries is shown in Attachment 2. The capital and O&M costs for the batteries were developed by FPL's Engineering and Construction and Power Generation Divisions. The book life (10 years) is based on FPL's current Depreciation Study.
- f. Both combustion turbines and batteries were provided as potential generation options into the EGEAS optimization model. Batteries have some advantages over combustion turbines in that they can be built faster, and can be built in smaller increments and may therefore be chosen by the optimization model as part of the most cost-effective resource plan. The model selected the most economic mix and timing of resources for both the SolarTogether and No SolarTogether Plans.

FPL does not believe that a levelized cost of electricity comparison, also known as a screening curve analysis, is the proper way to compare resource options, as this approach ignores the system impact of these resources. As requested, FPL computed a table with the comparison requested (see below). The costs of the combustion turbines is based on a set of 2 combustion turbines, which is the smallest size for which FPL has cost estimates, prorated to 200 MW.

Battery

Capacity Factor	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%
Total cost levelized (millions)	13	13	13	14	14	14	15	15	15	15
levelized cost \$/MWh	1,767	903	615	471	385	327	286	255	231	212

Combustion Turbine

Capacity Factor	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%
Total cost levelized (millions)	21	25	29	33	38	42	46	50	54	58
levelized cost \$/MWh	244	145	112	96	86	79	74	71	68	66

Battery Data

Capacity	200	MW
Duration	2	
Energy capacity	400	MWh
Conversion loss rate	14%	
In-service year	2022	

Combustion Turbine

Capacity	200	MW
Heat rate	9944	btu/kWh
VOM year 1	0.08	\$/MWh
VOM escalation	0.025	
In-service year	2022	

DECLARATION

I sponsored the answers to Interrogatory Nos. 177-181, 190-198 and Co-Sponsored No. 173 from Staff's Second Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.

Juan Enjamio

Date: _____

DECLARATION

I sponsored the answers to Interrogatory Nos. 182-183, and Co-Sponsored 170 and 184 from Staff's Second Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



Scott Bores


Date: _____

8/22/2019

DECLARATION

I sponsored the answers to Interrogatory Nos. 174-175 from Staff's Second Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.


William F. Brannen

Date: 8/23/2019

DECLARATION

I sponsored the answers to Interrogatory Nos. 160-169, 171-172, 176, 185-189, and Co-Sponsored 170, 173, and 184 from Staff's Second Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.

Matthew Valle

Date: _____

FPL's Response to Staff's Third Set of Interrogatories Nos.
200, 203, 205-206.

**Additional files contained on Staff Hearing Exhibits
CD/USB for No. 205)**

(Amended No. 206)

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 40
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Bores (203)*Enjamio (200,
205-206)

QUESTION:

Please identify all existing and proposed environmental regulations of CO₂ emissions from electric utility power plants as of July 1, 2019, that FPL believes will cause the Company to incur CO₂ emission compliance costs during the next 10 years.

RESPONSE:

There are existing regulations on CO₂ emissions from electric plants, described below, which impose minor costs on FPL. FPL is unaware of any existing or currently proposed environmental regulations of CO₂ emissions which will cause the Company to incur significant CO₂ emission compliance costs during the next 10 years. However, FPL believes that there is a high probability of future federal legislation resulting in significant future CO₂ compliance costs. FPL has adopted ICF's forecast for such future CO₂ compliance costs. A description of the ICF forecast, including the assumed probabilities, can be found in the responses to Staff's First Set of Interrogatories Nos. 30 and 96.

On June 19, 2019, EPA Administrator Andrew Wheeler signed a final rule entitled *Repeal of the Clean Power Plan; Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guidelines Implementing Regulations*. The rule is informally referred to as the Affordable Clean Energy (ACE) Rule. The ACE Rule contains three distinct actions: 1. Repeal of the Clean Power Plan (CPP); 2. Replacement of the CPP with the ACE Rule; 3) Revised 111(d) Implementing Regulations. Under EPA's ACE Rule, designated affected units under the rule were limited to electric utility steam generating units that burned coal more than 10% of their average annual heat input. The rule also exempted new units, units with stationary combustion turbines, and other units including non-fossil units. In the final rule, EPA identified that the applicable "Best System of Emission Reduction (BSER) was limited to changes that could be made on coal fired units to decrease GHG emissions by improving efficiency. The rule requires that States promulgate new rules to implement the ACE Rule requirements and submit State Implementation Plans that identify performance requirements for each affected coal-fired unit based on implementation of candidate technologies. In the development of the state's rule identifying applicable technologies for sources, the state may consider the remaining useful life of a unit in determining the standard of performance. EPA has proposed that States file their plans within 3 years and allow sources up to 24 months to comply with State rules which would require compliance by sources no later than 2024.

For FPL, the ACE Rule requires that its affected units, Indiantown Cogeneration and Scherer Unit 4, demonstrate compliance with applicable State plans by the 2024 deadline. FPL has determined that the Indiantown Cogeneration facility will not be required to comply with the rule since it will be retired prior to the compliance deadline. FPL anticipates that the Georgia EPD will initiate rulemaking to identify targets for affected sources and file a State Implementation Plan with the EPA identifying the candidate technologies applicable to each coal-fired unit in the state of Georgia that will include Scherer Unit 4. FPL has reviewed the list of target candidate technologies and has determined that previous performance improvements made to Scherer Unit 4 demonstrate compliance with the GHG reductions required under the rule. FPL anticipates that Scherer Unit 4 will not be required to implement further facility or operating modifications to

comply with rule requirements and instead implement the rule monitoring requirements which are anticipated to have minimal or no additional cost for compliance.

QUESTION:

Please refer to witness Bores' direct testimony, page 4, line 11 through 14, page 4, line 21 through page 5, line 4, and page 6, line 6 through 9. Please reconcile your statements that 96.4 percent of the total base revenue requirements (\$1.849 billion) and 96.4 percent of net base revenue requirements (\$1.370 billion) are allocated to participants.

RESPONSE:

The CPVRR of \$1.370 billion is calculated by subtracting the avoided generation savings of \$0.479 billion from the total base revenue requirements of \$1.849 billion. Participants contribute 96.4% (\$1.321 billion) of the \$1.370 billion. Whether the 96.4% is multiplied by each item separately or a net amount (*i.e.*, \$1.370 billion), participants contribute \$1.321 billion.

(\$ millions)	CPVRR	Participant Allocation	
		%	\$
<u>Base Revenue Requirements</u>			
FPL SolarTogether Capital, O&M	\$1,837.8	x 96.43%	= \$1,772.2
Program Administrative Costs	<u>\$11.5</u>	x 96.43%	= <u>\$11.1</u>
Total SolarTogether Costs	1,849.2	x 96.43%	= 1,783.2
System Impacts (Avoided Generation Capital, O&M)	<u>(479.0)</u>	x 96.43%	= <u>(461.9)</u>
Total Base RevReq's (fav) unfav	\$1,370.2	x 96.43%	= \$1,321.3
Participant % Allocation of Base RevReq's	x 96.43%		
Participant \$ Allocation of Base RevReq's	<u>= \$1,321.3</u>		

QUESTION:

1. ("ROG A") Please refer to FPL's 2019 TYSP. Please answer the following questions, providing electronic copies (in Excel format) of tables or charts:

a. Please provide the resource plans based on FPL's 2019 TYSP for the full Program period (2019 through 2051). As part of this response, please provide annual reserve margin data similar to Schedule 7 of the Ten-Year Site Plan, and for each unit identified in the resource plans please provide information similar to Schedule 9 of the Ten-Year Site Plan.

b. Please complete the table below for each scenario for each sensitivity, and the difference between the 2019 TYSP and FPL's proposed SolarTogether Plan. Provide the annual revenue requirement of each plan by category. Provide a version of this table in nominal and present value dollars for each scenario.

[Scenario Name] – ([Nominal / NPV] \$ millions)														
Year	SolarTogether				Remainder of System									System Total
	Generation	Transmission	O&M	Total	Generation	Transmission	Fuel	Purchases	Fuel	Transportation	O&M	Emissions (Non-carbon)	Emissions (Carbon-only)	Total
2020														
...														
Total														

c. Complete the table below for each scenario for each fuel and environmental sensitivity. Provide the annual and total value for the net system savings between the 2019 TYSP and FPL's proposed SolarTogether Plan, the total SolarTogether Charges, the SolarTogether Credits, and the remaining net system benefits to the general body of ratepayers. Provide a version of this table in nominal and present value dollars.

Net Impacts - [Scenario Name] – ([Nominal / NPV] \$ millions)				
Year	Net System Savings	SolarTogether Charges	SolarTogether Credits	Remaining Net System Savings
2020				
...				
Total				

RESPONSE:

- a. See Attachments 1-3 to this interrogatory.
- b. See Attachment 4 to this interrogatory.
- c. See Attachment 5 to this interrogatory.

QUESTION:

Please refer to FPL's response to Staff's Interrogatory 106.

- a. Provide the total gas transportation expenses annually for the period 2020 through 2051 assumed by the resource plan based on FPL's 2019 TYSP for the full Program period (2019 through 2051) used above in ROG ("ROG A").
- b. Provide the peak summer gas use, in mmcf/day, for the period 2020 through 2051 assumed by the resource plan based on FPL's 2019 TYSP for the full Program period (2019 through 2051) used above in ROG ("ROG A").
- c. Explain how gas transportation expenses were calculated for the 2019 FPL TYSP scenario. As part of this discussion, provide whether there is a minimum purchase amount or long-term contracts are required for firm gas capacity.

RESPONSE:

- a. Please see table below. This table shows total annual costs for firm gas transportation already under contract. It does not include costs for firm gas transport that FPL may contract for in the future.

YEAR	MM\$	YEAR	MM\$
2020	959.1	2036	935.9
2021	987.7	2037	932.2
2022	977.2	2038	931.1
2023	964.2	2039	930.1
2024	964.1	2040	931.5
2025	958.8	2041	927.9
2026	956.1	2042	813.6
2027	953.5	2043	812.3
2028	953.6	2044	812.6
2029	948.2	2045	809.5
2030	945.5	2046	808.5
2031	942.0	2047	807.5
2032	941.6	2048	808.8
2033	937.1	2049	805.5
2034	935.8	2050	804.2
2035	934.7	2051	802.8

- b. See table below for peak summer gas use projected for the resource plan.

Peak Summer Gas Use (MMCF/day)	
	2019 TYSP
2020	2,404
2021	2,398
2022	2,315
2023	2,316
2024	2,340
2025	2,353
2026	2,358
2027	2,377
2028	2,333
2029	2,332
2030	2,286

- c. FPL did not include firm gas transport costs, contracted or future, in the economic analysis for the 2019 Ten Year Resource Plan. FPL's assumption was that, with the large deployment of solar generation in this resource plan, FPL would not incur incremental firm gas transport costs over the costs for firm gas already under contract.

There is no definite minimum amount for incremental, or future, firm gas transport costs. The actual minimum amount of a contract would be subject to negotiations with the gas transport company.

DECLARATION

I sponsored the answers to Interrogatory Nos. 202-203 and co-sponsored No. 204 from Staff's Third Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



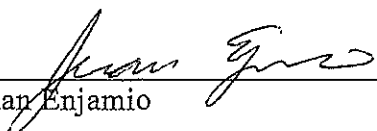
Scott Bores

Date: 8/29/2019

DECLARATION

I sponsored the answers to Interrogatory Nos. 200-201, 205-206, and co-sponsored No. 204 from Staff's Third Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



Juan Enjamio
Date: 8/29/2019

FPL's Response to Staff's Fourth Set of Interrogatories
Nos. 207-208.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 41
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Bores (207)Valle (208)

QUESTION:

Please refer to the Petition at page 3. At the time Phase 1 is complete and is in service, what is the total annual revenue requirement associated with the 1,490 MW Phase 1 SolarTogether program without the accrual of AFUDC.

RESPONSE:

At the time Phase 1 is complete, the total annual revenue requirements associated with the 1,490 MW FPL SolarTogether Program, excluding AFUDC, is \$126.3 million.

QUESTION:

Please refer to FPL's response to Staff's First Set of Interrogatories Nos. 125 and 184. Please explain how the total number of pre-registered meters for customers located in counties with planned SolarTogether Program sites (4,745) exceeds the total number of pre-registered meters for all customers (3,713)?

RESPONSE:

The data provided in FPL's response to Staff's Second Set of Interrogatories No. 184 inadvertently included both demand and non-demand meters. The corrected table below provides demand rate meters only and represents meter count data available as of September 2019.


County	Total Number of FPL Meters	Total Number of Preregistered (Customers)	Total Number of Preregistered (Meters)	Total Subscription Level (MW)	Total Project Capacity (MW _{AC})
Baker	5,511	4	10	9.6	149.0
Brevard	312,596	23	518	275.6	149.0
Charlotte	116,498	8	23	19.8	74.5
Clay	877	1	2	0.0	74.5
DeSoto	16,945	3	13	27.2	149.0
Hendry	10,041	2	4	2.4	74.5
Indian River	75,866	7	16	1.4	74.5
Manatee	188,656	16	155	51.5	74.5
Martin	94,201	11	26	10.0	74.5
Nassau	22,849	5	5	5.1	74.5
Okeechobee	20,050	4	8	1.9	149.0
Palm Beach	746,988	40	789	221.5	74.5
Putnam	19,946	3	3	5.2	74.5
St. Johns	91,352	6	14	3.8	74.5
St. Lucie	129,209	11	39	32.0	74.5
Union	1,630	0	0	0.0	74.5
Subtotal	1,853,215	144	1,625	667.0	1,490.0
All Other	3,151,524				
Grand Total	5,004,739				

Note: Total meter count represents data available as of September 2019

DECLARATION

I sponsored the answer to Interrogatory No. 207 from Staff's Fourth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.




Scott R. Bores

Date: 9/25/2019

DECLARATION

I sponsored the answers to Interrogatory No. 208 from Staff's Fourth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



Matthew Valle

Date: 7.24.19

FPL's Response to Staff's Fifth Set of Interrogatories Nos.
209-210.

**Additional files contained on Staff Hearing Exhibits
CD/USB for No. 210**

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 42
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Bores (209-210)*Enjamio
(210)

QUESTION:

Please refer to FPL's response to Staff's First Set of Interrogatories, No. 59. Please provide the percent of the program revenue requirements FPL intends to recover from participants using:

- a. The total cost of the program that will be included in rate base.
- b. The net cost of the program's facilities.

RESPONSE:

The following table provides the percentage of program revenue requirements recovered from participants utilizing total program costs and net program costs.

CPVRR in \$ millions	Total Program Costs	Net Program Costs
Total Program Costs Included in Rate Base	\$1,803.9	\$1,803.9
System Impacts - Avoided Generation Savings	na	(\$544.6)
Net Revenue Requirements	\$1,803.9	\$1,259.2
Subscription Revenues	\$1,315.5	\$1,315.5
Subscription Revenues as a % of Net Revenue Requirements	72.9%	104.5%

QUESTION:

Please refer to FPL's response to Staff's Second Set of Interrogatories, No. 181, and Staff's Third Set of Interrogatories, No. 204. Please provide (in electronic Excel format) an estimate total annual bill (similar to Interrogatory No. 181) for a residential customer participating in the program with a 5 kW subscription level and a monthly usage of 1,000 kWh.

RESPONSE:

The attachment to this response contains an estimated total annual bill impact for a residential customer with a 5 kW subscription in the program and a monthly usage of 1,000 kWh.

DECLARATION

I sponsored the answer to Interrogatory No. 209 and co-sponsored the answer to Interrogatory No. 210 from Staff's Fifth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



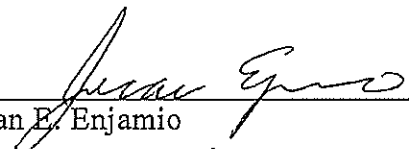
Scott R. Bores

Date: 9/26/2019

DECLARATION

I co-sponsored the answer to Interrogatory No. 210 from Staff's Fifth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



Juan E. Enjamio
Date: 9/26/2019

FPL's Response to Staff's Sixth Set of Interrogatories No.
211.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 43
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: *Enjamio (211)

QUESTION:

Please refer to FPL's response to Staff's Second Set of Interrogatories, No. 190. For the No ST Plan, please answer the following questions regarding the resource plan. If possible, provide justification for unit size and timing beyond referring to the output of FPL's EGEAS optimization model.

- a. For 2020, explain the inclusion of 100 MW of batteries that results in excess capacity above FPL's 20 percent reserve margin requirement of 90 MW. As part of this response, explain whether FPL considered a potential short term PPA or other resource in that year.
- b. For 2021, explain the inclusion of 200 MW of batteries that results in excess capacity above FPL's 20 percent reserve margin requirement of 50 MW. As part of this response, explain whether FPL considered a potential short term PPA or other resource in that year.
- c. For 2022, explain the inclusion of a 469 MW Greenfield CT Unit that results in excess capacity above FPL's 20 percent reserve margin requirement of 371 MW. As part of this response, explain whether FPL considered a potential short term PPA, the inclusion of batteries, or other resource in that year.
- d. For 2023, explain the inclusion of a 469 MW Greenfield CC Unit that results in excess capacity above FPL's 20 percent reserve margin requirement of 476 MW. As part of this response, please explain why this unit was necessary for planning purposes and explain whether FPL considered a potential short term PPA, the inclusion of batteries, or other resource in that year.
- e. For 2025, explain the inclusion of a 1,886 MW Greenfield CC Unit that results in excess capacity above FPL's 20 percent reserve margin requirement of 1,523 MW. As part of this response, explain whether FPL considered a potential short term PPA or other resource in that year.
- f. For 2028, explain the inclusion of a 1,886 MW Greenfield CC Unit that results in excess capacity above FPL's 20 percent reserve margin requirement of 1,817 MW. As part of this response, explain whether FPL considered a potential short term PPA, the inclusion of batteries, or other resource in that year.
- g. Please identify what resource options were made available to FPL's EGEAS optimization model in generating the resource plan. If either short term PPAs or solar photovoltaic facilities were not included in the resource options, please explain why not.

RESPONSE:

a-g. FPL used the following as generation supply options:

- 100 MW batteries – 2-hour duration, available 2020 and after
- 100 MW batteries – 3-hour duration, available 2020 and after
- Sets of 2 combustion turbines (235 MW per turbine) available 2022 and after
- Sets of 3 combustion turbines (235 MW per turbine) available 2022 and after
- 3x1 Greenfield Combined Cycle units (1,886 MW), available 2024 and after

Solar generation was added as a potential resource option only in the development of the resource plan shown in the 2019 Ten Year Site Plan. Solar was not added as resource options in the FPL SolarTogether and 2020 SoBRA resource plans. The nature of all solar generation is that several of its characteristics such as firm capacity, effects on load shape, and reduction in the amount of required firm gas transportation are affected by solar generation projects that are constructed later, with the earlier solar projects having more value. Including future solar projects beyond 2021 would have resulted in understating the benefits of the FPL SolarTogether Program.

The 100 MW battery size was selected as its size was judged to be the best compromise of size and cost (in \$/kW) to meet expected needs.

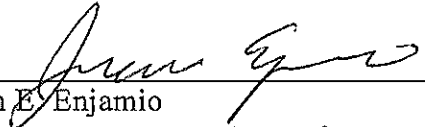
Short term PPAs were not considered as options. In the short-term, *i.e.*, the next two-three years, there is little uncommitted capacity available for a PPA in the state. In the longer term, FPL believes that it has become more speculative to add one-year PPAs as long-term resource options as there is less merchant generation capacity available that has been available in the past.

Using the resource options described above, FPL used its optimization model, EGEAS, to develop the lowest CPVRR for cases, *i.e.*, the No-ST and SolarTogether cases. The objective function of the EGEAS model is to minimize CPVRR subject to meeting the minimum reserve margin requirement. The results of the optimization, type and timing of resources were determined by the model.

DECLARATION

I sponsored the answer to Interrogatory No. 211 from Staff's Sixth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



Juan E. Enjamio
Date: 9/26/2019

FPL's Response to Staff's Seventh Set of Interrogatories
Nos. 212-215, 217-218, 220-221.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 44
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Valle (212-213, 215,
217-218)Bores(214, 217, 220)*Enjamio
(221)Deason(213-214)

QUESTION:

Please refer to witness Deason's Rebuttal testimony, page 22, lines 19-22.

- a. Please discuss how customers have contacted or notified FPL of their desire that their energy needs be met from renewable sources.
- b. Please provide the historical data on the number of FPL's customers, by class, who desire that their energy needs be met from renewable sources.

RESPONSE:

- a. Customers have contacted FPL to discuss their renewable energy needs via various informal modes including phone calls, emails, public meetings, utility conferences, and social media posts. See also FPL's response to Staff's Second Set of Interrogatories No. 166 which provides specifics as it relates to discussion with large customers.
- b. As these discussions have occurred over time by mostly informal means with both commercial and residential customers, FPL does not have this historical information. FPL has provided documentation that does represent customer interest in renewables across all customer types and should be considered. See FPL's responses to Staff's First Set of Interrogatories Nos. 49, 55, 125 and 143 and OPC's Seventh Set of Production of Documents, No. 18, which together document participation levels in net metering, SolarNow and FPL SolarTogether.

QUESTION:

Please refer to witness Deason's Rebuttal testimony, page 22, line 21 through page 23, line 1. Please explain the "other alternatives" customers would seek. Would these customers leave FPL's territory, or install their own solar generation? As part of your response, provide documentation that all participants could or would install their own solar generation.

RESPONSE:

If the FPL SolarTogether program is not approved, those customers who have sought this type of program may indeed look to other alternatives such as:

1. Installing private rooftop or ground mounted net metered solar, which would be subject to net metering rules and requirements. The result of which is a loss of load that shifts cost onto non-net metering customers. See also FPL's response to Staff's First Set of Interrogatories Nos. 59, 131 part B and 169, witness Valle's rebuttal testimony page 9, lines 8-13, and witness Deason's rebuttal testimony page 23, lines 1-6 and Staff's Seventh Set of Interrogatories No. 214.
2. Enroll in SolarNow, though this is unlikely as this program does not offer a path to future bill savings nor is it designed to support the achievement of renewable energy goals
3. Leave the state/service territory for a more favorable location that offers renewable programs that meet their needs. However, it is worth noting that many customers, such as the City, County, Governmental Agencies, and Educational Institutes cannot relocate. Further, as FPL's response to Staff's First Set of Interrogatories No. 148 notes, "FPL developed the program to address a specific customer demand, not to retain customers or load"
4. Select no alternative, and continue to request and push the utility and its regulators to provide solar programs that meet their environmental and financial goals.

FPL will not speculate on what "all participants could or would do" in the absence of the Program, the purpose of identifying that customers may seek other alternatives is to highlight that those alternatives are not without risk or cost burdens, and should be measured with the same diligence applied here.

QUESTION:

Please refer to witness Deason's Rebuttal testimony, page 23, lines 4-6.

- a. How would a loss of load occur?
- b. Does FPL have any studies on the estimated impact to its load if the Commission was to deny its petition? If yes, please provide the results of the study along with any supporting documentation.

RESPONSE:

- a. If customers choose to install private solar facilities to meet their individual needs because no other option exists, the generation supplied by the solar would naturally displace generation they would otherwise have received from FPL. Likewise, some industrial or large commercial customers may choose to curtail operations or move operations to jurisdictions with more meaningful renewable energy options and opportunities, resulting in a loss of load. This loss of load and corresponding loss of revenues and contributions to fixed costs would have a negative impact on the general body of customers.
- b. As FPL stated in the response to Staff's First Set of Interrogatories No. 148, the Program was developed to address a specific customer demand, not to retain load. The only studies FPL has are those provided in OPC's Eighth Production of Documents No. 35, which are the studies used in the 2019 TYSP and which do not contemplate the program. Additionally, in OPC's Seventh Production of Documents No. 19, FPL provided the calculations for witness Valle's rebuttal testimony, noting the annual impact on the general body due to net metering is \$13 million today and if 1.49 GW of FPL SolarTogether capacity were to be installed as net metering instead, that subsidy could grow to \$121 million in 2022 (page 9, lines 10-20).

QUESTION:

Please identify the Order where the Commission made the decision referenced in witness Deason's Rebuttal testimony, page 11, lines 5-7.

- a. Please refer to witness Valle's rebuttal testimony, page 3, lines 8-14. Please describe in detail how the SolarTogether tariff provides "benefits for the general body of customers that might not otherwise exist."
- b. Please refer to witness Valle's rebuttal testimony, page 8, lines 7-12. Please describe in detail how the "primary purpose served by this program, which is to help meet a growing customer demand for more direct involvement in the advancement of solar and to offer customers more choices" is consistent with the statements made on page 12, lines 5-6 of witness Valle's direct testimony which states "[A]lthough their reasons for being interested in community solar varied, a top driver was electric bill savings."

RESPONSE:

Please see Order No. PSC-15-0026-FOF-EI (Docket No. 130223-EI).

- a. See FPL's response to OPC's Eighth Set of Interrogatories No. 35.
- b. Witness Valle's rebuttal testimony on page 8, lines 7-12 speaks to why FPL is offering this program, while in his direct testimony page 12, lines 5-6, he is identifying a driver for why participants are interested in the program, specifically, bill savings, which speaks to the financial motivations of the participants. These statements are consistent in that by designing the program to meet specific customer needs, FPL is able to offer a program that more broadly offers customers the option to be more directly involved in the advancement of solar.

QUESTION:

Please refer to witness Valle's rebuttal testimony, page 11, lines 12-14.

- a. Please describe in detail how the administrative costs associated with the SolarTogether program would be recorded and recovered.
- b. Does FPL still intend to recover costs and record credits as described on page 11 of FPL's petition in this docket?

RESPONSE:

- a. FPL would record all administrative costs needed to implement and monitor the FPL SolarTogether program as base rate recoverable. If fully subscribed, the program participants will cover 104.5% of the base revenue requirements, including administrative costs. If the program is not fully subscribed, then, as described in FPL's response to Staff's First Set of Interrogatories No. 59, at the next base rate review the costs related to any unsubscribed capacity would be requested to be included in FPL's base rates in its next base rate filing.
- b. Yes, FPL still plans to recover the Program's costs through the FPL SolarTogether Charge and record the Program's credits through the FPL SolarTogether Credit as described on page 11 of the petition in this docket.

QUESTION:

Please explain in detail why FPL believes that additional protections for the general body of customers are needed as described on page 12, lines 6-8 of witness Valle's rebuttal testimony.

RESPONSE:

As explained in FPL's response to Staff's First Set of Interrogatories Nos. 59 and 169, the program was designed to allow sharing of system benefits between the participants and the general body of customers; by reserving a portion of the benefits for the general body of customers, the program offers protection from the "unknown potential decline in future fuel prices versus the forecast utilized in the analysis."

Witness Valle's rebuttal testimony on page 12 lines 6-8 is not a statement of FPL's belief that there is a need for additional protections. The updated economic model, which witness Valle outlines in his testimony and witness Bores and Enjamio describe in greater detail, enables a change in the benefit sharing ratio that increases the share of benefits allocated to the general body of customers, creating a greater buffer against the "unknown potential decline in future fuel prices versus the forecast utilized in the analysis," as discussed in Staff's First Set of Interrogatories No. 59 part a and Staff's Second Set of Interrogatories No. 169, enabling additional protections.

QUESTION:

Please confirm that the proposed SolarTogether credits are incremental costs that will be collected from all customers through FPL's fuel cost recovery clause.

RESPONSE:

Per witness Bores's direct testimony, page 9, lines 17-23, the proposed SolarTogether credits will be collected from all customers through FPL's fuel cost recovery clause. As explained in the testimony of FPL witness Yupp filed in Docket 20190001-EI on September 3, 2019, the projected 2020 total system fuel savings associated with the FPL SolarTogether Program are \$18,694,958. These system fuel savings serve as an offset to the Subscription Credit included in the calculation of the 2020 fuel factors.

QUESTION:

Please refer to page 12 of FPL's 2019 Ten-Year Site Plan. Please confirm that the last full paragraph states that the approval of the SolarTogether program would accelerate the construction of solar facilities shown in the Ten-Year Site plan for the years beyond 2020.

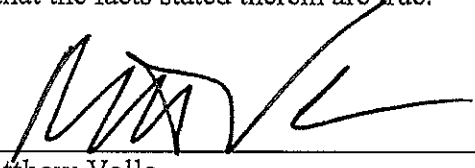
RESPONSE:

The FPL SolarTogether solar capacity replaces the 900 MW of solar nameplate capacity shown in the 2019 TYSP Resource Plan in 2020 and 2021. In addition, it accelerates part of the solar capacity shown in the 2019 TYSP for the years 2022 to 2024.

DECLARATION

I sponsored the answers to Interrogatory Nos. 212, 215-216, and 218 and co-sponsored Nos. 213 and 217 from Staff's Seventh Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



Matthew Valle

Date: 10/11/19

DECLARATION

I sponsored the answers to Interrogatory No. 220 and co-sponsored Nos. 214 and 217 from Staff's Seventh Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



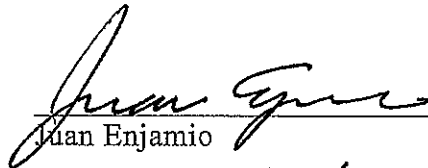
Scott Bores

Date: 10/11/2019

DECLARATION

I sponsored the answer to Interrogatory Nos. 219 and 221 from Staff's Seventh Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



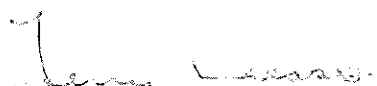
Juan Enjamio

Date: 10/14/2019

DECLARATION

I co-sponsored the answers to Interrogatory Nos. 213-214 from Staff's Seventh Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

~~--- Under penalties of perjury, I declare that I have read the foregoing declaration and~~
the interrogatory answers identified above, and that the facts stated therein are true.



Terry Deason

Date: 10-14-19 _____

FPL's Amended Response to Staff's Eighth Set of Interrogatories Nos. 222-228, 230, 232.

**Additional files contained on Staff Hearing Exhibits
CD/USB for Nos. 224, 226-228**

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 45
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: *Enjamio(222-228, 230,
232)Valle(230, 232)Bores (232)Brannen (232)

QUESTION:

Please refer to witness Enjamio's Rebuttal Testimony, page 5, lines 12-16, page 6, lines 8-10, and page 15, lines 6-9, in addition to FPL's 2019 Ten-Year Site Plan.

- a. Please explain if FPL used the identified cost-effectiveness standard in its development of the resource plan presented in FPL's 2019 Ten-Year Site Plan.
- b. Please explain if the resource plan presented in FPL's 2019 Ten-Year Site Plan meets FPL's reliability requirements.
- c. Please explain how, if at all, FPL limited the resource options available to its EGEAS optimization model in its development of the resource plan presented in FPL's 2019 Ten-Year Site Plan.

RESPONSE:

- a. Yes. The cost-effectiveness standard described in witness Enjamio's rebuttal testimony was the same standard applied in the development of FPL's 2019 Ten-Year Site Plan. While the cost-effectiveness standard was the same, there was a difference in development of the resource plans. Future solar resources (beyond those added in 2020 and 2021 as part of the 2020 SoBRA Project and FPL's SolarTogether Program, respectively) were considered as potential resource options in the development of the resource plans for the FPL SolarTogether Program.
- b. Yes. The resource plan presented in FPL's 2019 Ten Year Site Plan meets all three of FPL's reliability criteria: minimum 20% total reserve margin, minimum 10% generation-only reserve margin, and loss-of-load probability of 0.1 day per year.
- c. In developing its 2019 Ten Year Site Plan, FPL developed a list of the resource options considered to be viable at the time the plan was being developed. This list is shown below:
 - 100 MW batteries – 2-hour duration, available 2020 to 2030
 - 100 MW batteries – 3-hour duration, available 2020 to 2030
 - Sets of 2 combustion turbines (235 MW per turbine) available 2022 to 2030
 - Sets of 3 combustion turbines (235 MW per turbine) available 2022 to 2030
 - 3x1 Greenfield Combined Cycle units (1,886 MW), available 2024 to 2030
 - 745 MW of solar nameplate available in 2020
 - 1200 MW of solar (nameplate) available per year 2021-2030

QUESTION:

Please refer to witness Enjamio's Rebuttal Testimony, page 4, lines 19-21, and page 6, lines 8-10, FPL's 2019 Ten-Year Site Plan, FPL's amended responses to Staff's First Set of Interrogatories, No. 100, and Staff's Second Set of Interrogatories, No. 190, Attachment No. 3, and Exhibit WFB-4.

- a. Please explain what affect, if any, the approval of FPL's SolarTogether Program would have on the cost, construction, and in-service characteristics of the solar sites included in Projects 1 and 2 as compared to those solar sites as presented in FPL's 2019 Ten-Year Site Plan, Schedule 9.
- b. Please explain what affect, the approval of FPL's SolarTogether Program would have on the cost, construction, and in-service characteristics of the solar sites included in Projects 3, 4, and 5, as compared to those solar sites as presented in FPL's 2019 Ten-Year Site Plan, Schedule 9. As part of your response, please reconcile the in-service dates of the solar sites comprising Project 3 as reported in FPL's amended response to Staff's Second Set of Interrogatories, No. 190, Attachment No. 3, (in-service in 2020) and as reported in Exhibit WFB-4 (in-service on 1/1/2021) and the AFUDC amount for each of the solar sites as reported in FPL's amended response to Staff's Second Set of Interrogatories, No. 190, Attachment No. 3, and the removal of AFUDC for Projects 3, 4, and 5.

RESPONSE:

- a. None.
- b. As discussed in FPL's amended response to Staff's First Set of Interrogatories No. 100 and clarified in FPL's response to Staff's Eighth Set of Interrogatories No. 223, FPL has not determined the outcome of Projects 3, 4 and 5 in the event the FPL SolarTogether Program is not approved by the Commission. FPL will reevaluate the amount and timing of additional solar capacity as part of its late 2019/early 2020 integrated resource planning work. As such, FPL cannot opine on difference in the cost, construction, and in-service characteristics, including AFUDC, of the projects if built for FPL SolarTogether or otherwise. The results of those analyses will be accounted for in FPL's 2020 Ten-Year Site Plan filing. In response to Staff's request for clarification on the in-service dates of Projects 3, 4 and 5, please see witness Brannen's direct testimony on page 5, lines 9 through 12.

QUESTION:

Please refer to witness Enjamio's Rebuttal Testimony, Exhibit JE-7. Please provide a version of this exhibit showing annual data in Microsoft Excel format.

RESPONSE:

Please see Attachment 1 to this response.

QUESTION:

Please refer to witness Enjamio's Rebuttal Testimony, Exhibit JE-6, and FPL's response to Staff's Third Set of Interrogatories, No. 205, Attachment No. 1.

- a. Please explain the purpose of FPL's use of an equalizing unit in its cost-effectiveness analyses, and whether FPL uses an equalizing unit in all of its cost-effectiveness analyses.
- b. Please describe what criteria is used to determine the timing of an equalizing unit in FPL's cost-effectiveness analyses. As part of your response, explain if FPL applies the criteria in the same manner to all cost-effectiveness analyses in which FPL uses an equalizing unit.
- c. Please explain why FPL used equalizing units in different years (2031 vs 2034) between the scenarios.

RESPONSE:

- a. FPL's extensive resource planning experience has revealed that changes in resource plans late in the analysis period could unduly impact the process of determining the most cost-effective resource plan. To reduce this effect, FPL started to use the concept of the equalizing filler unit so that all resource plans under consideration are equal after the year when the equalizing filler unit is projected to be in-service. The use of an equalizing filler unit is now typically used in FPL's resource planning work.
- b. To enable a fair comparison, the year of the equalizing filler unit must be the same for all of competing resource plans for a given decision. The determination of the year for the equalizing filler unit can change for different analyses. Two considerations are used in making this determination: (1) the year of the equalizing filler unit should be soon after the tenth year of the analysis and, (2) it should be the earliest year for which all the resource plans under consideration in a specific analysis have a positive need for resources. (However, the year of the equalizing filler can vary from one analysis to another, but is held constant for all resource plans in a given analysis.) This same process is applied to all of FPL's resource planning analyses.
- c. FPL is assuming that the two scenarios referred to in this question are the resource plans for the FPL SolarTogether program and the 2019 Ten Year Site Plan.

When developing the resource plans for the 2019 Ten Year Site Plan, FPL determined that the first year, after 2030, in which the equalizing filler unit could be set was 2034 (i.e., the first year after 2030 where there would be a positive need for capacity in the resource plans under consideration).

In developing the resource plan for the FPL SolarTogether program, FPL determined that the first year in which the equalizing filler could be set would be 2031 (i.e., there was a need for capacity in 2031 under both resource plans under consideration).

In addition, please refer to FPL's response to part (b) of this question.

QUESTION:

Please refer to witness Enjamio's Rebuttal Testimony, Exhibit JE-7 and FPL's response to Staff's First Set of Interrogatories, No. 106.

- a. Please provide step-by-step calculations, in Excel with formulas intact, describing how FPL determined the 105 MMCF/day incremental firm gas transportation credit, and how that credit was used to determine the annual incremental gas transportation savings credited to the FPL SolarTogether Program for the period 2019-2051.
- b. Please explain if FPL used a solar facility's firm or non-firm capacity contribution to peak to determine the firm gas transportation credit. If the non-firm capacity contribution was used, please explain why.
- c. Please explain if FPL applies this calculation methodology to determine incremental gas transmission credits for all of its solar generation additions in all of its cost-effectiveness analyses.

RESPONSE:

- a. Please see Attachments 1, 2, and 3 to this response. Also please see the response to Staff's First Set of Interrogatories No. 106.
- b. In the determination of the firm gas transport credit, FPL did not use either the firm capacity value or the nameplate rating (non-firm capacity) of the solar projects. Instead, FPL used the projected total daily generation for the solar projects for the peak load day in the month of August. This is equivalent to using the average value for the hours the solar facility is generating, FPL used this daily solar generation amount since gas transportation is contracted on a daily basis, not hourly.

As a practical matter, there is a small difference between using the firm capacity value instead of the daily generation value. As an example, the firm capacity value for the Sweetbay site is 42.8% (see Attachment 1). This firm capacity value is based on the expected output in hour 17 and is expressed as a percentage of the nameplate rating. The average hourly value (also expressed as a percentage of the nameplate rating) for Sweetbay is 44.2%. If FPL had used the firm capacity value it would basically have applied a 42.8% value instead of a 44.2% value to the gas computation, which would have resulted in a slightly lower firm gas transport credit.

- c. FPL has computed firm gas transmission savings (credits) in its solar cost-effectiveness analyses for the 2017, 2018, 2019 and 2020 Solar Base Rate Adjustments projects and the FPL SolarTogether Program. FPL has used the same approach in every analysis where the solar project was an alternative to a non-solar generation resource.

QUESTION:

Please refer to FPL's response to Staff's Third Set of Interrogatories, No. 205, Attachment No. 1, and Attachment No. 4, tab titled "Mid Fuel – Mid CO2."

- a. Please provide step-by-step calculations, in Excel with formulas intact, describing how FPL determined the amount of incremental firm gas transportation avoided, and how that credit was used to determine the annual incremental gas transportation savings credited to the FPL's 2019 TYSP Plan for the period 2019-2051.

RESPONSE:

- a. During the 2019 Ten Year Site Plan (TYSP) analysis process, FPL did not separately calculate the firm gas transport savings (credit) associated with the solar generation because all of the most economic (cost-effective) plans had large amounts of solar added in the 10-year reporting window addressed in the 2019 TYSP. As a consequence of these large amounts of solar, none of these plans were projected to need additional firm gas transportation, and this fact was automatically captured in the projected CPVRR costs for these plans. Costs previously committed to gas transportation were considered to be sunk costs and were not included in the analysis.

Therefore, when responding to Staff's Third Set of Interrogatory No. 205 which requested a comparison of the CPVRR and rate impact of the 2019 TYSP resource plan to the CPVRR and rate impacts of the No ST and SolarTogether resource plans, FPL realized that not including firm gas transportation credits for the 2019 TYSP case would result in a mismatch or invalid comparison. FPL therefore computed a firm gas transportation credit inherent in the 2019 TYSP resource plan to use only for purposes of the comparison for Interrogatory No. 205.

The computation provided in Excel is shown in Attachments 1 and 2 included with this response.

QUESTION:

Please refer to witness Enjamio's Rebuttal Testimony, Exhibit JE-6 and FPL's 2019 TYSP. Please provide the annual amount of natural gas peak summer usage, firm natural gas transportation capacity subscribed, and the difference between them for the company in MMCF/day for the period 2019-2051 for each of the scenarios below. As part of this response, please complete the attached table.

- a. The No ST Plan
- b. The FPL SolarTogether Plan
- c. FPL's 2019 Ten-Year Site Plan

[Scenario]			
Year	Peak Summer Gas Use (MMCF/day)	Subscribed Firm Gas Transportation Capacity (MMCF/day)	Difference / (Need)
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
2027			
2028			
2029			
2030			
2031			
2032			
2033			
2034			
2035			
2036			
2037			
2038			
2039			
2040			
2041			
2042			
2043			
2044			
2045			
2046			
2047			
2048			
2049			
2050			
2051			

RESPONSE:

Please see Attachment 1 to this response.

QUESTION:

Please refer to witness Enjamio's Rebuttal Testimony, Exhibit JE-6, and FPL's response to Staff's Third Set of Interrogatories, No. 205, Attachment No. 1.

- a. Please explain if Exhibit JE-6 shows an acceleration of solar generation additions onto FPL's system due to the FPL SolarTogether Program as compared against FPL's 2019 Ten-Year Site Plan.
- b. Please identify the name and original and accelerated in-service dates for each solar generation addition accelerated by FPL's SolarTogether Program.
- c. Please provide an annual comparison of solar generation additions for the No ST Plan, the FPL SolarTogether Plan, and FPL's 2019 Ten-Year Site Plan for the period 2019-2030.

RESPONSE:

As shown in the table below, FPL's SolarTogether Program results in the acceleration of solar generation when compared to the resource plan in FPL's 2019 Ten-Year Site Plan.

- a. FPL did assign sites to the solar additions shown in FPL's 2019 Ten-Year Site Plan, as documented on pages 191-200. The commercial operation dates are reflective of the accelerated schedule for SolarTogether Projects 1 and 2.
- b. See table below:

Solar Generation Additions by Resource Plan (MW nameplate)			
	No ST Plan	Solar Together Plan	2019 Ten Year Site Plan
2019	298	298	298
2020	298	745	745
2021	--	1,043	447
2022	--	--	894
2023	--	--	894
2024	--	--	745
2025	--	--	1043
2026	--	--	--
2027	--	--	894
2028	--	--	1192
2029	--	--	1192
2030	--	--	1192

QUESTION:

Please refer to FPL's response to Staff's Request for Production of Documents, No. 18. Please identify within FPL's organizational chart each of FPL's witnesses in this docket.

RESPONSE:

Please see below for an organizational reporting hierarchy of FPL's witnesses.

- **Matthew Valle** (Vice President, Development, FPL) → reports to President and Chief Executive Officer, FPL
- **William Brannen** (Senior Director for Project Engineering and Due Diligence, NextEra Energy Resources, LLC ("NEER")) → reports to Vice President, Engineering & Construction, NEE → reports to Executive Vice President, Engineering, Construction and Integrated Supply Chain, NEE → reports to Chairman, President and Chief Executive Officer, NEE
- **Juan Enjamio** (Manager of Analytics, FPL) → reports to Director, Integrated Resource Planning, FPL → reports to Vice President, Finance, FPL → reports to President and Chief Executive Officer, FPL
- **Scott Bores** (Senior Director of Financial Planning and Analysis, FPL) → reports to Vice President, Finance, FPL → reports to President and Chief Executive Officer, FPL

DECLARATION

I co-sponsored the answer to Interrogatory No. 232 from Staff's Eighth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.

A handwritten signature in black ink, appearing to read 'Scott Beres', written over a horizontal line.

Scott Beres

Date: 10/22/2019

DECLARATION

I co-sponsored the answers to Interrogatory Nos. 231 - 232 from Staff's Eighth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.

William F. Brannen

Date: _____

DECLARATION

I co-sponsored the answers to Interrogatory Nos. 230-232 from Staff's Eighth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



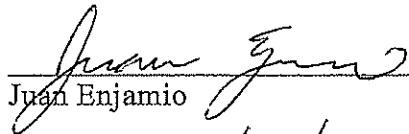
Matt Valle

Date: 10/23/19

DECLARATION

I sponsored the answers to Interrogatory Nos. 222-229, and co-sponsored Nos. 230-232 from Staff's Eighth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



Juan Enjamio
Date: 10/24/2019

FPL's Response to Staff's Ninth Set of Interrogatories
Nos. 233-240.

**Additional files contained on Staff Hearing Exhibits
CD/USB for Nos. 233-236, 238, 240**

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 46
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Bores(233-234,
237)*Enjamio(233,235-236,
238)Valle(239-240)

QUESTION:

Please refer to FPL's amended response to Staff's First Set of Interrogatories, Nos. 78 and 79. Please provide amended responses to the following questions dependent upon those or which also referenced paragraph 21 and 22 of the original Petition.

- a. Staff's First Set of Interrogatories, No. 28
- b. Staff's First Set of Interrogatories, No. 75
- c. Staff's First Set of Interrogatories, No. 106
- d. Staff's First Set of Interrogatories, No. 110
- e. Staff's First Set of Interrogatories, No. 113
- f. Staff's First Set of Interrogatories, No. 114
- g. Staff's Second Set of Interrogatories, No. 197
- h. Staff's Third Set of Interrogatories, No. 204

RESPONSE (subpart a):

See Attachment Nos. 1-2 for FPL's amended response to Staff's First Set of Interrogatories, No. 28, which asked:

Please provide the annual and cumulative values over the period 2020 through 2051 (in nominal and net present value), separated by type (CO₂, NO_x, SO₂, etc.), and in total for the following:

- A. Avoided air emissions resulting from FPL's solar generating units that comprise FPL's SolarTogether program, and show how each was calculated using the year 2022 as an example. Please present response in electronic (Excel) format.
- B. Air Emission Savings resulting from FPL's solar generating units that comprise FPL's SolarTogether program, and explain fully how the saving amounts were derived. Please present response in electronic (Excel) format.

QUESTION:

Please refer to FPL's amended response to Staff's First Set of Interrogatories, Nos. 78 and 79. Please provide amended responses to the following questions dependent upon those or which also referenced paragraph 21 and 22 of the original Petition.

- a. Staff's First Set of Interrogatories, No. 28
- b. Staff's First Set of Interrogatories, No. 75
- c. Staff's First Set of Interrogatories, No. 106
- d. Staff's First Set of Interrogatories, No. 110
- e. Staff's First Set of Interrogatories, No. 113
- f. Staff's First Set of Interrogatories, No. 114
- g. Staff's Second Set of Interrogatories, No. 197
- h. Staff's Third Set of Interrogatories, No. 204

RESPONSE (subpart b):

See Attachment Nos. 1-3 for FPL's amended response to Staff's First Set of Interrogatories, No. 75, which asked:

Please refer to paragraph 21 of the Petition. Please provide the resource plans for each of the Plans discussed. As part of this response, please provide annual reserve margin data similar to Schedule 7 of the Ten-Year Site Plan, and for each unit identified in the resource plans please provide information similar to Schedule 9 of the Ten-Year Site Plan.

QUESTION:

Please refer to FPL's amended response to Staff's First Set of Interrogatories, Nos. 78 and 79. Please provide amended responses to the following questions dependent upon those or which also referenced paragraph 21 and 22 of the original Petition.

- a. Staff's First Set of Interrogatories, No. 28
- b. Staff's First Set of Interrogatories, No. 75
- c. Staff's First Set of Interrogatories, No. 106
- d. Staff's First Set of Interrogatories, No. 110
- e. Staff's First Set of Interrogatories, No. 113
- f. Staff's First Set of Interrogatories, No. 114
- g. Staff's Second Set of Interrogatories, No. 197
- h. Staff's Third Set of Interrogatories, No. 204

RESPONSE (subpart c):

See Attachment No. 1 for FPL's amended response to Staff's First Set of Interrogatories, No. 106, which asked:

Please refer to FPL's response to Staff's First Data Request, No. 78. Please detail how the gas transportation costs were determined. As part of this response, please provide the annual amount of subscribed firm gas transportation capacity for the company in MCF/d for both the No ST Plan and the SolarTogether Plan.

QUESTION:

Please refer to FPL's amended response to Staff's First Set of Interrogatories, Nos. 78 and 79. Please provide amended responses to the following questions dependent upon those or which also referenced paragraph 21 and 22 of the original Petition.

- a. Staff's First Set of Interrogatories, No. 28
- b. Staff's First Set of Interrogatories, No. 75
- c. Staff's First Set of Interrogatories, No. 106
- d. Staff's First Set of Interrogatories, No. 110
- e. Staff's First Set of Interrogatories, No. 113
- f. Staff's First Set of Interrogatories, No. 114
- g. Staff's Second Set of Interrogatories, No. 197
- h. Staff's Third Set of Interrogatories, No. 204

RESPONSE (subpart d):

Below is FPL's amended response to Staff's First Set of Interrogatories, No. 110, which asked:

Please refer to FPL's response to Staff's First Data Request, No. 79.

- a. Please provide the payback period (using cumulative net present value) for each scenario for non-participants.
- b. Please provide the payback period (using cumulative net present value) for each scenario for participants.

The following table includes the non-participant and participant payback period utilizing cumulative net present value.

Fuel Cost Forecast	Environmental Compliance Cost Forecast	Net System Savings (Millions)	SolarTogether Charges (Millions)	SolarTogether Credits (Millions)	Remaining Net System Savings (Millions)	Payback Period (in Years) Utilizing Cumulative NPV ⁽¹⁾	
						Non-Participant	Participant
High Fuel Cost	Low CO2	(\$323)	(\$1,315)	\$1,452	(\$186)	20	8
High Fuel Cost	Mid CO2	(\$414)	(\$1,315)	\$1,452	(\$277)	19	8
High Fuel Cost	High CO2	(\$563)	(\$1,315)	\$1,452	(\$427)	17	8
Mid Fuel Cost	Low CO2	(\$159)	(\$1,315)	\$1,452	(\$22)	30	8
Mid Fuel Cost	Mid CO2	(\$249)	(\$1,315)	\$1,452	(\$112)	26	8
Mid Fuel Cost	High CO2	(\$401)	(\$1,315)	\$1,452	(\$265)	22	8
Low Fuel Cost	Low CO2	\$8	(\$1,315)	\$1,452	\$145	NA	8
Low Fuel Cost	Mid CO2	(\$82)	(\$1,315)	\$1,452	\$54	NA	8
Low Fuel Cost	High CO2	(\$232)	(\$1,315)	\$1,452	(\$96)	27	8

1) Calculated at FPL's weighted average cost of capital of 7.73%. For non-participants, the Cumulative NPV is the same as the Cumulative Present Value of Revenue Requirements.

QUESTION:

Please refer to FPL's amended response to Staff's First Set of Interrogatories, Nos. 78 and 79. Please provide amended responses to the following questions dependent upon those or which also referenced paragraph 21 and 22 of the original Petition.

- a. Staff's First Set of Interrogatories, No. 28
- b. Staff's First Set of Interrogatories, No. 75
- c. Staff's First Set of Interrogatories, No. 106
- d. Staff's First Set of Interrogatories, No. 110
- e. Staff's First Set of Interrogatories, No. 113
- f. Staff's First Set of Interrogatories, No. 114
- g. Staff's Second Set of Interrogatories, No. 197
- h. Staff's Third Set of Interrogatories, No. 204

RESPONSE (subpart e):

See Attachment No. 1 for FPL's amended response to Staff's First Set of Interrogatories, No. 113, which asked:

Please refer to FPL's response to Staff's First Data Request, No. 79 and 84. Please verify that non-participants only experience positive remaining net system savings on a cumulative net present value basis in the Mid-Fuel & Mid-CO2 scenario in year 30 (2049). If that is not correct, please provide the proper value and explain how it was derived.

QUESTION:

Please refer to FPL's amended response to Staff's First Set of Interrogatories, Nos. 78 and 79. Please provide amended responses to the following questions dependent upon those or which also referenced paragraph 21 and 22 of the original Petition.

- a. Staff's First Set of Interrogatories, No. 28
- b. Staff's First Set of Interrogatories, No. 75
- c. Staff's First Set of Interrogatories, No. 106
- d. Staff's First Set of Interrogatories, No. 110
- e. Staff's First Set of Interrogatories, No. 113
- f. Staff's First Set of Interrogatories, No. 114
- g. Staff's Second Set of Interrogatories, No. 197
- h. Staff's Third Set of Interrogatories, No. 204

RESPONSE (subpart f):

See Attachment Nos. 1-2 for FPL's amended response to Staff's First Set of Interrogatories, No. 114, which asked:

Please refer to FPL's response to Staff's First Data Request, Nos. 78 and 79.

- a. For each scenario, please provide an estimate of annual customer bills for a residential customer using 1,000 kWh/mo (in nominal and real values) excluding the proposed SolarTogether Charges and Credits.
- b. For each scenario, please provide an estimate of annual customer bills for a residential customer using 1,000 kWh/mo (in nominal and real values) including the proposed SolarTogether Charges and Credits.

QUESTION:

Please refer to FPL's amended response to Staff's First Set of Interrogatories, Nos. 78 and 79. Please provide amended responses to the following questions dependent upon those or which also referenced paragraph 21 and 22 of the original Petition.

- a. Staff's First Set of Interrogatories, No. 28
- b. Staff's First Set of Interrogatories, No. 75
- c. Staff's First Set of Interrogatories, No. 106
- d. Staff's First Set of Interrogatories, No. 110
- e. Staff's First Set of Interrogatories, No. 113
- f. Staff's First Set of Interrogatories, No. 114
- g. Staff's Second Set of Interrogatories, No. 197
- h. Staff's Third Set of Interrogatories, No. 204

RESPONSE (subpart g):

Below is FPL's amended response to Staff's Second Set of Interrogatories, No. 197, which asked:

Please refer to FPL's response to Staff's Interrogatory 106.

- a. Provide the total gas transportation expenses annually for the period 2020 through 2051 for both the No ST Plan and the SolarTogether Plan.
 - b. Provide the peak summer gas use, in mmcf/day, for the period 2020 through 2051 for both the No ST Plan and the SolarTogether Plan.
 - c. Explain how gas transportation expenses were calculated for this docket. As part of this discussion, provide whether there is a minimum purchase amount or long-term contracts are required for firm gas capacity.
 - d. Explain why, if the SolarTogether Plan avoids an incremental firm gas transport of 105 mmcf/day, there are no additional incremental firm gas transportation expenses after 2029, when the annual need exceeds 107 mmcf/day above current firm gas capacity under contract.
- a. FPL did not include total firm gas transport costs in the economic analysis for either the No ST Plan or the FPL SolarTogether Plan. Instead, FPL calculated the reduction in future gas transport costs that would result from the solar generation added through FPL SolarTogether and included this reduction in costs as a credit to the FPL SolarTogether Plan.

b. See table below:

Peak Summer Gas Use (MMCF/day)		
	No ST Case	Case
2020	2,426	2,391
2021	2,460	2,341
2022	2,408	2,291
2023	2,457	2,341
2024	2,538	2,423
2025	2,528	2,414
2026	2,585	2,471
2027	2,643	2,529
2028	2,609	2,496
2029	2,666	2,554
2030	2,732	2,620

- c. FPL first determined the amount of incremental firm gas transport (over that already under contract) that would be required under the No ST Plan. This is the amount of firm gas transport that would be required above that firm gas contract that is already under contract including 600 million cubic feet per day from the Sabal Trail pipeline. FPL then calculated the reduction in the amount of gas transport due to the addition of solar generation under the FPL SolarTogether Program. The projected costs of future firm gas transport were used to compute the incremental firm gas transport savings. FPL assumed that the minimum amount of gas that could be contracted is 100 MMCF/day on a long-term basis.
- d. The FPL SolarTogether Plan reflects a reduced need for firm gas transport by 105 MMCF/day. Under the No ST Plan, there is a deficit of firm gas transport starting in 2026, so FPL assumed that it would contract for firm gas transport in 2027. While FPL's need for firm gas continues to increase after 2027 reaching a level of 163 MMCF/day by 2030, the FPL SolarTogether Program was credited with a maximum reduction of 105 MMCF/day.

QUESTION:

Please refer to FPL's amended response to Staff's First Set of Interrogatories, Nos. 78 and 79. Please provide amended responses to the following questions dependent upon those or which also referenced paragraph 21 and 22 of the original Petition.

- a. Staff's First Set of Interrogatories, No. 28
- b. Staff's First Set of Interrogatories, No. 75
- c. Staff's First Set of Interrogatories, No. 106
- d. Staff's First Set of Interrogatories, No. 110
- e. Staff's First Set of Interrogatories, No. 113
- f. Staff's First Set of Interrogatories, No. 114
- g. Staff's Second Set of Interrogatories, No. 197
- h. Staff's Third Set of Interrogatories, No. 204

RESPONSE (subpart h):

See Attachment No. 1 for FPL's amended response to Staff's Third Set of Interrogatories, No. 204, which asked:

Please refer to FPL's response to Staff's First Set of Interrogatories, Nos. 79 and 99. For each version of the SolarTogether Plan (with and without DSM), please provide the following (in electronic Excel format): An estimate of annual customer bills for a residential participating customer using 1,000 kWh/mo (in nominal and real values) including the proposed SolarTogether Charges and Credits and the difference between the No ST and SolarTogether plans. For calculation, assume the customer has a 5 kW subscription in Project 1.

QUESTION:

Please refer to FPL's witness Bores rebuttal testimony page 3 lines 1 through 13. Please provide amended responses to the following questions.

- a. Staff's First Set of Interrogatories, No. 83
- b. Staff's First Set of Interrogatories, No. 97
- c. Staff's Second Set of Interrogatories, No. 194

RESPONSE (subpart a):

Below is FPL's amended response to Staff's First Set of Interrogatories, No. 83, which asked:

Please refer to paragraph 24 of the Petition. Provide the amount the Subscription Rate would need to be in order to cover the full revenue requirements of the SolarTogether projects without accounting for avoided generation.

The Subscription Rate required in order to cover the full revenue requirements, excluding the avoided system impact savings of avoided generation, is \$9.23/kW-month.

Subscription Rate With and Without Accounting for Avoided Generation Savings

	Including System Impacts		Excluding System Impacts	
	\$MMs	\$/kW-Month	\$MMs	\$/kW-Month
Total Program Costs	\$1,803.9	\$9.23	\$1,803.9	\$9.23
System Impacts - Avoided Generation Savings	(544.6)	(2.79)	na	na
Net Revenue Requirements	\$1,259.2	\$6.44	\$1,803.9	\$9.23
Participant Allocation of Revenue Requirements	104.5%	104.5%	100%	100%
Subscription Revenues & Rate	\$1,315.5	\$6.73	\$1,803.9	\$9.23

QUESTION:

Please refer to FPL's witness Bores rebuttal testimony page 3 lines 1 through 13. Please provide amended responses to the following questions.

- a. Staff's First Set of Interrogatories, No. 83
- b. Staff's First Set of Interrogatories, No. 97
- c. Staff's Second Set of Interrogatories, No. 194

RESPONSE (subpart b):

Below is FPL's amended response to Staff's First Set of Interrogatories, No. 97, which asked:

Please refer to the Petition at page 3. At the time Phase 1 is complete and is in service, what is the total annual revenue requirement associated with the 1,490 MW Phase 1 SolarTogether program?

At the time Phase I is complete, the total annual revenue requirement associated with the 1,490 MW FPL SolarTogether program is \$128.6 million (\$125.1 million, net of participant charges and credits).

QUESTION:

Please refer to FPL's witness Bores rebuttal testimony page 3 lines 1 through 13. Please provide amended responses to the following questions.

- a. Staff's First Set of Interrogatories, No. 83
- b. Staff's First Set of Interrogatories, No. 97
- c. Staff's Second Set of Interrogatories, No. 194

RESPONSE (subpart c):

See Attachment Nos. 1-4 for FPL's amended response to Staff's First Set of Interrogatories, No. 194, which asked:

Please provide the levelized system average electric rate for the SolarTogether Program (including the impact of the SolarTogether Charges and Credits), the No ST Plan, and the 2019 Ten-Year Site Plan for the period 2020 through 2051. As part of your response, provide a table for each scenario similar to FPL witness Whitley's direct testimony, exhibit AWW-9 from Docket No. 20190015-EG, in electronic Excel format.

QUESTION:

Please refer to the Stipulation and Settlement Agreement filed on October 9, 2019. Please complete table for each scenario (low/base/high fuel and CO₂) below showing the annual net systems savings, the total charges and credits to regular participants, the total charges and credits to low-income participants, and the remaining net system savings after taking into account all charges and credits. Please provide a copy of the table below in electronic (Excel) format.

[Scenario]						
Year	Net System Savings (\$Millions)	Regular Participants		Low Income Participants		Remaining Net System Savings (\$Millions)
		Charges (\$Millions)	Credits (\$Millions)	Charges (\$Millions)	Credits (\$Millions)	

RESPONSE:

Please see Attachment No. 1 to this interrogatory.

QUESTION:

Please refer to the Stipulation and Settlement Agreement filed on October 9, 2019 and FPL's response to Staff's Second Set of Interrogatories, No. 194. Please provide the levelized system average electric rate for the Settlement version of the SolarTogether Program for the period 2020 through 2051. As part of your response, complete a similar table for each scenario as that provided in ROG 194.

RESPONSE:

Please see Attachment Nos. 1, 2, 3, and 4 to this interrogatory.

QUESTION:

Please refer to the Stipulation and Settlement Agreement filed on October 9, 2019. Please complete table below for each scenario (low/base/high fuel and CO₂) by providing the cumulative net present value of the net system savings, total SolarTogether charges and credits, the remaining net system savings, and the payback periods (using cumulative net present value) in years for regular SolarTogether participants, low-income SolarTogether participants, and non-participants.

Scenario		Net System Savings (\$M)	SolarTogether		Remaining Net System Savings (\$M)	Payback Period (Years)		
Fuel	CO ₂		Charges (\$M)	Credits (\$M)		Regular Participant	Low-Income Participant	Non-Participant

RESPONSE:

Fuel Cost Forecast	Environmental Compliance Cost Forecast	Net System Savings (Millions)	SolarTogether Charges (Millions)	SolarTogether Credits (Millions)	Remaining Net System Savings (Millions)	Payback Period (in Years) Utilizing Cumulative NPV ⁽¹⁾		
						Regular Participant	Low Income Participant	Non-Participant
High Fuel Cost	Low CO ₂	(\$323)	(\$1,315)	\$1,452	(\$186)	8	0	20
High Fuel Cost	Mid CO ₂	(\$414)	(\$1,315)	\$1,452	(\$277)	8	0	19
High Fuel Cost	High CO ₂	(\$563)	(\$1,315)	\$1,452	(\$427)	8	0	17
Mid Fuel Cost	Low CO ₂	(\$159)	(\$1,315)	\$1,452	(\$22)	8	0	30
Mid Fuel Cost	Mid CO ₂	(\$249)	(\$1,315)	\$1,452	(\$112)	8	0	26
Mid Fuel Cost	High CO ₂	(\$401)	(\$1,315)	\$1,452	(\$265)	8	0	22
Low Fuel Cost	Low CO ₂	\$8	(\$1,315)	\$1,452	\$145	8	0	NA
Low Fuel Cost	Mid CO ₂	(\$82)	(\$1,315)	\$1,452	\$54	8	0	NA
Low Fuel Cost	High CO ₂	(\$232)	(\$1,315)	\$1,452	(\$96)	8	0	27

1) Calculated at FPL's weighted average cost of capital of 7.73%. For non-participants, the Cumulative NPV is the same as the Cumulative Present Value of Revenue Requirements.

QUESTION:

Please refer to the Stipulation and Settlement Agreement filed on October 9, 2019. Please provide the estimated residential customer (1,000 kilowatt-hour/month usage) rate impact of the Settlement for each scenario (low/base/high fuel and CO₂) for a non-participant, a regular participant, and a low-income participant for the period 2019 through 2051. For participants, assume a 5 kilowatt subscription. As part of your response, complete the table below.

[Scenario]			
Year	Average Remaining Net System Rate Impact (\$/1000-kWh/mo)		
	Non-Participant	Regular Participant	Low-Income Participant

RESPONSE:

Please see Attachment No. 1 to this interrogatory.

QUESTION:

Please refer to the Stipulation and Settlement Agreement filed on October 9, 2019. Please reconcile paragraph 3(b), which states that residential capacity is 372.5 megawatts, and paragraph 4(a), which states that 10 percent of residential capacity is 37.5 megawatts. As part of your response, please specify if the value for low-income customers is 37.5 MW or 37.25 MW, approximately how many customers each value would serve (at 5 kW per customer), and approximately how many low-income customers are in FPL's service territory.

RESPONSE:

FPL will allocate low income customers 37.5 megawatts of the residential capacity of 372.5 megawatts, which is equivalent to 10.07%.

Per the Settlement Agreement filed on October 9, 2019 page 4, item 4(a), for the purposes of FPL SolarTogether, low income customers are those whose income falls at or below 200% of the federal poverty level. Assuming a 5 kilowatt subscription per low-income customer, the 37.5 megawatts of low income capacity would serve 7,500 low-income customers. FPL does not track customers' income levels, but based on FPL customers that fall in zip codes identified as low income based on U.S. Census data (*i.e.*, a majority of the population in the zip code is within 200% of the federal poverty level), FPL estimates approximately 20%, or 875,000, of its residential customers are low income customers.

QUESTION:

Please refer to the Stipulation and Settlement Agreement filed on October 9, 2019. Please provide the annual amount of subscription available from each of the SolarTogether project sites for commercial, industrial, and governmental demand customers, residential and non-demand commercial customers, and for low-income residential customers. As part of the response, provide the name, in-service date, and installed capacity for each SolarTogether project site.

RESPONSE:

See Attachment No. 1 to this interrogatory, which lists the subscription availability by customer group for the five FPL SolarTogether Projects including the solar energy centers name and in-service date. Note, while the attached table shows capacity allocation between the customer groups by Project and by Solar Energy Center, participants' subscriptions credits will be based on the actual generation of the entire Phase (1,490 MW), not to a specific FPL SolarTogether Project. See also FPL's response to Staff's First Set of Interrogatories Nos. 121 and 133.

DECLARATION

I sponsored the answer to Interrogatory No. 237 and co-sponsored Nos. 233-234 from Staff's Ninth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



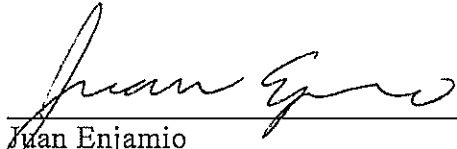
Scott Bores

Date: 11/6/2019

DECLARATION

I sponsored the answers to Interrogatory Nos. 235-236 and 238, and co-sponsored Nos. 233-234 from Staff's Ninth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



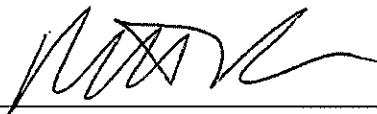
Juan Enjamio

Date: Nov 6, 2019

DECLARATION

I sponsored the answers to Interrogatory Nos. 239-240 from Staff's Ninth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



Matt Valle
Date: 11/5/19_____

47

FPL's Response to Staff's Tenth Set of Interrogatories No.
241.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 47
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: *Enjamio (241)Valle (241)

QUESTION:

Please develop a revised version of the FPL SolarTogether and No ST scenarios and answer the following questions, providing responses both in PDF and Excel format. For both the revised FPL SolarTogether and No ST scenarios, please assume that solar units are an alternative resource available, in addition to batteries and natural gas-fired units, through the year 2031, use the same demand-side management (DSM) assumptions as the 2019 Ten-Year Site Plan (TYSP), include the 2020 SoBRA Project as a committed project, and use an equalizing unit in 2031.

a. Provide resource plans for the full program period (2019 through 2051) for the revised FPL SolarTogether and No ST scenarios. As part of this response, please provide annual reserve margin data similar to Schedule 7 of the TYSP, and, for each unit identified in the resource plan, provide information similar to Schedule 9 of the TYSP.

b. Provide the annual and cumulative amount of solar generation additions for the revised FPL SolarTogether and No ST scenarios for the full program period (2019 through 2051). As part of this response, please also provide the difference between these values.

c. Please provide tables like those found in FPL's response to Staff's First Set of Interrogatories, Question No. 78, for the revised FPL SolarTogether and No ST scenarios for each of the nine natural gas and CO₂ price sensitivities, providing the differences between the scenarios, the annual revenue requirement of each scenario by category, and all values in nominal and net present value dollars for each sensitivity.

d. Please provide step-by-step calculations, in Excel format with formulas intact, describing how FPL determined the incremental firm gas transportation savings attributed in its cost-effectiveness analyses for the revised FPL SolarTogether and No ST scenarios for each of the nine natural gas and CO₂ price sensitivities.

e. Complete the table below for the revised FPL SolarTogether and No ST scenarios for each of the nine natural gas and CO₂ price sensitivities using the Charges and Credits outlined in FPL's revised Tariffs in witness Valle's rebuttal testimony. Provide the annual and total value for the net system savings between the scenarios, the SolarTogether Charges, the SolarTogether Credits, and the remaining net system savings to the general body of ratepayers. Provide a version of this table in nominal and present value dollars.

Net Impacts - [Sensitivity] – ([Nominal / NPV] \$ millions)				
Year	Net System Savings	SolarTogether Charges	SolarTogether Credits	Remaining Net System Savings
2020				
...				
Total				

f. Complete the table below for the revised FPL SolarTogether and No ST scenarios for each of the nine natural gas and CO₂ price sensitivities using the proposed Settlement Charges and Credits. Provide the annual and total value for the net system savings between the scenarios, the SolarTogether Charges, the SolarTogether Credits, and the remaining net system savings to the general body of ratepayers. Provide a version of this table in nominal and present value dollars.

Net Impacts - [Sensitivity] – ([Nominal / NPV] \$ millions)						
Year	Net System Savings	Regular SolarTogether Participants		Low-Income SolarTogether Participants		Remaining Net System Savings
		Charges	Credits	Charges	Credits	
2020						
...						
Total						

g. Please provide the annual estimated residential customer (1,000 kilowatt-hour/month usage) monthly rate impact for the revised FPL SolarTogether and No ST scenarios for each of the nine natural gas and CO₂ price sensitivities excluding any SolarTogether administrative costs, Charges, and Credits for the program period (2019 through 2051). As part of your response, complete the table below.

[Scenario] – [Sensitivity]	
Year	Monthly Rate Impact (\$/1000-kWh/mo)
	General Body of Ratepayers
2020	
...	
Total	

h. Please provide the annual estimated residential customer (1,000 kilowatt-hour/month usage) monthly rate impact for the revised FPL SolarTogether and No ST scenarios for each of the nine natural gas and CO₂ price sensitivities including SolarTogether administrative costs and the SolarTogether Charges and Credits in the revised Tariffs in witness Valle's rebuttal testimony for the program period (2019 through 2051). For participants, assume a 5 kilowatt subscription. As part of your response, complete the table below.

[Scenario] – [Sensitivity]		
Year	Monthly Rate Impact (\$/1000-kWh/mo)	
	Participant	Non-Participant
2020		
...		
Total		

i. Please provide the annual estimated residential customer (1,000 kilowatt-hour/month usage) monthly rate impact for the revised FPL SolarTogether and No ST scenarios for each of the nine natural gas and CO₂ price sensitivities including SolarTogether administrative costs and the SolarTogether Charges and Credits in the proposed Settlement for the program period (2019 through 2051). For regular and low-income participants, assume a 5 kilowatt subscription. As part of your response, complete the table below.

[Scenario] – [Sensitivity]			
Year	Monthly Rate Impact (\$/1000-kWh/mo)		
	Regular Participant	Low-Income Participant	Non-Participant
2020			
...			
Total			

j. Please provide the cumulative net present value payback period for the general body of ratepayers for the revised FPL SolarTogether and No ST scenarios for each of the nine natural gas and CO₂ price sensitivities excluding any SolarTogether administrative costs, Charges, and Credits. As part of this response, please complete the following table.

[Scenario]		
Fuel Cost Forecast	Environmental Compliance Forecast	Payback Period for General Body Of Ratepayers

k. Please provide the cumulative net present value payback period for participants and non-participants for the revised FPL SolarTogether scenario for each of the nine natural gas and CO₂ price sensitivities including any SolarTogether administrative costs and the SolarTogether Charges and Credits in the revised Tariffs in witness Valle's rebuttal testimony. As part of this response, please complete the following table.

Fuel Cost Forecast	Environmental Compliance Forecast	Participants	Non-Participants

l. Please provide the cumulative net present value payback period for regular participants, low-income participants, and non-participants for the revised FPL SolarTogether scenario for each of the nine natural gas and CO₂ price sensitivities including any SolarTogether administrative costs and the SolarTogether Charges and Credits in the proposed Settlement. As part of this response, please complete the following table.

Fuel Cost Forecast	Environmental Compliance Forecast	Regular Participants	Low-Income Participants	Non-Participants

RESPONSE:

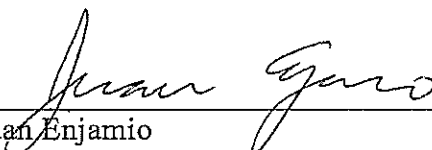
The analysis requested in Interrogatory No. 241 consists of a new economic evaluation that cannot be performed in the time allowed for service of discovery responses. The requested new economic analysis effectively asks for a comparison of FPL's 2019 Ten Year Site Plan (TYSP) against the SolarTogether Plan. It is important to observe that the solar additions shown in the SolarTogether Plan are essentially the same as the early year solar additions in the TYSP, except that approximately 600 MW of solar planned for early in 2022 in the TYSP are built in 2021 for purposes of SolarTogether, likely less than one year early, principally to meet broad customer interest in the participation of solar development through this unique Program. As such, FPL believes the plan is consistent with the 2019 TYSP, and note that if the cost of PV panels or associated import tariffs were to increase, or if the labor market for solar construction continues to tighten, a delay in the decision to construct these units could result in forgone savings for participants and non-participants alike.

Staff has correctly observed in this Docket that the proposed SolarTogether Program is non-conventional in that FPL is not weighing all types of resource options against one another in an effort to identify a lowest possible cost resource option, regardless of fuel source. Rather, SolarTogether is proposed to meet customer demand for this type of community solar program, and is designed on the basis that the Program (a) cost effectively meets a particularized customer need, as evidenced by the tremendous demand for this new community solar program, (b) also is cost-effective for non-participating customers, and (c) accelerates the utilization of solar energy in Florida. The third objective is self-evident, and the first two objectives are demonstrated by the economic analysis filed with FPL's rebuttal testimony on September 23, 2019. That economic analysis followed the same resource planning methodology FPL employed to analyze the cost-effectiveness of solar sites that have been previously presented to and approved by the Commission [three solar sites in 2016 included in the 2016 Rate Case (Docket 160021-EI) and the 2017, 2018, 2019 and 2020 FPL SoBRA Projects, consisting of four sites each (Dockets 20170001-EI, 20180001-EI and 20190001-EI)]. The analysis shows that SolarTogether creates total system savings of \$249 million. FPL proposes to allocate \$112 million of those savings, or 45%, to the general body of customers even though the cost of the generation that creates those savings will be covered entirely by the Program participants. Significantly, there is *no conventionally sourced rate base resource option* that would allow a segment of FPL's customers (in this case, non-participants in the SolarTogether program) to realize any percentage of projected savings without bearing a commensurate share of the projected revenue requirements. Here, non-participants are sharing in 45% of the benefits while not carrying any allocation of the revenue requirements of the projects.

DECLARATION

I sponsored the answer to Interrogatory No. 241 from Staff's Tenth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.

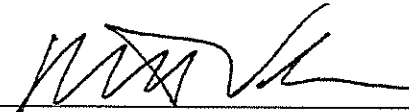


Juan Enjamio
Date: Nov 20, 2019

DECLARATION

I co-sponsored the answer to Interrogatory No. 241 from Staff's Tenth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



Matt Valle

Date: 1/8/2020

48

FPL's Response to Staff's Eleventh Set of Interrogatories
Nos. 242-245.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 48
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Bores(242-245)Deason (245)

QUESTION:

At the time Phase 1 is complete and is in service, what is the total annual revenue requirement impact of the reduction in the state corporate income tax rate from 5.5% to 4.458%?

RESPONSE:

Phase 1 is expected to be completed in 2021. The impact of the reduction in the state corporate income tax rate from 5.5% to 4.458% on the total 2021 projected annual revenue requirement is an increase of approximately \$2.28 million. An increase in revenue requirements is the result of the following:

- On a standalone basis, Phase 1 of SolarTogether program results in a taxable loss in 2021 due to tax depreciation being higher than book depreciation during this period. As such, an income tax benefit exists (*i.e.*, taxable loss multiplied by the state corporate income tax rate), not income tax expense. Since the state corporate income tax rate was reduced, the state income tax benefit is also reduced thereby increasing revenue requirements.
- Typically, current and deferred income tax expenses are calculated using the same state and federal income tax rates. However, since the accumulated deferred income taxes associated with the Phase 1 SolarTogether assets will turn around at 5.5% (rate effective beginning 1/1/2022), FPL has not modified the calculation of state accumulated deferred income taxes or deferred income tax benefit for 2021.

QUESTION:

At the time Phase 1 is complete and is in service, what is the total annual revenue requirement impact of the inclusion of AFUDC for Projects 1 and 2?

RESPONSE:

Phase 1 is expected to be completed in early 2021. The total 2021 projected annual revenue requirement impact from the inclusion of AFUDC on Projects 1 and 2 is approximately \$2.35 million.

QUESTION:

At the time Phase 1 is complete and is in service, what is the total annual revenue requirement including both the reduction in the state corporate income tax rate from 5.5% to 4.458% and excluding AFUDC for Projects 1 and 2?

RESPONSE:

Phase 1 is expected to be completed in early 2021. The total 2021 projected annual revenue requirement, prior to the removal of AFUDC for Projects 1 and 2 and reduction in the state corporate income tax rate to 4.458%, is \$128.60 million. Reducing the state corporate income tax rate and excluding AFUDC for Projects 1 and 2 results in total 2021 projected annual revenue requirement of \$128.51 million. The removal of AFUDC reduces the total annual revenue requirement while the reduction in the state corporate income tax rate results in an increase to revenue requirements (see FPL's Response to Staff's Eleventh Set of Interrogatories, No. 242), resulting in a net decrease in revenue requirements of \$0.09 million.

QUESTION:

Please explain why each Site is treated as an individual project for Siting Act purposes (i.e. <75 MW), but bundled with other Sites to meet the threshold for eligibility to accrue AFUDC (i.e. plant additions in excess of 0.5 percent of FERC Accounts 101 and 106). Please explain why the designation of an individual Site as a Project is not applied consistently under both the Siting Act and the AFUDC Rule.

RESPONSE:

The designation of an individual site under the Power Plant Siting Act ("PPSA"), Sections 403.501-.518, Florida Statute (F.S.) is unrelated to a project under Rule No. 25-6.0141, Allowance for Funds Used During Construction (the "AFUDC Rule"). The purpose of the PPSA is to provide a centralized process for licensing a large power plant at a particular site over its useful life and was adopted by the Commission via Rule 62-17.01 – 62-17.293, Electrical Power Plant Siting, Florida Administrative Code (the "Siting Rule"). The PPSA focuses on obtaining permitting and certification for the location of an "electrical power plant," which the PPSA defines as "any steam or solar electrical generating facility using any process or fuel, including nuclear materials" of at least 75 megawatts in capacity and "all associated facilities that are indirectly connected to the site." Each of the twenty sites identified as part of the SolarTogether program is a separate generating facility, less than 75 megawatts. The PPSA does not define "project" or use the term "project" in connection with "electrical power plant."


In contrast, the purpose of the AFUDC Rule is to recognize the fact that there are financing costs associated with any investment during its construction period and a return should be allowed on construction work in progress ("CWIP") balances. This is accomplished either by including CWIP in rate base or accruing AFUDC on the CWIP balance if a project meets the requirements under the AFUDC Rule. FPL follows the AFUDC Rule as to what qualifies for AFUDC. That rule provides the circumstances under which a "project" qualifies for AFUDC, but does not define the term "project." Therefore, to determine what constitutes a project, FPL employs an internal policy premised upon how the construction work is managed.

In regards to the proposed SolarTogether sites, FPL has grouped some of the sites together based on how the sites are managed and defined that group of sites as a single project. The sites that are grouped as a project have one project manager, one contractor, have the same construction schedule, and will go into service at the same time. All these criteria must be met in order to be deemed a "project" under FPL's policy. In addition, the project will qualify for AFUDC only if it (i) is projected to have a construction period of longer than a year and (ii) involves gross additions to plant in excess of 0.5 percent of the sum of the total balance in Account 101 – Electric Plant in Service, and Account 106, Completed Construction not Classified, at the time the project commences.

DECLARATION

I sponsored the answers to Interrogatory Nos. 242-244 and co-sponsored No. 245 from Staff's Eleventh Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.

A handwritten signature in black ink, appearing to read 'Scott Bores', written over a horizontal line.

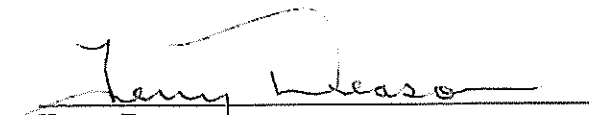
Scott Bores

Date: 11/25/19

DECLARATION

I co-sponsored the answer to Interrogatory No. 245 from Staff's Eleventh Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.


Terry Deason

Date: 11-25-19

FPL's Response to Staff's Twelfth Set of Interrogatories
Nos. 246, 250-253.

**Additional files contained on Staff Hearing Exhibits
CD/USB for No. 250**

(Supplemental No. 250)

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 49
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Brannen (246)*Enjamio
(250)Bores(251-253)

QUESTION:

Please refer to witness Bores' rebuttal testimony, page 4, lines 9 – 15.

- a. Please explain if EPC contractors have requested construction flexibility, if FPL has considered granting construction flexibility, or if FPL has considered utilizing multiple EPC contractors for those sites included in Projects 1 and 2.
- b. Please explain if utilizing multiple EPC contractors for those sites in Projects 1 and 2 could have yielded savings over awarding all sites within each of Projects 1 and 2 to a single EPC contractor per Project.

RESPONSE:

- a. EPC contractors had the option to request whatever construction flexibility they required to deliver the lowest cost bids. As part of FPL's solicitation process, contractors were requested to provide base proposals that conformed with the requirements of the requests for proposals ("RFP") issued for EPC services. Additionally, the contractors were explicitly encouraged to submit alternative proposals with different schedules that result in lower construction costs or modified terms and conditions from those identified in the RFP. For that reason, the EPC contractors bidding on ST Project 3 affirmatively requested construction flexibility, as noted in witness Brannen's rebuttal testimony filed September 23, 2019. The EPC contractors for ST Projects 1 and 2 did not request or require such flexibility to deliver their lowest costs bids for those sites.

As described in its response to OPC's Eighth Set of Interrogatories No. 38, FPL employs a robust solicitation and procurement process to evaluate contractor proposals to ensure the lowest overall cost of construction. In the case of the sites included in ST Projects 1 and 2, the evaluation included consideration of whether utilizing multiple EPC contractors for the sites would result in lower cost of construction. In fact, utilizing multiple contractors for those sites would have resulted in higher costs. Accordingly, the contracting structure utilized for ST Projects 1 and 2 resulted in the lowest overall cost of construction for those sites given the market conditions that existed at the time. As described in witness Brannen's rebuttal testimony, market conditions changed between the execution of the EPC agreement for ST Projects 1 and 2 and the time FPL was securing EPC agreements for ST Project 3. Contractor resources had become constrained which resulted in the contractor's request for greater flexibility for schedule and in-service date requirements to provide the lowest EPC costs.

- b. As described in the response above, utilizing multiple EPC contractors for those sites in ST Projects 1 and 2 would have in fact resulted in a higher cost of construction.

QUESTION:

Please refer to FPL's response to Staff's Tenth Set of Interrogatories, No. 241, and FPL's 2019 Ten-Year Site Plan. Please provide annual forecasted fuel consumption, in GWh and percent, for the full program period (2019 through 2051) for each of the resource plans identified below in a manner similar to that of Schedules 6.1 and 6.2 of FPL's 2019 Ten-Year Site Plan. As part of your response, please include Excel spreadsheets of the schedules with formulas intact.

- a. FPL's 2019 Ten-Year Site Plan Resource Plan.
- b. FPL's No ST Plan as revised by witness Valle's rebuttal testimony.
- c. FPL's SolarTogether Plan as revised by witness Valle's rebuttal testimony.
- d. No ST Plan as provided in response to Staff's Tenth Set of Interrogatories, No. 241.
- e. FPL's SolarTogether Plan as provided in response to Staff's Tenth Set of Interrogatories, No. 241.

RESPONSE:

- a. See Attachment No. 1.
- b. See Attachment No. 1.
- c. See Attachment No. 1.
- d. See FPL's response to Staff's Tenth Set of Interrogatories, No. 241. FPL expects that the projected fuel consumption for the no ST Plan requested in 241 would be essentially the same as that for FPL's 2019 Ten-Year Site Plan Resource Plan.
- e. See FPL's responses to Staff's Tenth Set of Interrogatories, No. 241. FPL expects that the projected fuel consumption for the SolarTogether Plan requested in 241 would be essentially the same as that for FPL's SolarTogether Plan as revised by witness Valle's rebuttal testimony for the years 2020-2021, and the same as that of FPL's 2019 Ten-Year Site Plan Resource Plan afterwards.

QUESTION:

At the time Projects 1 & 2 are complete and are in service, what is the total annual revenue requirement impact of the reduction in the state corporate income tax rate from 5.5% to 4.458%?

RESPONSE:

Projects 1 & 2 are expected to be completed in early 2020. The impact of the reduction in the state corporate income tax rate from 5.5% to 4.458% on the total 2020 projected annual revenue requirement for Projects 1 & 2 is an increase of approximately \$0.349 million. An increase in revenue requirements is the result of the following:

- On a standalone basis, Projects 1 & 2 result in a taxable loss in 2020 due to tax depreciation being higher than book depreciation during this period. As such, an income tax benefit exists (*i.e.*, taxable loss multiplied by the state corporate income tax rate), not income tax expense. Since the state corporate income tax rate was reduced, the state income tax benefit is also reduced thereby increasing revenue requirements.
- Typically, current and deferred income tax expenses are calculated using the same state and federal income tax rates. However, since the accumulated deferred income taxes associated with the Phase 1 SolarTogether assets will turn around at 5.5% (rate effective beginning 1/1/2022), FPL has not modified the calculation of state accumulated deferred income taxes or deferred income tax benefit for 2020.

QUESTION:

At the time Projects 1 & 2 are complete and are in service, what is the total annual revenue requirement impact of the inclusion of AFUDC for Projects 1 and 2?

RESPONSE:

Projects 1 & 2 are expected to be completed in early 2020. The total 2020 projected annual revenue requirement impact from the inclusion of AFUDC on Projects 1 and 2 is approximately \$2.17 million.

QUESTION:

At the time Projects 1 & 2 are complete and are in service, what is the total annual revenue requirement including both the reduction in the state corporate income tax rate from 5.5% to 4.458% and excluding AFUDC for Projects 1 and 2?

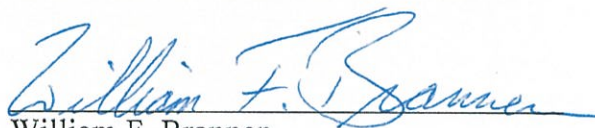
RESPONSE:

Projects 1 and 2 are expected to be completed in early 2020. The total 2020 projected annual revenue requirement, prior to the removal of AFUDC for Projects 1 and 2 and reduction in the state corporate income tax rate to 4.458%, is \$52.17 million. Reducing the state corporate income tax rate and excluding AFUDC for Projects 1 and 2 results in total 2020 projected annual revenue requirements of \$50.34 million. The removal of AFUDC reduces the total annual revenue requirement while the reduction in the state corporate income tax rate results in an increase to revenue requirements (see FPL's Response to Staff's Twelfth Set of Interrogatories, No. 251), resulting in a net decrease in revenue requirements of \$1.83 million.

DECLARATION

I sponsored the answers to Interrogatory Nos. 246-247 from Staff's Twelfth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.

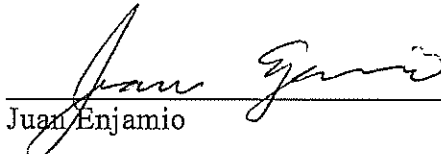

William F. Brannen

Date: 11/21/2019

DECLARATION

I sponsored the answer to Interrogatory No. 250 from Staff's Twelfth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



Juan Enjamio
Date: Nov 20, 2019

DECLARATION

I sponsored the answers to Interrogatory Nos. 251-253 from Staff's Twelfth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



Scott Bores

Date: _____

11/20/19

FPL's Response to Staff's Thirteenth Set of
Interrogatories No. 254.

**Additional files contained on Staff Hearing Exhibits
CD/USB for No. 254**

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 50
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Bores (254)Sim (254)

QUESTION:

Please refer to FPL's amended response to Staff's Second Set of Interrogatories, No. 190(b). Please provide a revised response for each of the nine fuel and CO₂ cost sensitivities excluding SolarTogether Program administrative costs. As part of your response, please provide the payback period in years for each of the sensitivities using cumulative net present value.


RESPONSE:

Please see Attachment No. 1 to this response.

DECLARATION

I co-sponsored the answer to Interrogatory No. 254 from Staff's Thirteenth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.




Scott R. Bores

Date: 12/3/2019

DECLARATION

I co-sponsored the answer to Interrogatory No. 254 from Staff's Thirteenth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



Steven R. Sim

Date: 1/6/2020

FPL's Response to Staff's Fourteenth Set of
Interrogatories Nos. 255-259.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 51
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Sims (255-258)Valle
(258)Bores(259)

QUESTION:

Please refer to the No ST Plan resource plan in Exhibit JE-6 of witness Enjamio's rebuttal testimony. Please confirm or deny that FPL's reserve margin in 2023 would be 20.03% excluding the addition of the 469 MW CT in 2023 but including the capacity additions and retirements shown for the period 2020-2022. If not, please provide what the reserve margin for this scenario would be.

RESPONSE:

Confirmed. FPL's reserve margin in 2023 would be 20.03% excluding the addition of the 469 MW CT in 2023. FPL notes that this CT capacity was selected by the EGEAS Optimization Model because it was more economical to add it in 2023 rather than to wait until 2024 to add capacity.

QUESTION:

If FPL's SolarTogether Program is not approved, would the unit additions contained in FPL's 2019 Ten-Year Site Plan be more cost-effective to customers than those contained in the No ST Plan as shown in Exhibit JE-6 of witness Enjamio's rebuttal testimony?

RESPONSE:

Yes. As indicated in FPL's response to Staff's Tenth Set of Interrogatories, Interrogatory No. 241, the SolarTogether Plan is roughly equivalent to the 2019 Ten-Year Site Plan resource plan. As demonstrated by witness Enjamio in his direct and rebuttal testimonies, the SolarTogether Program is cost-effective compared to the No ST Plan, and even though the analysis was not performed, it is reasonable to assume that the 2019 Ten-Year Site Plan also would be cost-effective compared to the No ST Plan.

QUESTION:

If FPL's SolarTogether Program is not approved, does FPL plan to implement its 2019 Ten-Year Site Plan, subject to revision by FPL's annual IRP process?

RESPONSE:

FPL's annual Integrated Resource Planning (IRP) process is concluded in the first quarter of each year for filing with the Commission on April 1. This IRP process uses the most recent official input assumptions (such as load, fuel prices, emission prices, capital and operating costs, and unit characteristics) and presents a resource plan for consideration by the Commission regarding whether the Ten-Year Site Plan document and accompanying resource plan are "suitable for planning". This resource plan, in and of itself, is not necessarily the basis for any particular resource decision, other than near-term projects, such as the 2020 SoBRA additions, for which a commitment to proceed has been made. If FPL's SolarTogether Program is not approved, FPL will determine, as part of its current IRP process, what resource additions are needed and are cost-effective for FPL customers. These projections will be presented in FPL's 2020 Site Plan.

QUESTION:

Please refer to FPL's SolarTogether Plan resource plan in Exhibit JE-6 of witness Enjamio's rebuttal testimony and FPL's 2019 Ten-Year Site Plan resource plan.

- a. Please confirm or deny that FPL's SolarTogether Plan, when compared to FPL's 2019 Ten-Year Site Plan, accelerates the in-service of approximately 600 MW of solar generation from early 2022 to 2021?
- b. Please identify any exhibits or discovery responses that characterize the economic impact of this comparison and the resulting acceleration of solar generation.

RESPONSE:

- a. FPL confirms this statement.
- b. Please see FPL's response to Staff's Tenth Set of Interrogatories, No. 241, which characterizes the economic impact of accelerating the in-service date of approximately 600 MW of solar generation and explains why consideration of such a comparison is not applicable or warranted given the nature of the voluntary, customer demand-driven Program under review and the context under which the Commission should evaluate the FPL SolarTogether Program. Additionally, although no actual calculation of the projected economics of such a comparison has been performed, FPL believes it would be reasonable to expect, assuming base case assumptions, that the acceleration of this solar generation would result in a relatively slight increase in CPVRR costs if construction costs remain as currently projected. Note, however, that if the cost of PV panels or associated import tariffs were to increase, or if the labor market for solar construction continues to tighten, a delay in the decision to construct these units could result in forgone savings for participants and non-participants alike.

QUESTION:

Please confirm or deny that FPL's SolarTogether Program would incur approximately \$11 million in administrative costs that would otherwise not be incurred if FPL's SolarTogether Program is denied.

RESPONSE:

FPL confirms that the FPL SolarTogether program will incur, on a CPVRR basis, approximately \$11.5 million in administrative costs that otherwise would not be incurred if the Program is denied. It is important to note that Participants, as part of their Subscription Charge, will be funding 104.5% of Program costs, including all administrative costs.

DECLARATION

I sponsored the answer to Interrogatory No. 259 from Staff's Fourteenth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



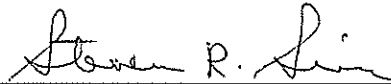
Scott Bores

Date: 12/11/2019

DECLARATION

I sponsored the answers to Interrogatory Nos. 255-257 and co-sponsored No. 258 from Staff's Fourteenth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



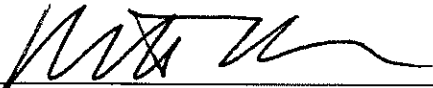
Steven R. Sim

Date: 1/7/2020

DECLARATION

I co-sponsored the answer to Interrogatory No. 258 from Staff's Fourteenth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



Matt Valle

Date: 1/8/2020

FPL's Response to OPC's Second Set of Interrogatories
Amended No. 8.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 52
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Sims (8)

QUESTION:

Please refer to FPL's Petition at Paragraph 13 and FPL's April 2019 Ten Year Power Plant Site Plan 2019-2028 ("Ten Year Site Plan") at pages 12 and 14. Table ES-1 on page 14 of the Ten Year Site Plan has entries for 248 MW of firm capacity from Solar PV for 2020 and 248 MW of firm capacity from Solar PV for 2021. These amounts are in addition to 165 MW of firm capacity from the proposed 2020 SoBRA PV projects that is also indicated in Table ES-1. Assuming a firm capacity to nameplate capacity percentage of approximately 55%, the 496 MW of firm capacity from non-SoBRA Solar PV for 2020 and 2021 in the Ten Year Site Plan is about 900 MW of nameplate PV Solar capacity.

a. Please explain in detail whether the 900 MW of nameplate non-SoBRA Solar PV capacity identified for 2020 and 2021 in Table ES-1 of the Ten Year Site Plan is in addition to the 1,490 MW of nameplate SolarTogether Solar PV that FPL is proposing or is part of the 1,490 MW of nameplate SolarTogether Solar PV that FPL is proposing.

b. Please explain in detail whether, in the event its SolarTogether proposal is not approved by the Commission, FPL would, in place of the 1,490 MW of SolarTogether solar PV projects, pursue the 900 MW of nameplate non-SoBRA Solar PV capacity identified for 2020 and 2021 in Table ES-1 of its Ten Year Site Plan.

c. Please explain in detail whether FPL views Phase 1 of its the SolarTogether proposal as accelerating its planned investment in non-SoBRA solar PV generation capacity from 900 MW of nameplate capacity for 2020 and 2021 to 1,490 MW of nameplate capacity for 2020 and 2021

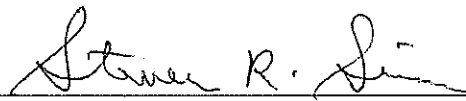
RESPONSE:

- a. At this point, FPL is not planning to build additional solar in 2020 and 2021 above the solar capacity included in FPL SolarTogether (1,490 MW) and the 2020 SoBRA Project. FPL will, however, continue to evaluate whether additional solar may be cost-effective in 2021 over the amount shown in the FPL SolarTogether Program.
- b. FPL still plans to proceed with the construction of the 900 MW of solar capacity shown in the 2019 Ten Year Site Plan (TYSP) even if the FPL SolarTogether Program is not approved.
- c. The FPL SolarTogether solar capacity replaces the 900 MW of solar nameplate capacity shown in the 2019 TYSP Resource Plan in 2020 and 2021. In addition, it accelerates part of the solar capacity shown in the 2019 TYSP for the year 2022.

DECLARATION

I sponsored the answer to Interrogatory No. 8 - Amended from OPC's Second Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



Steven R. Sim

Date: 1/6/2020

FPL's Response to OPC's Fifth Set of Interrogatories No.
25.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 53
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Valle (25)

QUESTION:

Please refer to the Direct Testimony of Mathew Valle at pages 13 and 15. Please explain in detail how FPL determined that returning 20% of the forecasted \$139 million CVPRR net benefit of Phase 1 of the SolarTogether projects to the general body of FPL customers is the appropriate percentage of the total net benefit to return to those customers.


RESPONSE:

FPL's decision to share the costs and benefits between the general body of customers and the participants is a unique attribute not common in other community solar programs. The intent of this feature is to allow both participants and the general body of customers to benefit from the environmental and financial benefits that result from the addition of new solar generation to the FPL system. As discussed in witness Valle's direct testimony, the FPL SolarTogether pricing was established to achieve a seven-year simple payback for participants. While a founding principle was that the benefits would be shared with the general body of customers, the split was not pre-established. The program design was the result of an iterative process that best balanced the levelized Subscription Charge, Benefit Rate, Benefit Rate escalation, and net benefit allocation. The 20% allocation would enable a seven-year simple payback for participants while offering the general body of customers an allocation that would recognize the uncertainty in the underlying Program assumptions.

DECLARATION

I sponsored the answers to Interrogatory Nos. 24-26 from Office of Public Counsel's Fifth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



Matthew Valle

Date: 8/19/19

FPL's Response to OPC's Sixth Set of Interrogatories No.
29.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 54
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Valle (29)

QUESTION:

Please refer to FPL's response to OPC's Second Request for Production of Documents, Item No. 2.

- a. Please identify each date since 2017 on which FPL personnel met by phone, web conference, or in person with personnel from the entity which authored the documents found at Bates Nos. FPL 0000013 through 0000025, and identify for each such meeting each attendee from FPL including each attendee's job title.
- b. Please provide a detailed explanation of FPL's consideration of the documents found at Bates Nos. FPL 0000013 through 0000025 including a detailed description of all analyses FPL performed of what was proposed in the documents.
- c. Please provide a detailed explanation with respect to the consideration FPL gave to the documents found at Bates Nos. FPL 0000013 through 0000025 potentially being a basis for all or a portion of its proposed SolarTogether program.

RESPONSE:

- a. Beginning in October 2017 and continuing to the present, FPL employees have had a number of face to face meetings and telephone conversations with personnel from the entity that authored the documents in Bates Nos. FPL 000013 through 000025 regarding the proposals contained in those documents.
- b. In evaluation of the proposals contained in those documents to sell power to FPL from a portfolio of solar projects as Qualifying Facilities under the Public Utility Regulatory Policy Act of 1978 ("PURPA") and applicable Florida law and regulations, FPL personnel evaluated the proposed PPA rate versus FPL's full avoided costs on both As Available and Firm Energy and Capacity bases. The proposed PPA pricing contained in the proposals was well above FPL's applicable projected As Available energy rate, as well as above the energy rate from the next planned generating unit in FPL's applicable Ten Year Site Plans. Additionally, the operating characteristics of the proposed Qualifying Facilities would likely not meet the requirements to receive capacity payments for Firm Energy and Capacity under FPL's Standard Offer Contract.
- c. The rate design of SolarTogether is complex and, combined with the structuring of certain elements to make the program appealing to potential participants (e.g., timing of program effective date, net cost to participate, payback period, and impacts to general body of rate payers), FPL needed to have a high degree of certainty and control over the project criteria in order to keep the program design manageable and on target consistent with customer demand and expectations. Unexpected variations in cost structure (e.g., up-front capital investment vs. over-time PPA payments), level of cost, uncertainty in annual solar production per project, or risks to the in-service date of the projects, would increase the uncertainty of the program offering and thereby greatly reduce its chance of success. As such, FPL chose from its available portfolio low-cost and cost-effective solar projects, after first selecting available projects to satisfy the SoBRA program for 2020, that provided the greatest certainty for the

design and launch of the SolarTogether program. There are other mechanisms, such as the long-standing availability of the Standard Offer Contract that are not subject to the program design features of the SolarTogether program, which are a more suitable avenue for evaluation of the proposals contained in the documents with Bates Nos. FPL 000013 through 000025.

FPL did not procure or plan a specific set of solar projects for its SolarTogether program, but rather established a general portfolio of potential solar projects based on evaluation of cost, risk, and project characteristics through its broader generation planning process. It was from this portfolio of potential projects that those most likely to meet the timing, cost, and production requirements of the SolarTogether program were chosen as the concept was developed (after first selecting available projects to satisfy the 2020 SoBRA Project). In that context, the proposals referenced in Bates Nos. FPL 000013 through 000025 were not specifically evaluated for SolarTogether. However, as described in subpart (b) above, the projects were evaluated versus FPL's avoided unit in its applicable Ten Year Site Plans consistent with state and federal law. Since the projects failed in those evaluations and did not proceed to an executed PPA, they were not considered part of the available portfolio of solar projects to be included in the SolarTogether program or otherwise as a part of FPL's resource plan. See FPL's response to OPC's Sixth Set of Interrogatories No. 29.

DECLARATION

I sponsored the answer to Interrogatory No. 29 from Office of Public Counsel's Sixth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.

Matthew Valle

Date: _____

55

FPL's Response to OPC's Eighth Set of Interrogatories No.
35.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 55
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Valle (35)

QUESTION:

Please refer to Mr. Valle's Rebuttal Testimony at page 3, lines 11-14. Please identify and describe in detail each benefit for the general body of customers that might not exist without the approval of the Company's proposed SolarTogether program.

RESPONSE:

FPL witness Valle details the benefits to the general body of customers on page 11, and elaborates on page 7-8. FPL witnesses Deason and Huber explain how "the innovative structure of the program creates benefits for the general body of customers that might not otherwise exist." These benefits are enumerated below.

- i) FPL SolarTogether creates \$249 million in favorable CPVRR benefits, resulting in "\$137 million for participants and \$112 million for the general body of customers (Witness Valle Rebuttal, page 11, line 8)";
- ii) In addition, "contributions from the participants will total 104.5% of the Program base revenue requirements. This means the general body of customers is not expected to contribute to the Program costs and are expected to receive approximately \$56 million in fixed base benefits that are not subject to fluctuations in fuel or emissions costs (Witness Valle Rebuttal, page 11, lines 21 through Page 12, line 1)";
- iii) Renewable energy provides strategic benefits to customers, including "increased fuel diversity, a lessened dependence on natural gas, minimization of fuel cost volatility, improved environmental conditions, and increased investment in Florida. The FPL SolarTogether Program would be a means both to achieve these goals and help ensure a significant increase of solar generation in Florida (Witness Deason Rebuttal, Page 8, lines 8-12)";
- iv) "Community solar programs, like FPL SolarTogether, perform a dual function of giving customers who may not otherwise have access to or the ability to invest in solar the opportunity to do so, while allowing those customers to remain customers of the utility, which supports the grid and benefits the entire customer base (Witness Huber Rebuttal, page 4, line 20 through page 5, line 1. Emphasis added)"; and
- v) "Utilities are better able to site the community solar resources at the locations that are most likely to provide greater benefits to the electric grid and exercise buying power and utilize economies of scale to lower the price of hardware and installation, (Witness Huber Rebuttal, page 5, lines 15-18)."

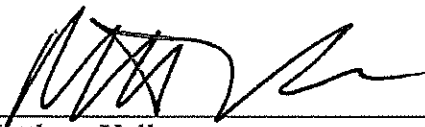
As FPL witness Deason describes, the customers who are seeking programs like FPL SolarTogether are "benefit facilitators" and the "benefits they facilitate are then shared with all customers (Witness Deason Rebuttal, Page 12, lines 17-18)". If not for these benefit facilitators and the Commission's approval of the FPL SolarTogether program, FPL may not have added all 1,490 MW of solar generation in 2020 and 2021 that results in the above benefits. As stated in FPL's amended response to Staff's First Set of Interrogatories No. 100

and OPC's Fifth Set of Interrogatories No. 26 Part c, "FPL will reevaluate the amount and timing of additional solar capacity to be installed beyond Projects 1-2 as part of its late 2019 early 2020 integrated resource planning work."

DECLARATION

I sponsored the answers to Interrogatory Nos. 35-36 and co-sponsored No. 37 from Office of Public Counsel's Eighth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



Matthew Valle

Date: 10/11/19

56

FPL's Response to OPC's Twelfth Set of Interrogatories
No. 53

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 56
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Valle (53)

QUESTION:

Please refer to the Company's response to Citizens' Interrogatory No. 37. Please state whether the Company has performed, or has had performed on its behalf, any analysis of how the forecast provided in response to Citizens' Interrogatory No. 37 would be affected by the Company adopting and implementing its SolarTogether programs as proposed in the Company's rebuttal testimony in this proceeding.


RESPONSE:

FPL has not performed nor contracted to have performed on its behalf any analysis of how the forecasts provided in OPC's Eighth Set of Interrogatories No. 37 would be affected by implementing FPL SolarTogether as presented in FPL's rebuttal testimony.

DECLARATION

I sponsored the answer to Interrogatory No. 53 from OPC's Twelfth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



Matt Valle

Date: 10/23/19

57

FPL's Response to Vote Solar's First Set of Interrogatories
No. 26.

**Additional files contained on Staff Hearing Exhibits
CD/USB for No. 26**

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 57
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Sim (26)

QUESTION:

Please refer to FPL's response to Staff's First Set of Interrogatories No. 31. Please provide the carbon price forecasts used by FPL since 2007, and what dates they were accepted as FPL's official carbon price forecast.

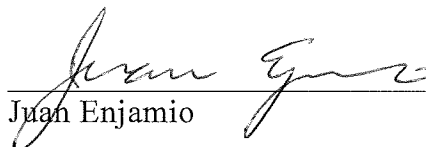
RESPONSE:

Please see Attachment No. 1 to this response.

DECLARATION

I sponsored the answers to Interrogatory Nos. 24, 26, 35, 41, 62-64 and co-sponsored No. 60 from Vote Solar's First Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



Juan Enjamio
Date: Aug 28, 2019

58

OPC's Response to Staff's First Set of Interrogatories

No. 1.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 58
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Dauphinais (1)

ADDITIONAL SPECIFIC OBJECTIONS

Citizens specifically object to the Interrogatory to the extent it calls for the Public Counsel to reveal mental impressions, conclusions, any litigations strategy, or any legal theory developed in anticipation of litigation in this case. Without waiving this objection or his right to assert it in this or future proceedings, the Public Counsel provides the foregoing position on the meaning of the 2016 Settlement Agreement as it applies to this facts of this case.

INTERROGATORIES

1. Please refer to FPL's petition and associated tariff filed on March 13, 2019, in Docket No. 20190061-EI. Is FPL's petition and associated tariff consistent with the terms of the October 6, 2016 Settlement Agreement, as provided in Order No. PSC-16-0560-AS-EI?

RESPONSE:

No. It is the view of the Public Counsel, in his role as signatory to the October 6, 2016 Settlement Agreement, that Paragraph 7 of the Settlement Agreement approved in Order No. PSC-16-0560-AS-EI ("the Agreement") specifically outlines the Parties' intent that FPL "not be allowed to recover through cost recovery clauses increases in the magnitude of costs of types or categories ... that have been, and traditionally, historically, and ordinarily would be, recovered through base rates." (Agreement, p. 8.) (emphasis added) Additionally, paragraph 23 of the Agreement provides that if FPL files a new or revised tariff provision, such tariff request may not " ... increase any existing base rate component of a tariff or rate schedule during the Term unless application of such new or revised tariff, service or rate schedule is optional to FPL's customers." (Agreement, p. 24.) FPL stated in its Petition that "[a]ll program costs and expenses will be reflected as base rate

recoverable costs.” (Petition at 11.) However, FPL also stated it will seek recovery through the Fuel Clause for the subscription credits paid out to Participating Customers. (Petition at 10.) Additionally, unsubscribed capacity is to default to rate base under FPL’s proposal. (Id.) The effects of the application of the tariff requested in the Petition at issue are not fully voluntary for all customers in that, whether or not FPL’s customers choose to participate or are able to participate in the SolarTogether program, all customers’ base rates will ultimately increase as a result of the SolarTogether program. The proposed use of the Fuel Clause as a method to temporarily avoid explicitly raising base rates does not appear to be consistent with the spirit of the Agreement.

Respectfully submitted,

J. R. Kelly
Public Counsel

s/Stephanie A. Morse
Stephanie A. Morse
Associate Public Counsel
Florida Bar No. 0068713

s/ Charles J. Rehwinkel
Charles J. Rehwinkel
Deputy Public Counsel
Florida Bar No. 0527599


Office of Public Counsel
c/o The Florida Legislature
111 W. Madison Street
Room 812
Tallahassee, FL 32399-1400

(850) 488-9330
Attorney for Florida's Citizens

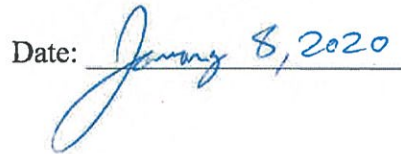
DECLARATION

I sponsored part of the answer to the Interrogatory from Staff's 1st Set of Interrogatories (No. 1) to the Office of Public Counsel in Docket No. PSC-20190061-EI, and hereby state my portion of the response is true and correct based on my personal knowledge and belief.

Under penalties of perjury, I declare that I have read the forgoing declaration and the interrogatory answer identified above, and the facts sponsored by me which are stated therein are true and correct to the best of my personal knowledge and belief.


Signature

James R. Dauphinais

Date: 

SACE's Response to Staff's First Set of Interrogatories
Nos. 1-2.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 59
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Jacob (1-2)

In responding to these Requests, SACE does not waive the foregoing objections, or the specific objections that are set forth in the responses to particular requests.

1. Please refer to the testimony of SACE witness Jacob, page 10, lines 20-21. In this testimony SACE conveys its support of FPL's proposed SolarTogether program. Does SACE also support approval of the SolarTogether tariff as filed in Exhibit MV-1, pages 1-6, of FPL witness Valle's direct testimony. If not, please identify what specific changes to the tariff should be made.

RESPONSE: SACE supports the SolarTogether tariff as filed in Exhibit MV-2 of FPL witness Valle's rebuttal testimony.

2. Please refer to the testimony of SACE witness Jacob, page 9, lines 15-21 and page 10, lines 1-18. Please clarify if the recommendations as to how FPL could improve its SolarTogether program are intended to apply to the Solar Together program and tariff being evaluated in this docket or to future filings?

RESPONSE: The purpose of the testimony is to compare and/or contrast FPL's proposed SolarTogether program design with established best practice criteria. This comparison will help inform the Commission on the suitability of the proposed program design and where enhancements may be warranted in this and/or future program expansions.

AFFIDAVIT

STATE OF GEORGIA)

COUNTY OF Georgia

I hereby certify that on this 30th day of September, 2019,

before me, an officer duly authorized in the State and County aforesaid to take

acknowledgments, personally, appeared

BRYAN A. JACOB

() who is personally known to me, or

☒ produced Georgia Dimeropoulos as identification and he/she acknowledged before me that he/she provided the answers to interrogatory numbers 1 and 2 from Staff's First Set of Interrogatories to Southern Alliance for Clean Energy (Nos. 1-2) in Docket No. 20190061-EI, and that the responses are true and correct based on his/her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 30th day of September, 2019.

Patricia A. Jones

Notary Public
State of Georgia, at Large

August 2, 2021

My Commission Expires



Vote Solar's Response to Staff's First Set of
Interrogatories No. 1.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 60
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Cox (1)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for approval of FPL SolarTogether program and tariff, by Florida Power & Light Company.	Docket No. 20190061-EI Date: October 2, 2019
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VOTE SOLAR'S RESPONSE TO STAFF'S FIRST INTERROGATORIES (NO. 1)

Vote Solar hereby responds to Staff's First Set of Interrogatories to Vote Solar (No. 1).

RESPONSE

1. Please refer to the testimony of Vote Solar witness Cox, pages 4-6. In this testimony witness Cox summarizes his testimony regarding the strengths and shortcomings of FPL's proposed SolarTogether program.
 - a. Does Vote Solar support approval of the SolarTogether tariff as filed in Exhibit MV-1, pages 1-6, of FPL witness Valle's direct testimony. If not, please identify what specific changes to the tariff should be made.

Vote Solar's Reponse:

Vote Solar does not support approval of the SolarTogether tariff as filed. These are the specific changes that that Vote Solar recommends to the tariff itself:

- An additional monthly subscription option for customers who are low income (defined as having income that is at 200% or less of the federal poverty level): Subscription credit shall equal the subscribing customer's retail rate for the first seven years of subscription, after which time the subscription credit shall default to the monthly subscription credit of general subscribers. This subscription option

is available first come first served to eligible customers up to 100 MW of capacity.

- An additional term for low income subscribers: "In no month shall the subscription charge exceed the subscription credit for subscribing low income customers."
 - Change the Special Provisions to replace paragraph beginning "Upon customer request" with: "FPL will retire all the renewable energy certificates (RECs) associated with customers' subscriptions."
- b. Are the recommended improvements outlined in witness Cox testimony to the design of the SolarTogether program intended to apply to the Solar Together program and tariff being evaluated in this docket or to future filings?

Vote Solar's Response:

Some recommended improvements are intended to apply to the current program and tariff and others are intended to apply to future filings. They are outlined below.

- Additional recommendations for the current program and tariff include:
 - See specific tariff changes outlined in Vote Solar response to OPC Interrogatory 1a, above.
 - The Commission should require FPL to consider additional market options such as power purchase agreements for any uncontracted capacity in the current phase.

- The Commission should require FPL to seek authorization for any changes it seeks to make to the currently proposed allocation of subscription capacity between residential/small commercial and large customers. FPL should be required to submit annual reports to the Commission on its progress in enrolling customers in the program, and the Commission should order FPL to engage in a robust stakeholder process to improve program offerings and outreach efforts if the capacity for any particular customer segment remains unfilled prior to allowing FPL to re-allocate unsubscribed capacity to other customer segments.
- The Commission should prohibit FPL from marketing subscriptions in SolarTogether as a comparable alternative to rooftop solar.
- Additional recommendations for any future phases of SolarTogether include:
 - The Commission should require FPL to consider additional market options such as power purchase agreements in any future phases of SolarTogether that the Company may propose.
 - The Commission should require FPL to incorporate a performance-based incentive that encourages FPL to promote low-income participation in future phases of the SolarTogether program.
 - The Commission should require FPL to evaluate the optimal quantity of solar capacity additions to determine how much solar capacity is in the public interest prior to approval of any future phases of SolarTogether.
 - The Commission should require FPL to consider the following improvements to its subscription offering in future phases:

- Incorporation of a time-varying rate that would better reflect the value of solar to the grid;
- The value of ancillary services from solar generation; and
- Requiring subscribers to enroll in time-of-use rates and/or demand-side management programs that would maximize benefits to the grid.

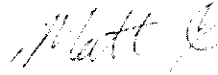
AFFIDAVIT

STATE OF GEORGIA

COUNTY OF FULTON

I hereby certify that on this 2nd day of October, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared DR. MATT COX, who is personally known to me, and acknowledged before me that he provided the answers to interrogatory numbers 1-11 from STATE'S FIRST SET OF INTERROGATORIES TO VOITH SOLAR (NO. 1) in Docket No. 19-00061-EL, and that the responses are true and correct based on his/her personal knowledge.

In witness whereof, I have hereunto set my hand and seal on the State and County aforesaid as of this 2nd day of October, 2019.



Notary Public
State of Florida - Large

My Commission Expires _____

61

Deposition of Terry Deason
taken on December 10, 2019.

Errata of Deposition completed on
January 6, 2020.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 61
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Deposition of Terry
Deason taken on December 10, 2019. Errata of
Deposition completed on January 6, 2...

<p>1 APPEARANCES: Page 2</p> <p>2 JENNIFER CRAWFORD, WALTER L. TRIERWEILER,</p> <p>3 KRISTEN SIMMONS, ESQUIRES, FPSC General Counsel's</p> <p>4 Office, 2540 Shumard Oak Boulevard, Tallahassee, Florida</p> <p>5 32399-0850, appearing on behalf of the Florida Public</p> <p>6 Service Commission Staff.</p> <p>7 MARIA MONCADA and WILLIAM COX, ESQUIRES, 700</p> <p>8 Universe Boulevard, Juno Beach, Florida 33408-0420, on</p> <p>9 behalf of Florida Power & Light Company.</p> <p>10 CHARLES REHWINKEL, DEPUTY PUBLIC COUNSEL, and</p> <p>11 STEPHANIE A. MORSE, ESQUIRE, Office of Public Counsel,</p> <p>12 c/o the Florida Legislature, 111 W. Madison Street, Room</p> <p>13 812, Tallahassee, Florida 32399-1400, appearing on</p> <p>14 behalf of the Citizens of the State of Florida.</p> <p>15</p> <p>16 ALSO APPEARING:</p> <p>17 TOM BALLINGER, Commission staff</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p>1 INDEX Page 3</p> <p>2 WITNESSES</p> <p>3 NAME: PAGE NO.</p> <p>4 TERRY DEASON</p> <p>5 Examination by Ms. Crawford 6</p> <p>6 Examination by Mr. Rehwinkel 46</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12 INDEX TO EXHIBITS</p> <p>13 NO. DESCRIPTION MARKED</p> <p>14</p> <p>15 No exhibits were marked for identification.</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23 *Huh-uh is a negative response</p> <p>24 *Uh-huh is a positive response</p> <p>25</p>
<p>1 DEPOSITION Page 4</p> <p>2 MS. CRAWFORD: Hi, everybody. This is</p> <p>3 Jennifer Crawford at the Commission. We're here</p> <p>4 for Terry Deason's deposition in the SolarTogether</p> <p>5 docket.</p> <p>6 If I could -- we're going to go ahead and take</p> <p>7 appearances and then -- let's start with the folks</p> <p>8 on the phone, if there's any appearances to be</p> <p>9 entered there. And if not, that's fine.</p> <p>10 Okay. For those who are listening in on the</p> <p>11 phone, if you could please put yourselves on mute,</p> <p>12 rather than hold. Please don't put us on hold.</p> <p>13 Your pretty hold music is not what we're here for</p> <p>14 today. We'd sure appreciate it.</p> <p>15 And then, if we could just go around the table</p> <p>16 for appearances.</p> <p>17 MR. BALLINGER: Tom Ballinger, Commission</p> <p>18 staff.</p> <p>19 MR. TRIERWEILER: Walt Trierweiler, Commission</p> <p>20 staff.</p> <p>21 MS. SIMMONS: Kristen Simmons, Commission</p> <p>22 staff.</p> <p>23 MS. MORSE: Stephanie Morse, M-o-r-s-e, Office</p> <p>24 of Public Counsel.</p> <p>25 MR. REHWINKEL: Charles Rehwinkel, Office of</p>	<p>1 Public Counsel. Page 5</p> <p>2 MR. COX: Will Cox, Florida Power & Light</p> <p>3 Company.</p> <p>4 MS. MONCADA: Maria Moncada, FPL.</p> <p>5 THE WITNESS: Terry Deason, Radey Law Firm.</p> <p>6 MS. CRAWFORD: Okay. And for the benefit of</p> <p>7 those on the phone, is everybody hearing us okay?</p> <p>8 Any difficulties?</p> <p>9 UNIDENTIFIED SPEAKER: No.</p> <p>10 MS. CRAWFORD: Okay. Great.</p> <p>11 Okay. So -- and also, just for the record,</p> <p>12 have there been any cross-notices of depositions in</p> <p>13 this matter?</p> <p>14 MR. REHWINKEL: We filed one today.</p> <p>15 MS. CRAWFORD: Okay.</p> <p>16 MR. REHWINKEL: This morning.</p> <p>17 MS. CRAWFORD: Okay.</p> <p>18 MR. REHWINKEL: In an abundance of caution.</p> <p>19 MS. CRAWFORD: Okay. Thank you.</p> <p>20 So, again, we're here for the deposition of</p> <p>21 FPL Witness Terry Deason. This deposition is being</p> <p>22 taken pursuant to notice and for the purposes of</p> <p>23 perpetuating expert testimony pursuant to the</p> <p>24 Florida rules.</p> <p>25 If you would, go ahead and swear in the</p>

<p style="text-align: right;">Page 6</p> <p>1 witness.</p> <p>2 THE COURT REPORTER: Raise your right hand.</p> <p>3 Whereupon,</p> <p>4 TERRY DEASON</p> <p>5 was called as a witness, having been first duly sworn to</p> <p>6 speak the truth, the whole truth, and nothing but the</p> <p>7 truth, was examined and testified as follows:</p> <p>8 EXAMINATION</p> <p>9 BY MS. CRAWFORD:</p> <p>10 Q And Mr. Deason, could you please state for the</p> <p>11 record your full name.</p> <p>12 A Yeah, it's James Terry Deason.</p> <p>13 Q And you've been deposed before.</p> <p>14 A Yes.</p> <p>15 MS. CRAWFORD: Okay. And so, if I ask a</p> <p>16 question and you need me to clarify it, please ask.</p> <p>17 If you need a break, please let me know and</p> <p>18 we'll be happy to take -- provide one.</p> <p>19 Same thing for the reporter; if you need a</p> <p>20 break, please signal and we'll be happy to do so.</p> <p>21 If you need to take a moment to refer to your</p> <p>22 testimony, please feel free to refresh yourself in</p> <p>23 that manner.</p> <p>24 I don't anticipate my questions will touch on</p> <p>25 confidentiality at all, but should they, I would</p>	<p style="text-align: right;">Page 7</p> <p>1 expect Counsel to signal and we can stop and figure</p> <p>2 out what the confidential portion is so we can make</p> <p>3 sure to observe confidentiality for that. Okay?</p> <p>4 And unless there's anything, we'll go ahead</p> <p>5 and get started.</p> <p>6 No?</p> <p>7 THE WITNESS: No.</p> <p>8 BY MS. CRAWFORD:</p> <p>9 Q Mr. Deason, could you please state your</p> <p>10 business address.</p> <p>11 A Yeah, it is 301 South Bronough Street,</p> <p>12 Suite 200, Tallahassee, Florida 32301.</p> <p>13 Q By whom are you employed?</p> <p>14 A The Radey Law Firm.</p> <p>15 Q And what's your position with Radey?</p> <p>16 A Consultant.</p> <p>17 Q And what are you --</p> <p>18 A Non-attorney consultant.</p> <p>19 Q Okay. Thank you.</p> <p>20 And what are your duties as a non-attorney</p> <p>21 consultant for Radey?</p> <p>22 A I provide consulting services for a number of</p> <p>23 different types of clients dealing with regulatory</p> <p>24 matters; primarily regulatory matters involving utility</p> <p>25 companies.</p>
<p style="text-align: right;">Page 8</p> <p>1 Q Okay. And you've been retained by FPL in the</p> <p>2 SolarTogether docket.</p> <p>3 A Yes.</p> <p>4 Q And for what purposes were you retained by FPL</p> <p>5 in this docket?</p> <p>6 A I was brought in to review the testimony filed</p> <p>7 by staff and by the Office of Public Counsel, provide</p> <p>8 input to FPL on that testimony, and then there was a</p> <p>9 decision made for me to file rebuttal testimony.</p> <p>10 Q Okay. And you filed rebuttal testimony, 25</p> <p>11 pages with one exhibit?</p> <p>12 A That is correct.</p> <p>13 Q And do you have any changes or modifications</p> <p>14 to that testimony or your exhibit at this time?</p> <p>15 A No.</p> <p>16 Q Okay. So, if I could refer you first -- first</p> <p>17 to Page 5 of your testimony and, at Lines 6 through 9,</p> <p>18 you state that, "The Commission's implementation of</p> <p>19 legislative policy and the promotion of renewables has</p> <p>20 evolved to appropriately recognize the role of large-</p> <p>21 scale universal solar;" that's correct?</p> <p>22 A Yes.</p> <p>23 Q Okay. What do you mean by "large-scale</p> <p>24 universal solar"? What's your understanding of that</p> <p>25 term?</p>	<p style="text-align: right;">Page 9</p> <p>1 A I think, to some degree, that term is maybe</p> <p>2 defined by the words there. I'm -- I'm referring to</p> <p>3 solar facilities that are larger than what would</p> <p>4 normally be anticipated for customers to install on</p> <p>5 their own roof.</p> <p>6 They are large-enough of a size that there are</p> <p>7 certain economies and efficiencies that are obtained by</p> <p>8 achieving that style -- that -- that size. And these</p> <p>9 facilities are constructed by regulated utilities for</p> <p>10 the benefit of their customers.</p> <p>11 Q Okay. Is there any particular megawatt</p> <p>12 production that you would associate with that term,</p> <p>13 "large-scale universal solar"?</p> <p>14 A Well, it seems to be that the majority of</p> <p>15 these type facilities are in the 74-, 74-and-a-half-</p> <p>16 megawatt range. And that seems to be typical. So, that</p> <p>17 certainly would fit into my characterization of large-</p> <p>18 scale solar.</p> <p>19 Q Okay. And can you give me some examples where</p> <p>20 the Commission has recognized the role of large-scale</p> <p>21 universal solar?</p> <p>22 A I can't point to specific dockets. I just</p> <p>23 know that the Commission has entertained proposals and</p> <p>24 had made some decisions. I know that there have been</p> <p>25 some proposals concerning SoBRA. I think those types of</p>

<p style="text-align: right;">Page 10</p> <p>1 facilities would be characterized as large-scale 2 universal solar.</p> <p>3 Q Okay. And you're referring to solar base-rate 4 adjustment?</p> <p>5 A Yes, that would be correct.</p> <p>6 Q And, to your knowledge, the SoBRAs that the 7 Commission has entertained -- have those been through 8 independent, freestanding dockets, or have those been in 9 connection with rate settlements?</p> <p>10 A You know, I know that some have been through 11 rate settlements. It -- some could have been 12 independent. I'm just not sure.</p> <p>13 Q Okay. Thank you.</p> <p>14 Still on Page 5 of your testimony, if you'd 15 take a look at Lines 12 through 15. And there, you 16 recognize the Commission's policy of considering the 17 overall cost-effectiveness to the general body of 18 ratepayers, correct?</p> <p>19 A Yes.</p> <p>20 Q And you describe an evolution driven by some 21 customers who cannot or -- or choose not to invest in 22 their own private solar facilities.</p> <p>23 Could you briefly describe some circumstances 24 why a customer cannot or would not choose to invest in 25 their own private solar facilities?</p>	<p style="text-align: right;">Page 11</p> <p>1 A I think there could be a myriad of reasons 2 why. You know, one of the most basic reasons would be 3 that -- let's take a residential customer, for example. 4 Perhaps they live in a building that does not allow 5 solar, such as a multi-family dwelling or an apartment 6 building, something of that nature. That sometimes 7 causes problems.</p> <p>8 Even if it's a single-family residence, there 9 may not be adequate roof structure or there may not be 10 adequate positioning of the roof to take full advantage 11 of the solar rays at the right angles and directions and 12 things of that nature. That -- that could be a 13 hindrance for some -- for some customers.</p> <p>14 Some customers may be economically challenged 15 to where they would find it difficult to come up with 16 the investment to -- in solar to -- to put those in 17 their -- on their own -- on their own home.</p> <p>18 Other customers may not be economically 19 challenged, but they just don't understand or see the 20 benefits of solar or they just don't want the esthetics 21 of that.</p> <p>22 So, I mean, the reasons could -- could be a 23 whole range of reasons.</p> <p>24 Q Okay. In your mind, in reference to this 25 docket, is there any difference between a customer who</p>
<p style="text-align: right;">Page 12</p> <p>1 cannot invest in solar versus a customer who chooses not 2 to invest in their own solar?</p> <p>3 A You know, I've not thought about that, as to 4 whether that distinction makes a difference for the 5 issues that -- as I understand them, in this case. So, 6 at this point, I just don't really have an answer for 7 that.</p> <p>8 Q Okay. That's fine.</p> <p>9 On Page 6 of your testimony, Lines 22 and 23, 10 you state that, "Regulation needs to be open to new and 11 innovative ways to capture benefits for customers." Do 12 you mean all customers there or do you mean only the 13 ones who cannot or choose not to invest in solar?</p> <p>14 A I'm -- for purposes of this sentence in my 15 testimony, I'm referring to all customers.</p> <p>16 Q All customers.</p> <p>17 And on Page 7, did --</p> <p>18 A Now -- now, let me --</p> <p>19 Q No -- please.</p> <p>20 A -- clarify for a moment.</p> <p>21 Q Absolutely.</p> <p>22 A I'm using that in terms of all customers, but 23 realizing that some customers are in different 24 situations and some may value solar more than others or 25 see the benefits either from an economic perspective or</p>	<p style="text-align: right;">Page 13</p> <p>1 from a societal, environmental perspective, so -- but 2 generally, I'm talking about all customers. Regulation 3 certainly needs to protect all customers and provide 4 benefits to all customers.</p> <p>5 Q Gotcha. Thank you.</p> <p>6 On Page 7 of your testimony, Lines 2 through 7 4, you mention that, "SolarTogether is designed to meet 8 customer expectations that did not exist in the past to 9 the extent that they do today." What customer 10 expectations are you referring to?</p> <p>11 A I'm generally referring to customers who put 12 value on energy that is produced from a renewable 13 source. And certainly, solar would fit into that 14 category. So, that's generally what I'm referring to.</p> <p>15 Q Okay. Is there anything else? No? Okay.</p> <p>16 A No, that's -- that's primarily the purpose of 17 that sentence.</p> <p>18 Q Same page, just following on there, Lines 4 19 through 6, you mention, "There are elements designed to 20 make the program successful, but haven't been previously 21 implemented in a Florida-PSC-approved program." What 22 elements are you talking about there?</p> <p>23 A Well, I'm primarily referring to the elements 24 that, I think, is the subject of Staff Witness Hinton's 25 testimony, and some of the things that are different</p>

<p style="text-align: right;">Page 14</p> <p>1 with SolarTogether than maybe have been considered in 2 some of the other proposals.</p> <p>3 It is a -- a proposal where there are 4 voluntary participants who receive -- who are required 5 to make certain payments and then receive certain 6 benefits. And then there are residual benefits, then, 7 that are shared with a general body of customers.</p> <p>8 So, I think maybe that's a little bit of a 9 different nuance than what has been typically 10 experienced in the past.</p> <p>11 Q Okay. Are -- are part of these elements also 12 things like customer satisfaction?</p> <p>13 A Well, I think that -- yes, that's part of 14 that. There are -- customers now have -- not all 15 customers, but maybe a great deal of customers have 16 motivations to see development of more renewable energy 17 and a desire to have their generation needs, their 18 energy needs, met either a hundred percent or -- or at 19 least a higher percentage from renewable sources.</p> <p>20 Q Would those elements include things like 21 increasing fuel diversity on FPL's portfolio?</p> <p>22 A Well, I'm primarily referring here to the -- 23 to the customer's perspective, but I think, from an 24 overall regulatory perspective and from an overall 25 policy perspective for the state of Florida and</p>	<p style="text-align: right;">Page 15</p> <p>1 Florida's policy of promoting renewable energy, things 2 like increasing fuel diversity would be one of the 3 considerations.</p> <p>4 Q Still on that page, at Line 12, I believe it 5 is, you mention that, "There are broad policy 6 considerations that should be used in determining 7 whether SolarTogether is in the public interest." What 8 are those considerations?</p> <p>9 A Well, if you will permit me, I'll just kind of 10 look at my testimony.</p> <p>11 Q That's fine.</p> <p>12 A One is to protect customers from cross- 13 subsidizations and undue preferences. And my discussion 14 of that begins on Page 7 at Line 16.</p> <p>15 And, of course, we already mentioned earlier 16 that the requirement that programs should be cost- 17 effective -- I would think that would be a 18 consideration.</p> <p>19 And then another is the policy of the state of 20 Florida to promote renewable energy -- that would be a 21 consideration.</p> <p>22 And another consideration would be the need 23 for regulation to be responsive to the needs of 24 customers and to provide options where appropriate. And 25 that is found on Page 8 of my testimony.</p>
<p style="text-align: right;">Page 16</p> <p>1 Q In his testimony, Witness -- FPL Witness Valle 2 indicates that the top driver for customer interest in 3 the community's solar program is electric-bill 4 reductions. Do you agree?</p> <p>5 A I have no basis to agree or disagree with his 6 statement. I can tell you from my experience as a 7 former commissioner and being around regulation that 8 bill impacts is certainly -- that is something -- 9 something that is ever-present on the minds of, if not 10 all, the vast majority of customers.</p> <p>11 Q Okay. But that's not necessarily the top 12 driver, in your mind, for this program?</p> <p>13 A No, I have no -- I don't know that I have 14 really tried to characterize what are the primary 15 drivers or no. I think the economics is -- certainly 16 would be a motivation for customers to volunteer to 17 participate in the program. I think that would be a -- 18 a driver. I don't know that I have determined that it 19 is the key driver, but I would agree that it is a 20 significant driver.</p> <p>21 Q Okay.</p> <p>22 A Another driver would be the desires of certain 23 customers to have a -- either all or a higher percentage 24 of their energy consumption -- have it originate from 25 renewable sources.</p>	<p style="text-align: right;">Page 17</p> <p>1 Q Okay. Still on Page 7, kind of roughly 2 Lines 16 through 23, you discuss the policy of 3 protecting customers from cross-subsidization. You 4 describe it as a do-no-harm approach to rate-making.</p> <p>5 And I'm going to ballpark the numbers because 6 I'm -- this is -- really isn't about the numbers, per 7 se, but I believe SolarTogether is estimated to produce 8 about \$249 million in benefits, roughly?</p> <p>9 A On a net present value basis, I think that is 10 correct.</p> <p>11 Q Okay.</p> <p>12 A I seem to recall seeing in an exhibit to one 13 of the other witnesses' testimony -- which I think 14 there's a calculation there, but -- I mean, if you're 15 not going to hold me to 249 --</p> <p>16 Q No.</p> <p>17 A Okay.</p> <p>18 Q Ballpark, subject to check, all those good 19 disclaimers.</p> <p>20 A All right.</p> <p>21 Q And again, subject to check, I believe it's 22 roughly about 112 million, or 45 percent, is allocated 23 to the general body of ratepayers. Does that sound 24 consistent --</p> <p>25 A That does --</p>

<p style="text-align: right;">Page 18</p> <p>1 Q -- with your knowledge? Okay.</p> <p>2 A -- sound consistent, yes.</p> <p>3 Q And so, the other 55 percent goes to the</p> <p>4 participants, roughly.</p> <p>5 A That is correct.</p> <p>6 Q Okay. So, as compared to the total benefits</p> <p>7 of the program, 249 million, thereabouts, the general</p> <p>8 body of ratepayers could be said to receive a reduced</p> <p>9 number of benefits from that total, correct?</p> <p>10 A No, I wouldn't --</p> <p>11 Q In other words, the 249 is greater than the</p> <p>12 112.</p> <p>13 A Well, mathematically, that's correct, but I</p> <p>14 wouldn't agree with your characterization --</p> <p>15 Q Okay.</p> <p>16 A -- that it's a reduced benefit. You have to</p> <p>17 look at what the participants are required to pay up</p> <p>18 front to allow them to participate and to receive the</p> <p>19 benefits that -- that inure to them as a result of</p> <p>20 their -- of their payments. So, all that has to be</p> <p>21 considered.</p> <p>22 So, I wouldn't characterize it as reduced, but</p> <p>23 to the extent that 45 percent is less than 55, I agree</p> <p>24 with that.</p> <p>25 Q Okay. And so, in terms of the allocation of</p>	<p style="text-align: right;">Page 19</p> <p>1 the benefits to the general body of ratepayers, do you</p> <p>2 agree that that allocation still results in a do-no-harm</p> <p>3 approach to ratemaking?</p> <p>4 A Yes.</p> <p>5 Q Okay. And what's the basis for that?</p> <p>6 A Because there -- there are net benefits for</p> <p>7 all customers, so there's no harm to the general body of</p> <p>8 customers.</p> <p>9 Q Would it be correct to characterize that</p> <p>10 overall allocation as an incremental cost of the</p> <p>11 program?</p> <p>12 A No, it would be an incremental benefit of the</p> <p>13 program.</p> <p>14 Q Okay. So, you would not characterize the</p> <p>15 program as having an overall reduction in benefits --</p> <p>16 I'm sorry. Let me rephrase that.</p> <p>17 Would it be correct to say that there's an</p> <p>18 overall reduction in benefits that would be considered</p> <p>19 as an incremental benefit? Is that the same -- is -- is</p> <p>20 it just semantics?</p> <p>21 A Well, I'm not sure I understand your</p> <p>22 question --</p> <p>23 Q Okay.</p> <p>24 A -- so --</p> <p>25 Q Okay. Well, maybe help me understand what the</p>
<p style="text-align: right;">Page 20</p> <p>1 incremental benefits of the SolarTogether program are,</p> <p>2 just high level.</p> <p>3 A Well, the incremental benefits are the -- the</p> <p>4 benefits that exist absent SolarTogether. So, the</p> <p>5 incremental benefits would be the 245 million, give or</p> <p>6 take, that you've identified in your question.</p> <p>7 Q Okay. At Line 23 on Page 7, and it carries</p> <p>8 through to Line 2 on Page 8, you state that,</p> <p>9 "SolarTogether exceeds the do-no-harm standard and</p> <p>10 provides additional assurances to the general body of</p> <p>11 customers." Are these additional -- what -- what are</p> <p>12 these additional assurances?</p> <p>13 A It is the \$245 million that gets shared 55/45.</p> <p>14 And then, too, there's the benefit of the fact that</p> <p>15 there is some mitigation of risks associated with</p> <p>16 customers' desiring more renewable energy to remain on</p> <p>17 the system and contribute to fixed costs.</p> <p>18 Q Okay. So, are some of these additional</p> <p>19 assurances that are associated with the SolarTogether</p> <p>20 program -- are any of those types of assurances that</p> <p>21 general body of customers don't have under traditional</p> <p>22 rate-making as -- as discussed in Witness Hinton's</p> <p>23 testimony?</p> <p>24 A I think I could agree with -- with that, but</p> <p>25 with this clarification, that what's being proposed here</p>	<p style="text-align: right;">Page 21</p> <p>1 provides benefits, and if the SolarTogether program</p> <p>2 is -- does not go forward within -- there would be</p> <p>3 benefits that would be left on the table. So, I think</p> <p>4 that also needs to be a consideration.</p> <p>5 Q Gotcha.</p> <p>6 Still on Page 8 of your testimony, Lines 4</p> <p>7 through 12, you discuss the Commission's policy of</p> <p>8 promoting renewable energy. So, let's say, as a</p> <p>9 hypothetical, the Commission were to approve the cost</p> <p>10 recovery of some or all of the proposed solar additions</p> <p>11 at issue in this docket, but not the associated</p> <p>12 tariff -- just a hypothetical.</p> <p>13 In other words, the Commission made a prudence</p> <p>14 finding as to those facilities, but didn't approve the</p> <p>15 tariff. Would the Commission still be supporting the</p> <p>16 policy of promoting renewable energy?</p> <p>17 A Well, I guess I'm having some difficulty with</p> <p>18 your -- with the premise of your question that the</p> <p>19 Commission would, in essence, declare the investment to</p> <p>20 be prudent, but not approve the tariff.</p> <p>21 So, normally, with the declaration of</p> <p>22 prudence, there is at least the anticipation, if not the</p> <p>23 requirement, that there would be cost recovery. And for</p> <p>24 there to be cost recovery, if it's not specified within</p> <p>25 a specific tariff, then I suppose it would have to wait</p>

<p style="text-align: right;">Page 22</p> <p>1 until there would be a rate proceeding.</p> <p>2 So, there would be a delay in that cost</p> <p>3 recovery. So, you know, perhaps it would still be</p> <p>4 promoting renewable, but I don't think it would be to</p> <p>5 the extent that it would be if the SolarTogether program</p> <p>6 were approved by the Commission.</p> <p>7 Q On Pages 9 and 10 of your testimony, you</p> <p>8 mention that the SolarTogether program provides</p> <p>9 incremental benefits and net new benefits for all</p> <p>10 customers.</p> <p>11 What baseline are you using as a comparison to</p> <p>12 determine the net new incremental benefits?</p> <p>13 A I'm sorry. You mentioned Pages 9 and 10. Do</p> <p>14 you have a line reference that would help me?</p> <p>15 Q It's just the general discussion.</p> <p>16 A Uh-huh.</p> <p>17 Q I can find -- give me a second.</p> <p>18 MR. BALLINGER: 7 -- 16 through --</p> <p>19 MS. CRAWFORD: Is it Line 18?</p> <p>20 You talk about net new benefits at Line 18 on</p> <p>21 Page 10.</p> <p>22 MR. BALLINGER: Starts on 16, on Line 9 [sic].</p> <p>23 MS. CRAWFORD: And incremental benefits start</p> <p>24 on Page on 9 at --</p> <p>25 MR. BALLINGER: Line 18.</p>	<p style="text-align: right;">Page 23</p> <p>1 MS. CRAWFORD: -- Line 18.</p> <p>2 THE WITNESS: Okay. I think I have a general</p> <p>3 understanding of your -- your references there to</p> <p>4 my testimony. So, if you could, repeat your</p> <p>5 question, please.</p> <p>6 BY MS. CRAWFORD:</p> <p>7 Q Okay. So, what is the baseline you're using</p> <p>8 as a comparison to determine the net new incremental</p> <p>9 benefits that are discussed here?</p> <p>10 A It would be a comparison between SolarTogether</p> <p>11 on a going-forward basis and no-SolarTogether on a</p> <p>12 going-forward basis.</p> <p>13 Q Can you give me some examples of what these</p> <p>14 new incremental benefits are or would be.</p> <p>15 A Yeah, it would be the -- the economic benefits</p> <p>16 as determined by the cumulative present value of revenue</p> <p>17 requirements analysis.</p> <p>18 Another would be -- something I alluded to</p> <p>19 earlier would be the potential mitigations of risk</p> <p>20 associated with customers leaving the system or reducing</p> <p>21 their demands and choosing alternatives so this program</p> <p>22 would mitigate that risk.</p> <p>23 Q And how does the tariff ensure that these net</p> <p>24 new benefits materialize?</p> <p>25 A Did you say assure that they materialize? Is</p>
<p style="text-align: right;">Page 24</p> <p>1 that your question?</p> <p>2 Q Yeah, well -- well, I'm assuming the tariff is</p> <p>3 designed to help materialize these benefits. What are</p> <p>4 the -- what are the elements in the tariff that help</p> <p>5 make sure that happens?</p> <p>6 A It would be the elements where participants</p> <p>7 choose to participate and then would be obligated to</p> <p>8 make payments that covers -- under the revised filing,</p> <p>9 it would recover more than a hundred percent of the</p> <p>10 costs of the facilities.</p> <p>11 So, by approving that tariff, that certainly</p> <p>12 facilitates the benefits that would be derived</p> <p>13 therefrom.</p> <p>14 Q You're generally familiar with FPL's ten-year</p> <p>15 site plan?</p> <p>16 A I know it exists. I've reviewed a number of</p> <p>17 them over the years, but I don't have any -- the</p> <p>18 specifics of that ten-year site plan -- I'm not familiar</p> <p>19 with that.</p> <p>20 Q Okay. Well, unfortunately, mine is up on my</p> <p>21 desk.</p> <p>22 MR. BALLINGER: Subject to check.</p> <p>23 MS. CRAWFORD: Yeah.</p> <p>24 BY MS. CRAWFORD:</p> <p>25 Q And I'm -- so, I'm going to ask these, kind of</p>	<p style="text-align: right;">Page 25</p> <p>1 subject to check. If you're comfortable answering them,</p> <p>2 that's great, but I understand -- I don't have,</p> <p>3 unfortunately, the ten-year site plan with me at the</p> <p>4 moment.</p> <p>5 Is it -- is it correct to say that the idea</p> <p>6 between the ten-year site plan is to present FPL's</p> <p>7 current plans to -- and I'll -- I'll just quote it --</p> <p>8 "... Augment and enhance its electric-generation</p> <p>9 capability as part of its efforts to meet FPL's</p> <p>10 projected incremental resource needs for the 2019</p> <p>11 through 2028 time period"?</p> <p>12 A That sounds correct to me.</p> <p>13 Q For -- for the current one, the 2019.</p> <p>14 Do you have any knowledge whether there are</p> <p>15 planned or prospective solar generating facilities</p> <p>16 included as part of FPL's ten-year site plan?</p> <p>17 A My understanding is that it does and I would</p> <p>18 be surprised if it does not.</p> <p>19 Q And do you know whether any of the facilities</p> <p>20 that are the subject of the SolarTogether petition are</p> <p>21 also listed in FPL's current ten-year site plan?</p> <p>22 A I don't have that knowledge or that</p> <p>23 specificity.</p> <p>24 Q Would you know the witness that would probably</p> <p>25 be the correct one to direct that question to? No.</p>

<p style="text-align: right;">Page 26</p> <p>1 Okay.</p> <p>2 A There -- there are a number of FPL witnesses</p> <p>3 and -- and -- but I can't tell you off the top of my</p> <p>4 head --</p> <p>5 Q Okay.</p> <p>6 A -- which one would be best.</p> <p>7 Q Okay. So, with the subject-to-check</p> <p>8 assumption that there are solar facilities appearing in</p> <p>9 FPL's current ten-year site plan, would you characterize</p> <p>10 the SolarTogether facilities, if approved, as</p> <p>11 accelerating the implementation of solar as compared to</p> <p>12 what's projected in the ten-year site plan?</p> <p>13 A Well, not having that degree of knowledge</p> <p>14 without specifics, I can't say, but one would have to</p> <p>15 just look at the ten-year site plan and see the time</p> <p>16 periods that are provided there and compare that to the</p> <p>17 time periods that are set out in the SolarTogether</p> <p>18 program.</p> <p>19 And if what is being proposed by SolarTogether</p> <p>20 would bring incremental solar facilities online sooner,</p> <p>21 I would say that, yes -- the answer to your question</p> <p>22 would be yes, but I don't have the factual basis since I</p> <p>23 don't have --</p> <p>24 Q Understood.</p> <p>25 A -- that -- to make that comparison at this</p>	<p style="text-align: right;">Page 27</p> <p>1 point.</p> <p>2 Q If SolarTogether were to not be approved by</p> <p>3 the Commission, do you believe the solar facilities in</p> <p>4 the ten-year site plan would still remain as part of</p> <p>5 FPL's current plan, to the best of your knowledge?</p> <p>6 A Let me answer your question this way -- and I</p> <p>7 hope it would be responsive. And if it's not, please</p> <p>8 let me know. I think, as a regulated utility, one that</p> <p>9 takes their role seriously, as does FPL, that they are</p> <p>10 going to be looking at all types of generation</p> <p>11 additions, all types of technologies, and they will make</p> <p>12 decisions as to what meets the needs of customers in a</p> <p>13 cost-effective way.</p> <p>14 I think, then, their plans would also consider</p> <p>15 some of the other policies of the state of Florida in</p> <p>16 terms of promoting renewable energy and achieving some</p> <p>17 other objectives like fuel diversity and things of that</p> <p>18 nature.</p> <p>19 So, I would anticipate that FPL -- and in</p> <p>20 fact, all regulated utilities in Florida -- that they</p> <p>21 would take all of that into consideration and come</p> <p>22 forward with the best plan possible, realizing that it</p> <p>23 is just a plan and that it will -- while it's a ten-year</p> <p>24 plan, it will change from year to year.</p> <p>25 Q Does the SolarTogether petition, if approved,</p>
<p style="text-align: right;">Page 28</p> <p>1 compared to not -- not having SolarTogether approved --</p> <p>2 does that evaluate the acceleration of solar at all?</p> <p>3 A I'm sorry -- does -- I --</p> <p>4 MS. CRAWFORD: Let's go off the record.</p> <p>5 THE WITNESS: Does the decision not to</p> <p>6 approve --</p> <p>7 MS. CRAWFORD: Let's go off the record for a</p> <p>8 second.</p> <p>9 THE WITNESS: Okay.</p> <p>10 (Discussion off the record.)</p> <p>11 BY MS. CRAWFORD:</p> <p>12 Q All right. So, earlier, we were discussing</p> <p>13 the roughly \$249 million associated -- of benefits</p> <p>14 associated with the SolarTogether program.</p> <p>15 Those benefits don't compare SolarTogether as</p> <p>16 to the solar that's listed in the ten-year site plan; is</p> <p>17 that correct? It's basically SolarTogether versus</p> <p>18 normal fossil-fuel generation.</p> <p>19 A Here's -- here's my understanding: that it is</p> <p>20 a comparison of SolarTogether to a scenario where there</p> <p>21 is no-SolarTogether. And that's how the benefits are</p> <p>22 calculated.</p> <p>23 Q Okay.</p> <p>24 A So, it's either with or -- it's comparing</p> <p>25 with -- a scenario with SolarTogether to a scenario</p>	<p style="text-align: right;">Page 29</p> <p>1 without SolarTogether. And what is encompassed in the</p> <p>2 scenario without SolarTogether -- I can't tell you</p> <p>3 what's contemplated there.</p> <p>4 Q Okay. All right. So, let's go to Pages 13</p> <p>5 and 14 of your testimony. And just in a general sense,</p> <p>6 this is where you're discussing strategic benefits to</p> <p>7 consider regarding the SolarTogether program, correct?</p> <p>8 A Okay.</p> <p>9 Q Is one of the benefits an increase in fuel</p> <p>10 diversity? I think we touched on that earlier.</p> <p>11 A Yes.</p> <p>12 Q Okay. And you state that promoting fuel</p> <p>13 diversity is a policy supported by the Commission?</p> <p>14 A Yes, I would agree with that and it is -- it's</p> <p>15 also in statute as well.</p> <p>16 Q Okay. And so, if SolarTogether were to be</p> <p>17 approved, you believe that would be an increase in fuel</p> <p>18 diversity for FPL?</p> <p>19 A Yes, it would.</p> <p>20 Q Do you know the magnitude of this increase?</p> <p>21 A I do not.</p> <p>22 Q Do you know if there are any witnesses who</p> <p>23 might be able to describe or quantify that for us --</p> <p>24 A I do not --</p> <p>25 Q -- in this proceeding?</p>

<p style="text-align: right;">Page 30</p> <p>1 A -- know.</p> <p>2 MS. CRAWFORD: Okay. One moment.</p> <p>3 (Discussion off the record.)</p> <p>4 BY MS. CRAWFORD:</p> <p>5 Q If the Commission were to approve the co- --</p> <p>6 and again, this is the hypothetical where, just for</p> <p>7 hypothetical purposes, we're going to assume the</p> <p>8 Commission approves the prudence of the SolarTogether</p> <p>9 facilities, but not -- does not approve the tariff.</p> <p>10 If the prudence was approved for those</p> <p>11 facilities, would the Commission still be promoting the</p> <p>12 policy of increased fuel diversity?</p> <p>13 A Yes, with this qualifier: if the decision was</p> <p>14 such that it would be a sound basis upon which FPL could</p> <p>15 go forward with the -- the solar facilities as</p> <p>16 contemplated.</p> <p>17 Q On Page 13 of your testimony -- referring you</p> <p>18 to Lines 5 through 8, please -- you state that the novel</p> <p>19 elements of the SolarTogether program are, in large</p> <p>20 part, necessitated by the strong desire of some</p> <p>21 customers to increase solar generation and decrease</p> <p>22 reliance on fossil fuels.</p> <p>23 A Yes.</p> <p>24 Q And you -- you characterize this as a -- as a</p> <p>25 strong desire.</p>	<p style="text-align: right;">Page 31</p> <p>1 Would you also describe that desire as a need?</p> <p>2 In other words, is the approval of the SolarTogether</p> <p>3 facilities necessary to provide electricity to those</p> <p>4 customers? If SolarTogether doesn't get approved,</p> <p>5 they're still going to be able to flip a switch and have</p> <p>6 the lights come on, they're still going to have the</p> <p>7 electricity they need to run their operations and so</p> <p>8 forth.</p> <p>9 A I don't think it's an issue of whether there's</p> <p>10 going to be reliable service with or without</p> <p>11 SolarTogether. I think that there will be reliable</p> <p>12 service.</p> <p>13 The question is -- for those customers that</p> <p>14 are motivated by this desire to have more renewable</p> <p>15 generation, the question is how do they meet that</p> <p>16 desire. They can choose to stay on FPL's system and,</p> <p>17 perhaps, participate in some programs, which I don't</p> <p>18 think meets the needs as -- as directly as</p> <p>19 SolarTogether; or they could put in their own solar</p> <p>20 facilities and, to that extent, bypass the FPL system.</p> <p>21 And that's one of the risks that I think</p> <p>22 SolarTogether helps mitigate because SolarTogether</p> <p>23 provides an economic benefit to participants and it also</p> <p>24 gives to participants a fulfillment of their desire to,</p> <p>25 in fact, have higher energy use from a renewable source</p>
<p style="text-align: right;">Page 32</p> <p>1 and a way to be able to demonstrate that.</p> <p>2 As being a voluntary participant in the</p> <p>3 program, it can be quantified and demonstrated to the</p> <p>4 world, to the extent those customers deem that</p> <p>5 appropriate as part of their business plan or their</p> <p>6 internal ethics as in regard to promoting environmental</p> <p>7 measures or fighting global warming -- whatever those</p> <p>8 customers' motivations are, SolarTogether helps them</p> <p>9 achieve those.</p> <p>10 Q And actually, at Page 23 of your testimony --</p> <p>11 and I believe this is the section where you're</p> <p>12 addressing OPC Witness Dauphinais' testimony and your</p> <p>13 criticisms of his testimony, specifically Lines 1</p> <p>14 through 4.</p> <p>15 MS. MONCADA: I'm sorry, Jennifer. Lines --</p> <p>16 MS. CRAWFORD: Lines 1 through 4 on Page 23.</p> <p>17 BY MS. CRAWFORD:</p> <p>18 Q And -- and there, you state that, "Among the</p> <p>19 many advantages of large-scale universal solar is the</p> <p>20 retention of loads of these customers and the</p> <p>21 contributions towards the fixed costs of all customers."</p> <p>22 So, these are the customers you're talking about.</p> <p>23 A Yes.</p> <p>24 Q And your concerns about retaining their loads</p> <p>25 on the system.</p>	<p style="text-align: right;">Page 33</p> <p>1 A Yes.</p> <p>2 Q Okay. And by "these customers," are you</p> <p>3 talking about all the participants of the program? Are</p> <p>4 you talking about primarily commercial/industrial</p> <p>5 customers?</p> <p>6 A I'm not making a distinction. I would think</p> <p>7 that customers desiring more renewable generation</p> <p>8 probably would cover all customer classes. And it could</p> <p>9 include residential, commercial, industrial.</p> <p>10 Q Okay. And in your opinion, if SolarTogether</p> <p>11 is denied -- well, you testify, you believe these</p> <p>12 customers would likely seek other alternatives outside</p> <p>13 of the advantages provided by large-scale universal</p> <p>14 solar, correct?</p> <p>15 A I think that's a legitimate risk, yes.</p> <p>16 Q Okay. What -- what alternatives do you</p> <p>17 believe they'd seek?</p> <p>18 A The most direct and probably the biggest</p> <p>19 threat would be to construct their own solar facilities</p> <p>20 and basically displace energy that they were re- -- were</p> <p>21 previously receiving through FPL's system by their own</p> <p>22 generation. I think that would be the -- the biggest</p> <p>23 threat.</p> <p>24 Q Okay. And -- and strictly to your knowledge,</p> <p>25 have any of these customers stated they would seek these</p>

<p style="text-align: right;">Page 34</p> <p>1 alternatives should SolarTogether not be approved by the 2 Commission?</p> <p>3 A I've not -- had no conversations with any of 4 these customers. So, I can't say that.</p> <p>5 Q Okay. Do you have any reason to believe they 6 would create a situation where they would just 7 disconnect from FPL altogether?</p> <p>8 A Here again, I think that would be unlikely 9 because there's a certain reliability component of 10 service, and I would think that, before there would be 11 an actual disconnection, there would have to be certain 12 assurances that that customer had adequate resources and 13 capacity to meet their needs at all times.</p> <p>14 But I think that where the risk comes in is 15 where there's a significant amount of kilowatt hours 16 that are generated by solar facilities and are not being 17 received through the -- through FPL's meter. And that's 18 where the loss of contribution would come in.</p> <p>19 Q How would you quantify the risk of loss of 20 load if the SolarTogether program isn't approved?</p> <p>21 A I -- I cannot put a number in terms of it is 22 anticipated that a certain amount of megawatts would be 23 lost. All I can tell you is that I deem it a 24 significant risk.</p> <p>25 And all one has to do is look at the improving</p>	<p style="text-align: right;">Page 35</p> <p>1 economics of solar. What makes it cost-effective for 2 regulated utilities means that it is potentially an 3 attractive alternative for other entities as well, 4 particularly larger customers who could obtain some of 5 the economies of -- in putting in their own large 6 system.</p> <p>7 So, I can't quantify it, but I can attest it 8 is my belief that it is real and it is growing.</p> <p>9 Q Would you agree that the Commission has 10 addressed concerns regarding load retention in the past?</p> <p>11 A Yes.</p> <p>12 Q Okay. And off the top of your head, what -- 13 in what ways or in what dockets has the Commission 14 addressed loss-of-load risk?</p> <p>15 A Well, I'm going off my memory, but there's 16 been a long history of load retention, particularly 17 for -- for gas utilities and gas customers. And that's 18 not surprising when you look at the fact that many gas 19 customers -- their choice to use natural gas is a 20 choice, and that they, perhaps, could have alternatives 21 in terms of fuel switching, in terms of what -- their 22 use of natural gas. And so, the Commission has looked 23 at that in a number of situations for gas utilities.</p> <p>24 I would analogize that, to some extent -- and 25 what we're facing here -- as to, what has been</p>
<p style="text-align: right;">Page 36</p> <p>1 historically the case for gas customers and the 2 opportunity to fuel-switch, we're seeing now in 3 electricity -- which we've never seen before -- because 4 of the advent of cost-effective solar, and that, for 5 some customers, it could be analogous to fuel-switching 6 for gas because they can -- they can construct their own 7 solar facilities.</p> <p>8 So -- so, yeah, gas utilities -- there has 9 been some situations for electric utilities, while it 10 hasn't been going on as long for the gas, but there's 11 been efforts to approve tariffs. I think one is the 12 CISR tariffs, Commercial Industrial Service Rider -- I'm 13 not sure -- oh, I'm get- -- okay.</p> <p>14 Q You were anticipating --</p> <p>15 A I'm getting -- I'm getting a thumbs-up on that 16 one, C-I-S-R.</p> <p>17 Q Yeah.</p> <p>18 A And it has long been acknowledged that 19 retaining certain customers and the benefits they 20 provide to the system as a whole -- that that is 21 something that regulation needs to be aware of and, 22 where appropriate, to allow flexibility in tariffs to 23 retain that load and provide benefits for all customers.</p> <p>24 Q Okay. And -- and on that, is it your 25 understanding that FPL actually has what you call the</p>	<p style="text-align: right;">Page 37</p> <p>1 CISR rate? It's Commercial Industrial Service Rider.</p> <p>2 A My understanding is FPL does have that rate.</p> <p>3 MS. CRAWFORD: And with Counsel's permission, 4 I would like to hand an order --</p> <p>5 MS. MONCADA: Okay.</p> <p>6 MS. CRAWFORD: -- to the witness. Thank you.</p> <p>7 And just for the record, what I've provided 8 the witness and to OPC is Order 9 No. PSC-14-0110-TRF-EI.</p> <p>10 MS. MONCADA: Do you have one for me, 11 Jennifer?</p> <p>12 MS. CRAWFORD: I'm sorry. Of course I do.</p> <p>13 MS. MONCADA: Thank you.</p> <p>14 MS. CRAWFORD: That's from Docket -- just for 15 completeness, 20130286-EI.</p> <p>16 BY MS. CRAWFORD:</p> <p>17 Q And you weren't sitting on the Commission at 18 this time, but if I could ask you just to take a quick 19 glimpse at that order.</p> <p>20 A Okay. If you give me a moment --</p> <p>21 Q Absolutely.</p> <p>22 A Would it be helpful to read the highlighted 23 sections?</p> <p>24 Q Yes, please. That would be wonderful. Thank 25 you.</p>

<p>Page 38</p> <p>1 A (Examining document.) Okay. I think I've 2 read enough.</p> <p>3 Q Okay. And just for the --</p> <p>4 A Perhaps. We'll see when you ask your 5 question.</p> <p>6 Q Right. And just for the purposes of the 7 transcript, this order indicates that similar CISR 8 tariffs had been approved at this point of this order, 9 for Gulf Power Company, TECO, and Duke Energy, correct? 10 There on Page 1.</p> <p>11 A Yes, I -- I see that language, yes.</p> <p>12 Q Okay. And there's language on Page 2 I've 13 highlighted. If you wouldn't mind just reading it, for 14 the record, and then I'll ask a question or two on that.</p> <p>15 A Okay. Read it into the record?</p> <p>16 Q No, if you want to just read it, that's fine.</p> <p>17 A Yeah, I've read that.</p> <p>18 Q You -- you're good?</p> <p>19 A Yeah.</p> <p>20 Q Okay. So, it appears to me that this order 21 requires, in order for a customer to take advantage of 22 the CISR tariff that's being approved herein, that the 23 customer would be required to provide proof of a viable 24 alternative. Would you agree with that?</p> <p>25 A Yes.</p>	<p>Page 39</p> <p>1 Q And that they're also required to pay the 2 incremental cost to serve plus administrative costs?</p> <p>3 A Yes.</p> <p>4 Q Okay. Would you agree that there are no such 5 requirements in FPL's proposed SolarTogether program?</p> <p>6 A I agree and I -- I'm not sure that there 7 would -- it would be necessary --</p> <p>8 Q And why is that?</p> <p>9 A -- to have that.</p> <p>10 First of all, the -- let's take this case 11 maybe in a little bit of perspective. This -- it's my 12 understanding, and I think it's in the testimony for the 13 FPL witnesses, that SolarTogether is not being proposed 14 as a load-retention measure, okay, but there's been a 15 number of concerns raised and -- particularly with OPC's 16 witness in terms of risks.</p> <p>17 And when I was brought in to rebut that 18 testimony, I thought it was important to bring to the 19 attention of the Commission that one of the risks that 20 SolarTogether would help mitigate, which would be the -- 21 for the benefit for all customers, is to retain load.</p> <p>22 So -- so, we need to realize that it was -- 23 that SolarTogether was not proposed as load retention, 24 but I think it provides some risk mitigation there.</p> <p>25 So -- and then, too, I alluded to the fact</p>
<p>Page 40</p> <p>1 that what had happened earlier with the -- with the gas 2 utilities and the -- and the customers there -- what 3 we're -- if we're not there yet, we're soon getting to 4 the point with solar becoming more and more cost- 5 effective that it's a situation analogous to fuel -- to 6 fuel-switching. So, it's almost, on its face, apparent 7 that the customers are going to have choices now for 8 electricity that they have not had in the past.</p> <p>9 So, for those reasons, I'm not sure that it's 10 a fair -- a comparison to say that this is required for 11 CISR, but it's not part of SolarTogether. I think, to 12 some extent, it's a little bit of an apples-and-oranges 13 comparison, but I -- I do agree that these are 14 requirements for CISR. And they are requirements that 15 are put in place to make sure that benefits are achieved 16 and maintained for customers, and that it's just not 17 basically an undeserved or an unwarranted discount 18 that's being given out.</p> <p>19 Q A few minutes ago, when I was asking about 20 what other alternatives might a customer seek if 21 SolarTogether isn't approved -- and you had stated that 22 they might construct their own facilities that would 23 displace the load provided by FPL.</p> <p>24 Is it your belief that, for those customers 25 who are currently kind of slated for the SolarTogether</p>	<p>Page 41</p> <p>1 program -- could they install their own solar, all of 2 them, or would some of them have limitations in that 3 regard?</p> <p>4 A I -- I -- I -- not knowing the customers and 5 their -- and their fi -- business plans and financials, 6 I -- I couldn't say.</p> <p>7 Q Okay. All right. If I could refer you back 8 to Page 13 of your testimony, in general, Lines 17 9 through 20.</p> <p>10 A Okay.</p> <p>11 Q And there, you state that FPL's SolarTogether 12 program meets the criterion of being cost-effective and 13 it's based on achieving the lowest electric rates.</p> <p>14 A Yes.</p> <p>15 Q Okay. Help me understand your use of the 16 phrase "lowest electric rates." Are you saying 17 SolarTogether produces the lowest electric rates for 18 FPL's customers?</p> <p>19 A No, I'm using the term more general here; to 20 the extent that the proposal is cost-effective, that 21 would put downward pressure on rates compared to a 22 situation of no-SolarTogether.</p> <p>23 Q Okay. And still, on Page 13, looking 24 generally around Lines 13 through 17, you state that 25 there are a number of strategic considerations that</p>

<p style="text-align: right;">Page 42</p> <p>1 could result in the best or preferred generation- 2 expansion plan not being the least-cost plan, correct? 3 A Yes. 4 Q And can you give me the examples where the 5 Commission approved best-cost planning versus what was 6 necessarily the least-cost option? 7 A I can't point to a specific docket. I can 8 just tell you the Commission has a history -- an 9 appropriate history of -- particularly when it comes to 10 power plant siting -- to look at alternatives consistent 11 with the Power Plant Siting Act. 12 And within that act, there are cost 13 considerations as -- other considerations such as fuel 14 diversity and things of that nature. 15 MS. CRAWFORD: With Counsel's permission, I'd 16 like to hand an order to the witness. 17 MS. MONCADA: Okay. Thank you. 18 MS. CRAWFORD: And for purposes of the record, 19 what I've provided to the witness is Order No. PSC- 20 05-0084-FOF-EI. 21 BY MS. CRAWFORD: 22 Q That was in the 2005 fuel docket, 20050001. 23 And it appears that you were on the Bench at the time, 24 actually, I note. 25 A Yes, and your executive director was on this</p>	<p style="text-align: right;">Page 43</p> <p>1 case as well. 2 Q Yes. 3 And I'll give you a moment to familiarize 4 yourself with that order. I don't remember what I had 5 for breakfast this morning, so I don't want to ask you 6 cold about something from -- 7 A Okay. Just give me a moment -- 8 Q Sure. 9 A -- and I'll refresh my memory. 10 Q Thank you. 11 A (Examining document.) Okay. I think I'm 12 generally -- 13 Q Okay. 14 A -- familiar. 15 Q Okay. 16 A But, obviously, this is a long order and I 17 haven't read it all. 18 Q Of course. Of course. And -- and just 19 generally stating, this is an order from the 2005 fuel 20 docket. And in it, the Commission approved Unit Power 21 Sales agreements, or UPS agreements, between FPL and the 22 Southern Company for cost-recovery purposes; does that 23 appear correct? 24 A That is correct. 25 Q Okay. And if you would, go to Page 3, and</p>
<p style="text-align: right;">Page 44</p> <p>1 there's some discussion that's conveniently highlighted 2 for you. Hopefully I got to the other copies, but 3 perhaps not. My apologies, if not. And there's some 4 discussion there about the UPS agreements. 5 Now, you don't remember this specifically, I 6 take it, or -- 7 A Well, my -- it's coming back to me. 8 Q Okay. All right. 9 A So -- obviously, there's a -- there's been a 10 lot of years and -- but I -- I'm generally familiar with 11 what happened here. 12 Q Okay. And is it correct to say that, in this 13 order, the Commission approved UPS agreements even 14 though a pure -- and I'm -- I'm quoting from language 15 here at Page 3, in the second full paragraph -- "... a 16 pure dollar-and-cents cost-effectiveness comparison 17 suggests that a self-build option would be more cost- 18 effective by approximately 69 to 93 million and, 19 instead, the Commission approved these UPS agreements 20 that were centered on coal energy production," 21 coal-based; is that correct? 22 A That is correct. 23 Q Okay. 24 A The Commission understood that there were -- I 25 would term them as "strategic benefits" associated with</p>	<p style="text-align: right;">Page 45</p> <p>1 these UPS agreements and, given that, the Commission 2 approved these agreements. 3 Q And right below that sentence that I read, 4 there's actually a little bit of discussion about the 5 Commission approving these UPS agreements, even though 6 there's a certain premium paid for them. 7 And then, further down, it discusses one of 8 those benefits that's kind of the tradeoff for this 9 premium price and the UPS agreements is that of fuel 10 diversity; would you agree with that? 11 A Yes. 12 Q Okay. Would it be correct to characterize 13 that SolarTogether proposes a premium price for the 14 general body of ratepayers that's offset by some of the 15 elements you've talked about; fuel diversity, load 16 retention? 17 A No, I can't agree with that -- 18 Q Okay. 19 A -- because I don't think there is a premium 20 price. 21 Q Okay. 22 A This decision, though, would be support for 23 the proposition that, if there were a premium price, 24 that the strategic benefits may be sufficient to justify 25 a premium price, but I don't think there's a premium</p>

<p style="text-align: right;">Page 46</p> <p>1 price associated with SolarTogether.</p> <p>2 MS. CRAWFORD: Okay. Thank you very much.</p> <p>3 That's all the questions I have.</p> <p>4 THE WITNESS: Thank you.</p> <p>5 MS. CRAWFORD: I appreciate your time.</p> <p>6 (Discussion off the record.)</p> <p>7 EXAMINATION</p> <p>8 BY MR. REHWINKEL:</p> <p>9 Q All right. Good afternoon --</p> <p>10 A Good afternoon.</p> <p>11 Q -- again.</p> <p>12 I -- Charles Rehwinkel on behalf of the Office</p> <p>13 of Public Counsel. And like staff, I have some</p> <p>14 questions that go through your testimony.</p> <p>15 But just so -- I think you had a -- a</p> <p>16 conversation or a dialogue with the staff attorney, and</p> <p>17 it was about your role in the case.</p> <p>18 Were you brought in only on rebuttal or had</p> <p>19 you been consulted about testifying earlier, perhaps,</p> <p>20 on -- on the direct route with the -- that would be</p> <p>21 filed with the petition?</p> <p>22 A No, I was not contacted in anticipation of</p> <p>23 filing direct testimony. It was subsequent to the</p> <p>24 filing of direct testimony before I was contacted by</p> <p>25 FPL.</p>	<p style="text-align: right;">Page 47</p> <p>1 Q Okay. So, just to be clear, you weren't</p> <p>2 contacted before the petition was filed for your advice</p> <p>3 about the tariff or the program?</p> <p>4 A That is correct, I was not consulted or asked</p> <p>5 to review anything before.</p> <p>6 Q Okay. Are you testifying as an expert in this</p> <p>7 case?</p> <p>8 A Yes.</p> <p>9 Q And -- and what are the areas of expertise</p> <p>10 that you are offering yourself as an expert on?</p> <p>11 A Regulatory policy.</p> <p>12 Q That's it?</p> <p>13 A Well, I -- I think that term encompasses a</p> <p>14 lot. So, I'm not trying to limit myself. I think I am</p> <p>15 expert to express all of the opinions that I have stated</p> <p>16 in my testimony.</p> <p>17 Q Does that include least-cost planning?</p> <p>18 A To the extent I address least-cost planning,</p> <p>19 yes.</p> <p>20 Q Do you address it, in your opinion, in this</p> <p>21 testimony?</p> <p>22 A I address it in a broad context as to the</p> <p>23 terminology used by Witness Hinton and how I interpret</p> <p>24 what the Commission's policy is in terms of approving</p> <p>25 generation-expansion plans.</p>
<p style="text-align: right;">Page 48</p> <p>1 Q Have you reviewed Mr. Enjamio's testimony?</p> <p>2 A I have, but it's been a while.</p> <p>3 Q Do you consider his testimony to address</p> <p>4 least-cost planning for FPL?</p> <p>5 A I can't say. I -- I don't -- I don't know.</p> <p>6 Q Okay. In your testimony -- I believe it's on</p> <p>7 Page 4, Line 10 -- you cite to Section 366.92(1); is</p> <p>8 that right?</p> <p>9 A Yes.</p> <p>10 MR. REHWINKEL: Okay. I want to pass out a</p> <p>11 copy of -- of that. Just pass it -- did I give you</p> <p>12 one? I'll ask you to look at it -- and for the</p> <p>13 staff, too.</p> <p>14 BY MR. REHWINKEL:</p> <p>15 Q And I believe this is from the 2019 Florida</p> <p>16 Statutes. And is -- is 3- -- is the statute that you're</p> <p>17 referencing in your testimony what's on this page?</p> <p>18 A Yes.</p> <p>19 Q Okay. And is Subsection 1 the only portion of</p> <p>20 366.92 that you are referencing in your testimony?</p> <p>21 A I'm not trying to exclude any of the other</p> <p>22 provisions in the statute, but 366.92(1) was the most</p> <p>23 relevant for purposes of my testimony. So, that's what</p> <p>24 I referenced.</p> <p>25 Q Okay. Did you make a determination that</p>	<p style="text-align: right;">Page 49</p> <p>1 Subsections 2 through 5 of that -- of that particular</p> <p>2 statute are not relevant?</p> <p>3 A I made no determination, really, one way or</p> <p>4 the other.</p> <p>5 Q Okay. Is it your testimony that this</p> <p>6 statutory provision is the source of authority for the</p> <p>7 Commission to approve the FPL's SolarTogether petition?</p> <p>8 A You know, you're asking me a legal question,</p> <p>9 but realizing that I'm not an attorney, I will answer it</p> <p>10 this way: I think that this particular statutory</p> <p>11 provision gives guidance to the Commission when it is</p> <p>12 determining the benefits of SolarTogether.</p> <p>13 But I think that there are probably other</p> <p>14 statutory provisions which give jurisdiction to the</p> <p>15 Commission to actually approve the tariff.</p> <p>16 Q Is it -- did you cite any other statutory</p> <p>17 provision in your testimony?</p> <p>18 A I may have, but I don't think that it had</p> <p>19 anything to do with tariff approval.</p> <p>20 Q Okay. At the time that you filed your</p> <p>21 testimony -- that would have been on September 23rd?</p> <p>22 A That sounds correct.</p> <p>23 Q Did you know what year that this statute</p> <p>24 became law?</p> <p>25 A No, I did not. I guess you can look at the</p>

<p style="text-align: right;">Page 50</p> <p>1 statutory history and maybe we could find that out, but 2 it -- it didn't make a really -- if it was current, I 3 felt it was appropriate. 4 Q Okay. You were -- you were chairman and a 5 commissioner last through the year of 2006; is that 6 correct -- or did your term end at the January of 2006? 7 I can't remember. 8 A No, it ended December 31, 2006. 9 Q Okay. So, were you involved in any way in 10 the -- in the Commis- -- in the Legislature's adoption 11 of this provision? 12 A I don't recall being involved. 13 Q Okay. I mean, it's not something like the -- 14 the Unit Power Sales order that we just talked about 15 from -- from 2005 that you have a recollection of -- of 16 being consulted on or having an involvement in the 17 legislative process; is that fair? 18 A That's fair. 19 Q Okay. Did you -- at the time you filed your 20 testimony, did you look at any of the -- the four times 21 that this statute, 366.92, overall was amended? 22 A No, I did not. 23 Q Okay. So, that would mean you wouldn't know 24 why it was amended or what the purposes of any 25 amendments were?</p>	<p style="text-align: right;">Page 51</p> <p>1 A I did not. As -- as my participation in this 2 docket, I did not review the history of this statutory 3 provision and the various amendments that may have taken 4 place. That's correct, I did not do that. 5 Q Do you -- were you, at the time you filed your 6 testimony, aware of the circumstances behind which the 7 statute was passed in 2006? Was there something that 8 was -- that was in the public purview that -- that was 9 being addressed by this? 10 A Well, I know that there has been a history in 11 Florida of an increasing reliance on natural gas as a 12 generation fuel; that there have been instances where 13 there have been some fluctuations in the price of gas 14 and some price spikes that had some adverse impacts in 15 terms of cost to customers. 16 That could have been some of the backdrop for 17 this, but, you know, I can't say with a hundred percent 18 accuracy that that was, you know, the reason. I just 19 know that there -- volatility of fuel costs and fuel 20 diversity are things that are mentioned here. 21 So, I would anticipate that those were things 22 that the Comm- -- that the Legislature considered to be 23 important. 24 Q Okay. But I think we've established you don't 25 have any recollection, in your role as a public service</p>
<p style="text-align: right;">Page 52</p> <p>1 commissioner, that -- that -- of the reasons why this 2 was adopted? 3 A I think that's fair. 4 Q Okay. At the time you filed your testimony, 5 did you know what was meant by the phrase at the end of 6 Subsection 1 that reads, "... And, at the same time, 7 minimize the cost of power supply to utilities and their 8 customers"? 9 MS. MONCADA: Can you repeat the question? 10 MR. REHWINKEL: Yes. 11 BY MR. REHWINKEL: 12 Q At the time you filed your testimony, did you 13 know what was meant by the phrase in Subsection 1, 14 quote, "... And, at the same time, minimize the cost of 15 power supply to utilities and their customers"? Do you 16 see that in the statute? 17 A I do see that in the statute. 18 Q Do you know what was meant by that when you 19 filed your testimony? 20 A I have -- I have an understanding as to what 21 that means. 22 Q And can you tell me what it is? 23 A Reading this entire provision in its 24 totality -- to me, this means that there are a number of 25 considerations which need to be made by the Commission</p>	<p style="text-align: right;">Page 53</p> <p>1 in -- in promoting renewable energy, but that has to be 2 balanced with cost impacts to customers. 3 Q So, what is your understanding of the word 4 "minimize"? 5 A It has to be part of the consideration that -- 6 there's not -- this -- costs to customers have to be 7 part of the consideration. I'm not putting any emphasis 8 on the term "minimize," other than that it needs to be 9 part of the consideration in determining what the 10 Commission should do in promoting renewable energy. 11 Q Okay. Does it -- is there any connotation in 12 the word "minimize" of "lowest"? 13 A I could see where it could be interpreted that 14 way, but I'm not making that interpretation. I'm 15 just -- based upon my experience and how the Commission 16 has made decisions that all of these considerations are 17 balanced, and that, when you're considering things such 18 as fuel diversity and minimizing volatility of fuel 19 costs, that that has to be done with the idea of what is 20 going to be the bottom-line impact of customers' rates 21 and that those provisions have to be balanced. 22 Q Okay. Could the Commission approve the 23 SolarTogether facilities, tariff, and program based on 24 this specific statute alone? 25 MS. MONCADA: I'm going to object. To the</p>

<p>1 extent you're asking him about that in terms of 2 regulatory policy, it's okay, but to the extent 3 you're asking him for a legal conclusion, we 4 object. 5 BY MR. REHWINKEL: 6 Q You can answer the question. 7 A Okay. I think this statutory provision gives 8 guidance to the Commission and is a reasonable basis 9 upon which to evaluate the merits of SolarTogether, but 10 I think there are other statutory provisions which gives 11 the Commission the jurisdiction to actually approve a 12 tariff. 13 Q And what are those? 14 A You -- I can't speak to them off the top of my 15 head or to identify those, but I think it's clear that 16 the Commission has rate-making authority and has the 17 part -- authority to consider, suspend, approve tariffs. 18 Those statutory provisions certainly would be 19 part of the Commission's jurisdiction and its 20 requirements in the consideration of SolarTogether. 21 Q Okay. So, looking, again, at 366.92 and 22 Subsection 5, it says, "The Commission may adopt rules 23 to administer and implement the provisions of this 24 section." Did I read that right? 25 A You did.</p>	<p>Page 54</p> <p>1 Q Okay. Did the Commission adopt rules to 2 implement this? 3 A I don't -- I can't point to any specific rules 4 that were adopted that speaks directly to this statutory 5 provision. 6 Q Okay. So, in absence of rules, does the 7 Commission need to rely on you to understand what this 8 statute means and how to implement it? 9 A No, I think the Commission needs to rely upon 10 its own expertise and its staff and the record that is 11 developed. And my role in this case is to help develop 12 that record. 13 Q Okay. Do you know if the Commission has a 14 non-rule policy that one can look to and say that 15 that -- say that the SolarTogether facilities, the 16 tariff, and the program should be approved? 17 A I'm going to ask you to repeat the question, 18 please. 19 Q Is there a non-rule policy that the Commission 20 has that someone -- a member of the public can look to 21 and say that that policy is -- gives the Commission 22 guidance or authority to approve the SolarTogether 23 facilities, tariff, and program? 24 A Well, the term "non-rule policy" -- that's a 25 very broad concept. And, you know, every decision the</p> <p>Page 55</p>
<p>1 Commission makes is either -- is consistent with policy 2 or is, perhaps, embarking on a path of new policy. And 3 at what point those -- the accumulation of all of those 4 decisions point to a firm policy is difficult to say. 5 And sometimes it -- it needs judgment to do that. 6 So, I can't point to one particular order that 7 says, this encapsulates the non-rule policy, but I think 8 if one were so inclined, that they could review enough 9 orders and decisions to get an idea as to what the 10 Commission considers and evaluates in making these types 11 of decisions. 12 Q So, we've established that there's not a rule 13 that -- that implements 366.92, correct? 14 A We've established it's not a rule to which 15 I'm -- I'm aware of. 16 Q That you're aware of. 17 A Yeah. 18 Q Okay. And assuming there isn't a rule, then 19 any policy that would implement 366.92 would be non-rule 20 policy; is that fair? 21 A Yeah, I think that's fair. 22 Q Okay. Now, have you testified to or presented 23 in your testimony all of the orders that contain the 24 policies that the Commission would look to to understand 25 whether to approve the SolarTogether tariff, facilities,</p> <p>Page 56</p>	<p>1 and program? 2 A No, I've not attempted to review all of those 3 orders, and I certainly haven't identified them since 4 I've not attempted to identify them and review them. 5 Q Okay. Mr. Hinton's testimony -- does that 6 testimony reflect Commission policy, in your opinion? 7 A Let me answer your question this way -- and if 8 it's not responsive, let me know. I don't think his 9 testimony, in and of itself, establishes policy, but my 10 review of his testimony certainly -- of his testimony 11 raises questions that I think are relevant and the 12 Commission needs to consider. So, it's the Commission's 13 decisions that -- that implements policy. His testimony 14 doesn't establish policy. 15 My testimony doesn't establish policy, but it 16 tries to give some information to the Commission that I 17 hope would be helpful as they consider their policy and 18 consider the -- the facts and specifics of the 19 SolarTogether proposal. 20 Q Okay. So, I think I asked -- I used the verb 21 "reflect" -- does it reflect Commission policy. 22 A Oh. 23 Q And you said in your answer it doesn't 24 establish. And I think we both could agree that 25 Commission policy is only established through decisions</p> <p>Page 57</p>

<p style="text-align: right;">Page 58</p> <p>1 of the Commission, either by adoption of rule or 2 issuance of orders; is that fair?</p> <p>3 A That's fair, yes.</p> <p>4 Q Okay.</p> <p>5 A I -- I may have misinterpreted your question.</p> <p>6 Q Oh, that's okay.</p> <p>7 So, my question is: Do you think it -- what 8 Mr. Hinton testified to -- reflects Commission policy or 9 do you reject that his testimony is a reflection of 10 Commission policy?</p> <p>11 A No, I don't reject his testimony. Again, I 12 will reiterate, I think his testimony raises some very 13 legitimate concerns that need to be addressed. And part 14 of the focus of my testimony was to address those 15 concerns in a way that I hope would be helpful to the 16 Commission.</p> <p>17 Q But you're not going to give me an answer 18 about whether it reflects Commission policy?</p> <p>19 A I have no basis to say that there's a portion 20 of his testimony that is not reflective of Commission 21 policy.</p> <p>22 Q Let's look on Page 4, Line 18 of your 23 testimony. And you use the phrase "customers' desire 24 for solar generation." And I think Ms. Crawford asked 25 you about that already.</p>	<p style="text-align: right;">Page 59</p> <p>1 You see that?</p> <p>2 A I do.</p> <p>3 Q Tell me who these customers are that desire 4 solar generation.</p> <p>5 A I cannot identify specific customers as far as 6 a name, but I think that there are customers who are 7 driven by two strong motivations; one is economics, and 8 another is a -- for lack of a better -- better term, 9 social conscience as to the inherent benefits of 10 renewable generation.</p> <p>11 And I think SolarTogether addresses both of 12 those strong desires of customers, economics and their 13 social conscience, to some degree.</p> <p>14 Q Do you know how many customers have this -- 15 this shared view?</p> <p>16 A I do not.</p> <p>17 Q Do you have an order of magnitude about how -- 18 I mean, is it -- would you agree that there are five 19 million or so FPL customers on a billed-account basis, 20 and probably 10 million people that they serve? Have 21 you heard those statistics before?</p> <p>22 A That sounds about right.</p> <p>23 Q Okay.</p> <p>24 A It's -- it's -- definitely is a large company.</p> <p>25 Q Yes. So, do you know what percentage of those</p>
<p style="text-align: right;">Page 60</p> <p>1 five million or ten million have these views?</p> <p>2 A No, but I did listen to today's agenda 3 conference, and I did listen to the discussion that the 4 Commissioners had with SolarNow -- which is a different 5 proposal, but -- and I did hear that there is a -- a 6 higher than what was originally anticipated in terms of 7 customers being interested in and subscribing to 8 SolarNow.</p> <p>9 So, I'm not, perhaps, the correct witness to 10 try to quantify that, but I think that they -- the 11 desire of these customers is real and it's my opinion 12 that it's growing.</p> <p>13 Q So, you heard there were 55,000 SolarNow 14 customers?</p> <p>15 A I did hear that number, yes.</p> <p>16 Q And you heard that there had been 70,000 that 17 had been through the system, and there's 55,000 now.</p> <p>18 A And I heard Mr. Valle describe the situations 19 of some of that churn --</p> <p>20 Q Sure.</p> <p>21 A -- and the various reasons for that, yes.</p> <p>22 Q So, what evidence would you have that the -- 23 the percentage of customers -- if you took the -- the -- 24 I always get mixed up -- the denominator of five million 25 and the numerator of 55,000, is -- is that percentage</p>	<p style="text-align: right;">Page 61</p> <p>1 accurate or is -- is -- are there more than 55,000 that 2 have these desires that you've testified about?</p> <p>3 A No, I -- I can't put a number on it. And, 4 again, Mr. Valle may be better prepared to answer that 5 question. I can just tell you that I think that the -- 6 all one has to do is look at what's going on in the 7 world around us and see that desire for renewable 8 generation is something that's part of the social 9 consciousness now.</p> <p>10 And then you combine that with the attractive 11 economics of that and it would be a natural conclusion 12 to draw that there are customers that desire the 13 benefits that solar can provide.</p> <p>14 Q If there were only 55,000 customers -- this is 15 hypothetical -- if there were only 55,000 customers 16 that -- that were interested in SolarTogether, would 17 that be enough for the Commission to act on those 18 customers' desires?</p> <p>19 A First of all, let me be sure that this is 20 clear: I'm not trying to analogize SolarNow with 21 SolarTogether. I think they're entirely two different 22 programs and the scale and scope is entirely different. 23 And the motivations for customers --</p> <p>24 Q I just picked a number. I wasn't --</p> <p>25 A Oh, okay.</p>

<p style="text-align: right;">Page 62</p> <p>1 Q -- trying to get into it -- if you just had</p> <p>2 55,000 customers who wanted what the -- what the company</p> <p>3 offers as benefits of SolarTogether -- would that be</p> <p>4 enough for the Commission to take action based on what</p> <p>5 you testify to here as customer desire for solar</p> <p>6 generation?</p> <p>7 A I think that's a question better directed to</p> <p>8 Mr. Valle, but I can say this, that -- and I'm sure you</p> <p>9 can appreciate this -- one customer or 55,000</p> <p>10 customers -- every customer is important.</p> <p>11 And to the extent that the Commission can</p> <p>12 devise tariffs or programs or things that meet</p> <p>13 customers' desires and can do so in a way that is not</p> <p>14 harmful to the other customers, that's something that</p> <p>15 the Commission should give serious consideration to.</p> <p>16 Q Does the Commission rely on customer desire</p> <p>17 when it makes decisions about whether to approve a</p> <p>18 baseload generation plant that has a certain type of</p> <p>19 fuel associated with it?</p> <p>20 A I think it's part of the consideration, yes.</p> <p>21 Q Are you -- have you looked at any orders that</p> <p>22 cite a threshold number of customers and -- and their</p> <p>23 expression of desire with respect to whether to approve</p> <p>24 a generation resource?</p> <p>25 A I can tell you I -- no, I can't cite the</p>	<p style="text-align: right;">Page 63</p> <p>1 specific order, but I can tell you this Commission has a</p> <p>2 long history, and appropriately so, of seeking customer</p> <p>3 input on all its decisions.</p> <p>4 And to the extent that there are customers</p> <p>5 that, perhaps, intervene or just show up and give public</p> <p>6 testimony in terms -- for a proposed new generating unit</p> <p>7 in terms of its location or its size or its technology</p> <p>8 or its impact on the environment -- those are all inputs</p> <p>9 that the Commission receives and takes into</p> <p>10 consideration.</p> <p>11 Q Page 5, Lines 3 through 10 -- if you could,</p> <p>12 look at that part. What is your basis for using the</p> <p>13 phrase "strong desire to see more solar generation,</p> <p>14 generally," in your -- in your testimony, as you use it</p> <p>15 here?</p> <p>16 MS. MONCADA: Can you repeat the page and</p> <p>17 line?</p> <p>18 MR. REHWINKEL: It's Page 5.</p> <p>19 MS. MONCADA: Uh-huh.</p> <p>20 MR. REHWINKEL: It's Lines 3 through 10.</p> <p>21 MS. MONCADA: Okay.</p> <p>22 THE WITNESS: Three through ten.</p> <p>23 MR. REHWINKEL: That's -- that's Line 10 is</p> <p>24 where --</p> <p>25 THE WITNESS: Oh, okay.</p>
<p style="text-align: right;">Page 64</p> <p>1 MS. MONCADA: Thank you.</p> <p>2 THE WITNESS: (Examining document.) Okay.</p> <p>3 I've reviewed that part of the testimony. Could</p> <p>4 you repeat the question, please?</p> <p>5 BY MR. REHWINKEL:</p> <p>6 Q Okay. What is your basis for using the phrase</p> <p>7 "strong desire to see more solar generation, generally"?</p> <p>8 A It's just based upon my experience and my</p> <p>9 observation of the evolution of solar as a cost-</p> <p>10 effective technology and the public's recognition of</p> <p>11 that and how that has grown over time.</p> <p>12 Q At the time you filed your testimony, had you</p> <p>13 done any studies to quantify level of desire among</p> <p>14 customers, generally, for solar generation?</p> <p>15 A Again, I haven't quantified it. I think it's</p> <p>16 real and it's growing.</p> <p>17 Q Okay. And -- okay.</p> <p>18 On Page 5, Lines 13 through 15 --</p> <p>19 A Yes.</p> <p>20 Q So, what is your basis for using the phrase,</p> <p>21 "The Commission appropriately considers the overall</p> <p>22 cost-effectiveness of large-scale universal solar"? Are</p> <p>23 there orders that you're referencing there?</p> <p>24 A Obviously, I don't identify any orders. I</p> <p>25 think that if someone does the necessary research, they</p>	<p style="text-align: right;">Page 65</p> <p>1 probably could locate some orders. I'm just speaking</p> <p>2 from experience that the Commission always considers the</p> <p>3 impacts on the general body of customers and that those</p> <p>4 impacts are considered when it makes decisions about new</p> <p>5 generating facilities regard- -- regardless of</p> <p>6 technology.</p> <p>7 Q So, you left the Commission in 2006. I think</p> <p>8 we agreed on -- on that. At the time you were on the</p> <p>9 Commission, did the Commission approve any large-scale</p> <p>10 universal solar facilities before the -- the end of</p> <p>11 December 2006?</p> <p>12 A I don't recall any. And I think that it was a</p> <p>13 case of the technology not maturing to the extent or</p> <p>14 advances made to the extent that it is as economically</p> <p>15 attractive as it is now.</p> <p>16 Q Okay. So, would you agree that 2008 may have</p> <p>17 been the first time -- 2010, when solar facilities were</p> <p>18 added? I can't remember when DeSoto went in, but -- do</p> <p>19 you know?</p> <p>20 A I -- I don't know.</p> <p>21 Q Okay.</p> <p>22 A But I feel confident it was after 2006.</p> <p>23 Q Okay. And do you -- do you know what the</p> <p>24 first solar facility -- large-scale solar facility that</p> <p>25 FPL added was -- when that was?</p>

<p style="text-align: right;">Page 66</p> <p>1 A I do not know.</p> <p>2 Q Okay. What I'm trying to get at is you're</p> <p>3 saying the Commission has appropriately considered</p> <p>4 overall cost-effectiveness. And so, how did you -- how</p> <p>5 did -- that seems like that's more of a -- of a specific</p> <p>6 project-by-project determination that one would have to</p> <p>7 look at in order to make that kind of assessment. So,</p> <p>8 I'm trying to understand what you looked at to know</p> <p>9 that.</p> <p>10 A No, this statement is not based on a specific</p> <p>11 project-by-project analysis of that. It's based upon my</p> <p>12 experience and my understanding as to how the Commission</p> <p>13 has implemented its statutory authority. And it -- and</p> <p>14 consistent with that authority, it considers rate</p> <p>15 impacts on customers.</p> <p>16 Q Okay. One of the reasons I'm asking you</p> <p>17 this -- I just kind of want to be up front about this.</p> <p>18 I'm not going to hear at the hearing -- you bring four</p> <p>19 or five orders out and say, well, Commissioners, let me</p> <p>20 tell you about these orders -- because that's not part</p> <p>21 of your testimony; is that right?</p> <p>22 A No, I -- I -- obviously, I didn't identify any</p> <p>23 orders. I -- whether -- I don't have an idea that I'm</p> <p>24 going to bring any orders out --</p> <p>25 Q Okay.</p>	<p style="text-align: right;">Page 67</p> <p>1 A -- at the hearing, but you pr -- you know,</p> <p>2 you may put some orders in front of me and then I'll</p> <p>3 certainly interpret those the best way that I see fit.</p> <p>4 Q Sure. But you're not offering any</p> <p>5 affirmatively, as part of your testimony, is what I'm</p> <p>6 trying to understand.</p> <p>7 A So, it would just be -- be clear, you're</p> <p>8 asking me whether I plan to present an order that stands</p> <p>9 for the proposition that solar development needs to be</p> <p>10 cost-effective and here is an order that so states?</p> <p>11 Q I'm more looking at whether this phrase, "The</p> <p>12 Commission appropriately considers" -- which, to me, has</p> <p>13 a strong impli- -- implication, if not a direct</p> <p>14 statement, that the Commission has made decisions about</p> <p>15 the overall cost-effectiveness of large-scale universal</p> <p>16 serv- -- solar facilities. So, in my mind, I'm reading</p> <p>17 "Commission considers" equals an order.</p> <p>18 A Well, you know, I think that there are</p> <p>19 probably orders out there, but I haven't identified any</p> <p>20 order that I felt was -- that was necessary for me to</p> <p>21 quote from it and include it in my testimony.</p> <p>22 And as of right now, I don't plan to present</p> <p>23 any orders. It would be outside the scope of my direct</p> <p>24 testimony, I suppose, if I tried to present an order --</p> <p>25 Q Okay.</p>
<p style="text-align: right;">Page 68</p> <p>1 A -- at this point of the hearing.</p> <p>2 Q Okay.</p> <p>3 A Or the process.</p> <p>4 Q So, I think staff counsel asked you about</p> <p>5 SoBRAs, and you declined or demurred on bringing any</p> <p>6 specific SoBRA order. And that would be similar to your</p> <p>7 answers in this last little exchange; is that right?</p> <p>8 MS. MONCADA: I'm going to object. If you</p> <p>9 could, rephrase and clarify.</p> <p>10 BY MR. REHWINKEL:</p> <p>11 Q Well, Ms. Crawford asked you about SoBRAs, and</p> <p>12 you didn't point to any specific order approving SoBRAs</p> <p>13 in any answer to her questions; is that right?</p> <p>14 A I didn't identify -- that's correct. I did</p> <p>15 not identify any specific order in response to her</p> <p>16 question.</p> <p>17 Q All right.</p> <p>18 A But let me be -- be clear, too, I mean, while</p> <p>19 I've not identified any orders -- that's not to say that</p> <p>20 there's none out there. I think there may be some --</p> <p>21 some orders out there that may be instructive to the</p> <p>22 Commission, beneficial to them.</p> <p>23 You know, I'll be honest with you, in</p> <p>24 preparation for today's deposition, I -- I looked at a</p> <p>25 recent order involving Tampa Electric Company. And, you</p>	<p style="text-align: right;">Page 69</p> <p>1 know, that may be an order that is instructive for the</p> <p>2 Commission in this docket, but it's not an order I'm</p> <p>3 relying upon, and I don't mention it in my testimony,</p> <p>4 and I don't plan to bring that order out at the hearing</p> <p>5 and ask the Commissioners to read their order.</p> <p>6 Q Okay. Do you think the Commission can rely on</p> <p>7 Duke or Tampa Electric SoBRA orders in supporting a</p> <p>8 SolarTogether tariff?</p> <p>9 A I think it's possible that they could.</p> <p>10 Q And when you read those orders, did you read</p> <p>11 all of the order and all of the stipulations that might</p> <p>12 have underlined those -- underlined those orders?</p> <p>13 A No, I understand that. And I think staff</p> <p>14 counsel alluded to this -- that a lot of the sol- --</p> <p>15 SoBRA may have been in conjunction with settlements, and</p> <p>16 there may have been certain requirements and things</p> <p>17 associated with that.</p> <p>18 So, no, I'm -- I'm not saying that it's a</p> <p>19 perfect analogy that just because a SoBRA was approved</p> <p>20 that it stands for the proposition that SolarTogether</p> <p>21 has to be approved, but you know, I'm not saying that it</p> <p>22 couldn't be used to support either. I've just not made</p> <p>23 that determination.</p> <p>24 Q When you look at orders that adopt a</p> <p>25 settlement agreement, would you agree that, when the</p>

<p style="text-align: right;">Page 70</p> <p>1 Commission adopts an order and says in their -- adopts a 2 settlement agreement and says in their order that the 3 stipulation is incorporated by reference -- are you 4 familiar with that general concept? 5 A Yes. 6 Q Okay. And have you looked at any of the 7 recent settlement agreements, whether from 2016 or 2017, 8 that have provisions that said, this settlement 9 agreement is -- shall not be cited or used for 10 precedent? Are you familiar with a provision like that? 11 A I am familiar with that language generally 12 being included in settlements. 13 Q Okay. So, do you believe the Commission is 14 free to disregard that language and, nevertheless, use a 15 settlement provision as precedent? 16 A You know, that would be up for the Commission 17 to decide. I would urge caution before a Commission did 18 that because I think it would call into question the 19 willingness of parties to enter into those stipulations. 20 So, I'm not here to say that the Commission cannot do 21 that, but I would urge caution. 22 Q Why wouldn't they -- why would they even be 23 able to, if -- if the settlement agreement said it and 24 the order adopted a settlement agreement, why would the 25 Commission be free to ignore it?</p>	<p style="text-align: right;">Page 71</p> <p>1 A It -- 2 MS. MONCADA: Objection. That -- to the 3 extent you're asking him for a legal -- for legal 4 authority. 5 Q You can answer the question. 6 A Okay. It's been my experience that the 7 Commission has great latitude, and when it approves a 8 settlement, it does not abdicate its responsibility to 9 set rates that are fair, just, and reasonable and -- and 10 to fulfill all of the other requirements of its 11 jurisdiction. 12 So, here again, I would urge caution in doing 13 so, but I cannot, sitting here today, tell the 14 Commission that it cannot make any consideration 15 whatsoever of any of those decisions concerning SoBRA, 16 even though they may have been part of a settlement 17 agreement. 18 That's just -- that's a line that I'm not 19 willing to cross and say -- tell the Commission it 20 cannot consider something. It may not be advisable to 21 consider it, but I can't make that statement. 22 Q Do you think the Commission should cherry-pick 23 out of orders and pick the things they like and 24 disregard the things they don't? 25 A Well, I -- I think your question answers</p>
<p style="text-align: right;">Page 72</p> <p>1 itself. I can't say that anybody is supportive of 2 cherry-picking. 3 Q Okay. Look on Page 7, Lines 3 through 4. And 4 I know Ms. Crawford asked you about customer ex- -- 5 expectations, but I just want to ask you a specific 6 question. Did you do any research, before you filed 7 your testimony, to determine that customer expectations 8 have changed, as you use that phrase in your testimony? 9 A No, I'm speaking about my -- no, I did not do 10 any research specific on that question. 11 Q Okay. And can you just tell me what, 12 generally, time frames are -- I assume that you're 13 talking about today as -- in -- contemporaneous with the 14 SolarTogether proposal, right? 15 What is the past that you're referring to? 16 When -- when did -- how far back are you talking about? 17 Last year? Four years ago? 13 years ago, when you left 18 the Commission? What do you mean? 19 A Obviously, you know, I didn't attempt to put a 20 time period on that. Certainly, it was in the past. 21 I -- I would say that, if there was analysis done, you 22 would see a correlation between customers' interests 23 growing and with the improved cost-effectiveness of 24 solar -- I think that would be a correlation. 25 I think -- would think you would also see a</p>	<p style="text-align: right;">Page 73</p> <p>1 correlation between increased discussions of topics such 2 as fossil fuels, global warming, things of that nature 3 that have increased over the years in terms of the 4 social consciousness of -- of the country, generally. 5 So, in terms of years, you know, I would say 6 that you've seen this evolution over probably the past 7 decade or so. 8 Q Okay. So, ten years is your -- 9 A I mean, that's -- 10 Q -- time frame? 11 A That's the general time frame that I think 12 probably would fit in the message I'm trying to deliver 13 here. 14 Q Okay. Did you review Order PSC-20160560, 15 which is FPL 2016 rate settlement that includes SoBRAs? 16 A Not for purposes of this case. 17 Q You looked at it before? 18 A A long time ago. 19 Q Okay. Do you know whether the Commission 20 considered customer expectations with regard to solar in 21 approving the -- the 2016 settlement agreement in the 22 SoBRA provisions? 23 A I cannot say. 24 Q Okay. And just so I understand, I think I -- 25 I understood, on Page 7, Line 12, the phrase "other</p>

<p style="text-align: right;">Page 74</p> <p>1 broad policy considerations."</p> <p>2 You referenced, I believe, a series of -- of</p> <p>3 items, no cross-subsidies, cost-effectiveness, promote</p> <p>4 renewables and, I think, customer interests or demand.</p> <p>5 A Meeting the need needs of customers.</p> <p>6 Q Meeting the needs. Okay.</p> <p>7 A Yeah.</p> <p>8 Q But just so I understand, if I look at the</p> <p>9 structure of your testimony, looking on Page 6, on</p> <p>10 Line 22, in answering the Line 19 question that has the</p> <p>11 phrase "broad policy considerations," you have "first,"</p> <p>12 and it goes through four, on Page 8, Line 14.</p> <p>13 A Yes, I would agree with that.</p> <p>14 Q Okay. And I'm just trying to understand,</p> <p>15 embedded in your second broad policy consideration is</p> <p>16 this phrase "other broad policy considerations." I just</p> <p>17 want to make sure that -- are we talking about the same</p> <p>18 four that are here or are there four here and then some</p> <p>19 more? Do you understand my question?</p> <p>20 A I do understand your question. And, perhaps,</p> <p>21 my language was inartfully -- I'm -- I don't have</p> <p>22 another set of broad policy considerations, for purposes</p> <p>23 of my testimony.</p> <p>24 Q Okay.</p> <p>25 A I'm not saying that there may -- that there</p>	<p style="text-align: right;">Page 75</p> <p>1 are no other broad policy considerations, but they're</p> <p>2 not the focus of my testimony.</p> <p>3 Q Okay. So, just so I understand, whether it's</p> <p>4 in these four, on Pages 6 through 8, or the ones that</p> <p>5 you responded to staff about, that's the universe of</p> <p>6 broad policy considerations as contained in what you're</p> <p>7 affirmatively offering to the Commission.</p> <p>8 A That is the universe of what I'm offering.</p> <p>9 Q Okay.</p> <p>10 A Obviously, the Commission is free to consider</p> <p>11 any other broad policy considerations beyond what I've</p> <p>12 identified.</p> <p>13 Q Okay.</p> <p>14 A And they feel it's relevant, they're certainly</p> <p>15 free to do so.</p> <p>16 Q Okay. So, the gist of my question is there's</p> <p>17 not a hip pocket of another set of broad policy</p> <p>18 considerations list that you're going to bring forward.</p> <p>19 A (Indicating.) No, there's not one there.</p> <p>20 (Laughter.)</p> <p>21 Q You might keep it in your breast -- in your</p> <p>22 jacket pocket, but -- in all seriousness, there's --</p> <p>23 that -- this is the universe.</p> <p>24 A Yes.</p> <p>25 Q Okay. On Page 8, Lines 14 through 15, you use</p>
<p style="text-align: right;">Page 76</p> <p>1 the phrase "needs" on Line 14. Do you see that?</p> <p>2 A I do.</p> <p>3 Q So, tell me what you mean by "needs." What --</p> <p>4 A I'm using --</p> <p>5 Q Before I ask you that, let me ask you -- does</p> <p>6 needs and desires -- are those the same thing? Are</p> <p>7 those words synonymous?</p> <p>8 A Well, I kind of look at it when you're</p> <p>9 parenting your kids, what I would consider a desire, my</p> <p>10 kids might consider a need. Of course, they're all</p> <p>11 grown now, so maybe that's a bad analogy.</p> <p>12 I -- I think it's -- it's -- you know, in the</p> <p>13 eyes of a customer who feels like they want more</p> <p>14 renewable generation -- they may consider that a need.</p> <p>15 And if they have a viable alternative, they may -- they</p> <p>16 may exercise their discretion to choose an alternative.</p> <p>17 And I think regulation needs to be cognizant</p> <p>18 of that. And to the extent that there can be cost-</p> <p>19 effective alternatives provided to customers to meet</p> <p>20 their desires before they become a need, well, then that</p> <p>21 may be the appropriate thing to do.</p> <p>22 So, I -- I'm not trying to make a distinction</p> <p>23 between desires and needs, in terms of my testimony. I</p> <p>24 think I'm trying to put it in the context of</p> <p>25 customers -- if they have a desire that is so important</p>	<p style="text-align: right;">Page 77</p> <p>1 that they're going to act upon it, I think that's a</p> <p>2 consideration for the Commission.</p> <p>3 I think an analogy may be customers that</p> <p>4 desired standard meters as opposed to non-standard</p> <p>5 meters -- one could argue that, well, you know, a smart</p> <p>6 meter meets all your needs. So, your desire for a</p> <p>7 standard meter is just a desire.</p> <p>8 But the Commission didn't look at it that way.</p> <p>9 They felt that there were customers that desired a</p> <p>10 standard meter and they tried to implement a program</p> <p>11 that would facilitate that desire being met and in a way</p> <p>12 that did not burden the general body of customers.</p> <p>13 Q You didn't testify to the smart-meter analogy</p> <p>14 in this case, right?</p> <p>15 A I thought about it. I don't know if it's in</p> <p>16 the testimony or not. I really don't know if it's in</p> <p>17 there.</p> <p>18 MS. CRAWFORD: It is.</p> <p>19 THE WITNESS: It may be.</p> <p>20 MS. MONCADA: It is.</p> <p>21 THE WITNESS: It is?</p> <p>22 MS. MONCADA: It is in --</p> <p>23 BY MR. REHWINKEL:</p> <p>24 Q All right. It wasn't in -- okay. But it</p> <p>25 wasn't offered on direct. You're providing that as an</p>

<p style="text-align: right;">Page 78</p> <p>1 analogy on rebuttal, right?</p> <p>2 A Since I didn't --</p> <p>3 Q Yeah.</p> <p>4 A -- file direct testimony -- if I -- if it's in</p> <p>5 my testimony, it's in my rebuttal.</p> <p>6 Q Okay. But just so I understand, you are</p> <p>7 saying that -- that, for purposes of this case, the term</p> <p>8 "needs" is interchangeable with regard to the term</p> <p>9 "desires" with respect to customers?</p> <p>10 A I can see where there would be a different</p> <p>11 connotation, perhaps. And I'm not trying to make that</p> <p>12 distinction in my testimony. I think that there -- if</p> <p>13 there are a group of customers that have an earnest</p> <p>14 desire for a certain outcome and they can justify it to</p> <p>15 the Commission, I think the Commission has a need to see</p> <p>16 if that desire can be -- can be achieved.</p> <p>17 Q Did you ever preside over a docket -- a need-</p> <p>18 determination docket when you were a Commissioner?</p> <p>19 A I'm sure that I did.</p> <p>20 Q Was the -- in a need-determination, was the</p> <p>21 need that the Commission was determining customers'</p> <p>22 desires or was it the need of the customers to have</p> <p>23 safe, reliable electric service at the lowest,</p> <p>24 reasonable cost?</p> <p>25 A Well, I think customers need reliable service</p>	<p style="text-align: right;">Page 79</p> <p>1 and they certainly desire reliable service. I'm not</p> <p>2 understanding the -- the nuance you're trying to develop</p> <p>3 in your question. Maybe you can help me.</p> <p>4 Q Okay. So, I -- I think you said that need and</p> <p>5 desire are -- are one in the same in the context of this</p> <p>6 case. Is that wrong?</p> <p>7 A I'm saying, for purposes of my testimony, that</p> <p>8 I'm not trying to draw a distinction between the term</p> <p>9 "needs" and "desires."</p> <p>10 Q Okay. Looking on Page 9, Line 22 --</p> <p>11 A Yes.</p> <p>12 Q You use the phrase "benefit facilitator"?</p> <p>13 A Yes.</p> <p>14 Q Is that a -- is that a phrase that you pulled</p> <p>15 out of a Commission order in the past or is this</p> <p>16 something you coined for this testimony?</p> <p>17 A It's something that I coined for this</p> <p>18 testimony.</p> <p>19 Q Okay. Are you assuming that the SolarTog- --</p> <p>20 for purposes of the concept of the benefit facilitator,</p> <p>21 are you assuming that the subscription to a solar -- the</p> <p>22 SolarTogether program, if it's approved, will -- will</p> <p>23 always be full?</p> <p>24 A No, I'm not making that assumption.</p> <p>25 Q Okay. If half of the SolarTogether program</p>
<p style="text-align: right;">Page 80</p> <p>1 went unsubscribed or over -- in five years, half the</p> <p>2 people left and nobody stood in their place, would those</p> <p>3 people still be benefit facilitators, the -- the ones</p> <p>4 that were left?</p> <p>5 A Yes, I would still characterize them as such.</p> <p>6 Q No one has to stay on the SolarTogether</p> <p>7 tariff; is that correct? I mean, there are no -- there</p> <p>8 are no minimum subscription periods or contracts anybody</p> <p>9 has to subscribe to; is that your understanding?</p> <p>10 A It's my understanding that there's -- it's</p> <p>11 free choice of customers to participate, if there is</p> <p>12 room, and that they can exit the program when they</p> <p>13 desire.</p> <p>14 Q Okay.</p> <p>15 A Or when they need to.</p> <p>16 Q You use the phrase "best-cost planning"?</p> <p>17 A Yes.</p> <p>18 Q Is that a phrase that you found in a</p> <p>19 Commission order somewhere?</p> <p>20 A No, that's a phrase that --</p> <p>21 Q You coined?</p> <p>22 A I think I attributed that to myself -- or if I</p> <p>23 didn't, I intended to.</p> <p>24 Q Okay. So, you coined that phrase for this?</p> <p>25 A Yeah. Can you refer me to my testimony, where</p>	<p style="text-align: right;">Page 81</p> <p>1 I used that?</p> <p>2 Q I, unfortunately, didn't write down the page.</p> <p>3 A Okay. But no, I -- to answer your question, I</p> <p>4 did not -- that was not a term that I found in an order</p> <p>5 and I used it here, so --</p> <p>6 Q I think it's on Page 13, Line 17.</p> <p>7 A Yeah, I think -- I said, I'd like to look at</p> <p>8 it as best-cost planning. So, yeah, that's a term that</p> <p>9 is attributed to me, for purposes of this testimony.</p> <p>10 Q And -- and not only is it not in a Florida PSC</p> <p>11 order, you didn't find it in another state, other -- one</p> <p>12 of the other 49 state commission orders; is that right?</p> <p>13 A That is correct.</p> <p>14 Q Okay. Is -- is that phrase something that's</p> <p>15 defined in technical literature anywhere, "best costs"?</p> <p>16 A It -- it may be, but if it is, I'm not aware</p> <p>17 of the citation.</p> <p>18 Q Okay. What is a best cost?</p> <p>19 A I'm just using this phrase to try to</p> <p>20 illustrate the point that, when you're planning to add</p> <p>21 generation to a -- a fleet of generation, that there are</p> <p>22 a lot of considerations and that it would be --</p> <p>23 depending on the facts, it may be inappropriate for the</p> <p>24 Commission just to look at the economics and not look</p> <p>25 for other considerations.</p>

<p style="text-align: right;">Page 82</p> <p>1 So, when you -- you look at these other</p> <p>2 considerations, there may be -- the best choice may be</p> <p>3 one that is not the least cost.</p> <p>4 Q Okay. And you're -- you're an accountant by</p> <p>5 training, undergraduate and Master's in accounting; is</p> <p>6 that right?</p> <p>7 A Yes.</p> <p>8 Q Is there a concept in the accounting</p> <p>9 literature or in your accounting education of a best</p> <p>10 cost that you can point me to?</p> <p>11 A No, I -- I don't think that's a term that is</p> <p>12 generally associated with cost accounting, cost -- in</p> <p>13 accounting, costs are costs.</p> <p>14 Q Okay.</p> <p>15 MS. MONCADA: Would it be okay to take a break</p> <p>16 in like ten minutes?</p> <p>17 MR. REHWINKEL: Oh, sure. Absolutely.</p> <p>18 (Discussion off the record.)</p> <p>19 (Brief recess.)</p> <p>20 BY MR. REHWINKEL:</p> <p>21 Q So, we're back on the record, and hopefully we</p> <p>22 can bring this to a swift conclusion. So, let's look at</p> <p>23 Page 13, Line 17 through 20 of your testimony. And I'm</p> <p>24 just trying to under- -- actually, it's -- yeah, I'm</p> <p>25 trying to understand this sentence. And I'm going to</p>	<p style="text-align: right;">Page 83</p> <p>1 read it and I want to ask you about it.</p> <p>2 It says, "Nevertheless, to the extent the term</p> <p>3 'least cost' implies that a generation-expansion plan</p> <p>4 should be cost-effective, the FPL SolarTogether program</p> <p>5 certainly meets this criteria and is based on achieving</p> <p>6 the lowest electric rates." Did I read that?</p> <p>7 A You did read that correctly.</p> <p>8 Q Okay. Am I misreading this if I am seeing in</p> <p>9 it the concept that -- that cost-effective equals lowest</p> <p>10 cost? Is it -- is that a concept that's embedded in</p> <p>11 that sentence?</p> <p>12 A No, it should not be. And I can understand</p> <p>13 where, perhaps, it could be interpreted that way, but</p> <p>14 that was not my intent.</p> <p>15 Q Okay. I thought, in response to a question --</p> <p>16 and we can see what the transcript says -- to -- from</p> <p>17 Ms. Crawford, that -- that you use the phrase -- phrase</p> <p>18 "lower cost" in context of -- of this sentence. But</p> <p>19 here, it says "lowest cost."</p> <p>20 A Yeah, and --</p> <p>21 Q Are you --</p> <p>22 A Perhaps, I inartfully drafted this particular</p> <p>23 sentence and -- but my intent is to give the -- the</p> <p>24 message that, to the extent SolarTogether or any</p> <p>25 proposal for new generating capabilities is cost-</p>
<p style="text-align: right;">Page 84</p> <p>1 effective, that that would have a beneficial impact on</p> <p>2 rates and everything else equal would actually put</p> <p>3 downward pressure on rates over the long term.</p> <p>4 Q Okay. So, what you're saying is that, if it's</p> <p>5 cost-effective, it means that it -- it would yield lower</p> <p>6 costs than not doing it. Is that -- assuming all the</p> <p>7 assumptions that went into the cost-effectiveness</p> <p>8 analysis were borne out -- is that what you're saying?</p> <p>9 A I think that's a fair characterization, yes.</p> <p>10 Q But just so I understand here, it's not your</p> <p>11 testimony that, if SolarTogether is deemed by the</p> <p>12 Commission to be cost-effective, that it is the lowest-</p> <p>13 cost option.</p> <p>14 A I agree because SolarTogether is only</p> <p>15 comparing SolarTogether scenario with a non-</p> <p>16 SolarTogether scenario.</p> <p>17 Q Okay.</p> <p>18 A And I'm not in a position to say that would</p> <p>19 generate the least cost.</p> <p>20 Q Okay. Let's look at Page 14. And I'm looking</p> <p>21 at -- actually, it really starts on Line 13, Lines 21,</p> <p>22 carrying over to the top of Page 14.</p> <p>23 A I -- I'm sorry. I was making a note to</p> <p>24 myself.</p> <p>25 Q Yeah, look at the bottom of 13.</p>	<p style="text-align: right;">Page 85</p> <p>1 A Bottom of 13?</p> <p>2 Q The Q & A that starts, "What are some of" --</p> <p>3 A Okay.</p> <p>4 Q And just review that all the way through kind</p> <p>5 of Line 6, if you would.</p> <p>6 A (Examining document.) Okay.</p> <p>7 Q Now, you -- you -- is it your testimony that</p> <p>8 the Power Plant Siting Act does not apply to the</p> <p>9 SolarTogether project in -- in toto or in individual</p> <p>10 74.5-megawatt pieces?</p> <p>11 A That is my understanding. I'm not testifying</p> <p>12 to that, but I think other witnesses support that.</p> <p>13 Q Okay.</p> <p>14 A And let -- let me be clear on that, too.</p> <p>15 Q Sure.</p> <p>16 A The individual projects, I understand, are</p> <p>17 74.5 megawatts, which is less than 75. So, based upon</p> <p>18 just that single fact, the Power Plant Siting Act would</p> <p>19 not apply.</p> <p>20 Q Okay. And -- okay.</p> <p>21 So, what I'm looking at is on Page -- on</p> <p>22 Line 7 of Page 14, I see the word "requires."</p> <p>23 A I see that, yes.</p> <p>24 Q Okay. And the sentence reads, "In addition to</p> <p>25 the cost-effectiveness, the PPSA also requires the</p>

<p style="text-align: right;">Page 86</p> <p>1 Commission to consider fuel diversity and whether 2 renewable generation is being utilized to the extent 3 reasonably available." Is that -- did I read that 4 right? 5 A You did. 6 Q Now, are you using the term "requires" here 7 with respect to the PPSA as it -- as applying to 8 SolarTogether and the Commission's determination for 9 SolarTogether? 10 A No. I'm -- I'm -- I'm saying that the Power 11 Plant Siting Act requires the Commission to consider 12 when it is determining a need for a facility that is 13 subject to the Power Plant Siting Act. 14 Q Okay. Just so I understand that. 15 Now -- 16 A But just to be clear, I do -- on Line 6, I say 17 that it does provide some guidance to the Commission, 18 which, at the Commission's discretion, if they felt like 19 it was appropriate to take that guidance, it would be up 20 to their judgment as to whether they should make those 21 considerations. 22 Q Well, are you saying the Commission should 23 cherry-pick out of the statute the things that -- that 24 it wants to use, even if the statute doesn't apply to 25 the particular fact scenario?</p>	<p style="text-align: right;">Page 87</p> <p>1 A The Commission should not cherry-pick, but it 2 has full discretion to weigh the various measures and 3 benefits and costs and the various requirements in 4 statute and make an informed decision. 5 Q But we're clear that the PPSA does not impose 6 any requirements on the Commission with respect to its 7 consideration of SolarTogether; is that correct? 8 A I think that's correct, but you know, in a 9 previous set of questions and answers, you referred me 10 to Section 366.92, in terms of renewable-energy policy. 11 And again, I think that is a statutory provision that, 12 again, gives some guidance to the Commission as it 13 considers renewable projects regardless of whether it's 14 under the Power Plant Siting Act or not. 15 Q Well, no, that 366.92 -- it doesn't mention 16 the PPSA, does it? 17 A I -- I don't think it does mention the PPSA. 18 Q Okay. What -- is it your opinion that it's a 19 stand-alone statutory provision that the Commission can 20 look to? 21 A I think it is stand-alone and the Commission 22 can look to it. I can -- I do note that some of the 23 things contained in 366.92 are general -- some of the 24 same general subject matter is contained in the Power 25 Plant Siting Act.</p>
<p style="text-align: right;">Page 88</p> <p>1 Q Okay. But if that's the case, the Commission 2 can refer to 366.92 and they don't even need to look at 3 the PPSA; is that right? 4 A That would be up to the Commission. 5 Q You're not saying that FPL wants it both ways 6 to say that the PPSA doesn't apply to SolarTogether's 7 1497 megawatts sliced into 74.5-megawatt chunks so that 8 they don't have to go through that process, but then 9 they also can avail themselves of anything in the PPSA 10 that supports the projects. Is that your testimony? 11 A No, that's not my testimony. The Commission 12 is free to look at all of the statutes and, while not 13 cherry-picking, they need to be informed of the 14 statutory provisions and see what applies and to make an 15 informed judgment. 16 So, I'm not saying that the Commission is -- 17 is somehow prevented from looking at the PPSA for 18 guidance, but -- but neither am I suggesting that the 19 Commission has to look at the PPSA in that the pro- -- 20 provisions contained therein is somehow controlling for 21 what is being proposed as SolarTogether. 22 Q Okay. So, if I go further down, there's a 23 sentence that starts on Line 9 and it ends on Line 12. 24 It starts, "Given." It says, "Given that the planned 25 solar facilities will help to ensure the increase in</p>	<p style="text-align: right;">Page 89</p> <p>1 fuel diversity and are, indeed, from a renewable-energy 2 source, the FPL SolarTogether facilities would meet 3 these planning criteria." Do you see that? 4 A I do. 5 Q Did I read that right? 6 A Yes. 7 Q So, planning criteria or cri- -- are these -- 8 is this something that's contained in so- -- in the PPSA 9 that you're saying applies to the Commission's 10 consideration of SolarTogether? 11 A I'm not saying it necessarily applies to 12 SolarTogether, but to the extent the Commission is so 13 inclined to look to the PPSA for some guidance or maybe 14 comfort that what's being proposed is -- is -- is not 15 inconsistent with the PPSA, the Commission is free to do 16 so. And I'm trying to give some comfort to the 17 Commission that what is being -- being proposed is not 18 inconsistent with the PPSA. 19 Q Okay. Just so -- to close the loop on this 20 one, "criteria," as used here, does not mean that there 21 is some statutory requirement or mandate; is that -- is 22 that fair? That -- that emanates from the PPSA that the 23 Commission is required to follow. 24 A For consideration of SolarTogether? 25 Q Yes.</p>

<p style="text-align: right;">Page 90</p> <p>1 A I would agree.</p> <p>2 Q Now, let's look on Page 16, Lines 14 through</p> <p>3 16. And you have the sentence that says, "The important</p> <p>4 point is that the net savings are positive, which</p> <p>5 benefits all customers." Did I read that right?</p> <p>6 A You did.</p> <p>7 Q And this may be an inartful-ness or maybe you</p> <p>8 intended it, but are you testifying that -- that there</p> <p>9 are net positive benefits on a CPVRR basis or are you</p> <p>10 saying there are projected or estimated net positive</p> <p>11 benefits?</p> <p>12 A I'm saying that the CPVRR analysis shows that</p> <p>13 there will be net savings.</p> <p>14 Q Okay. But you're not testifying that those</p> <p>15 savings will materialize. You're referring to the CPVRR</p> <p>16 analysis that someone else performed; is that fair?</p> <p>17 A That is correct.</p> <p>18 Q So, just so we understand it, you're not</p> <p>19 testifying to the materialization or realization of</p> <p>20 those benefits; is that fair?</p> <p>21 A That is fair, but to be clear and complete,</p> <p>22 the CPVRR analysis is a tool that has been accepted by</p> <p>23 the Commission and historically relied upon by the</p> <p>24 Commission. And no one can say with a hundred-percent</p> <p>25 certainty that the projections there will result in a</p>	<p style="text-align: right;">Page 91</p> <p>1 certain outcome.</p> <p>2 Perhaps there's a confidence level of a</p> <p>3 certain range of outcomes, and the Commission is</p> <p>4 certainly astute to that and has used this tool to make</p> <p>5 appropriate decisions.</p> <p>6 Q Okay. Page 22, Lines 3 through 5. And you're</p> <p>7 referring -- it's -- this sentence reads, "Third, the</p> <p>8 Commission has a policy of meeting the earnest desires</p> <p>9 of customers as long as it could be done cost-</p> <p>10 effectively or in a manner that does not cause harm to</p> <p>11 the general body of customers."</p> <p>12 And -- and I'd ask you if I read that</p> <p>13 correctly and for you to take the time to understand the</p> <p>14 context of it, since it's obviously the third point in a</p> <p>15 series.</p> <p>16 A Yeah, I was looking back to the question</p> <p>17 and -- so, just give me a moment, please.</p> <p>18 (Examining document.) Okay. I think I</p> <p>19 understand the general context.</p> <p>20 Q And I read the question into the record right?</p> <p>21 A Yes.</p> <p>22 Q Okay. So, tell me what are "earnest desires."</p> <p>23 A It is a desire of the customer that is not</p> <p>24 frivolous. It is something that has meaning. There's</p> <p>25 a -- a reason for the desire and it can be substantiated</p>
<p style="text-align: right;">Page 92</p> <p>1 and explained to the Commission and that the Commission</p> <p>2 would have a basis to determine -- discern that it is an</p> <p>3 honest, earnest, reasonable desire that needs attention.</p> <p>4 Q Okay. It wouldn't be an irrational desire; is</p> <p>5 that right?</p> <p>6 A That's correct.</p> <p>7 Q So, how many customers is -- is in this</p> <p>8 category of customers that the Commission would be</p> <p>9 responding to?</p> <p>10 A I cannot quantify it.</p> <p>11 Q Is this any different than the other customers</p> <p>12 that you referred to as having strong desires? Is there</p> <p>13 any difference between "strong desires" and "earnest</p> <p>14 desires"?</p> <p>15 A No.</p> <p>16 Q Okay. It's just another way of saying the</p> <p>17 same thing?</p> <p>18 A Yes.</p> <p>19 Q And just to close the loop on this, you didn't</p> <p>20 do any studies or look at any analysis about how many</p> <p>21 customers possess these earnest desires that you</p> <p>22 reference.</p> <p>23 A No, I didn't do a study, but to be clear, I</p> <p>24 think that this is a -- a desire that is real and is</p> <p>25 growing, but I cannot quantify it.</p>	<p style="text-align: right;">Page 93</p> <p>1 Q And just -- since I asked you, did you look at</p> <p>2 any analysis, did FPL provide you any analysis that</p> <p>3 says, we've done a survey and this is the percentage of</p> <p>4 customers who have these kind of desires?</p> <p>5 A I've not seen that. If it exists -- I don't</p> <p>6 know if it exists, but another witness may be able to</p> <p>7 better answer that question.</p> <p>8 Q Okay. So, you said you didn't see it. Did</p> <p>9 anybody tell you they had such an analysis --</p> <p>10 A No, I --</p> <p>11 Q -- and give you verbally --</p> <p>12 A I'm not aware of any such analysis.</p> <p>13 Q Okay. All right.</p> <p>14 A But I'm not saying that there's not an</p> <p>15 analysis that exists. I'm not aware of an analysis.</p> <p>16 Q Okay. And I'm not only asking you about this</p> <p>17 in the context of your testimony and your personal</p> <p>18 knowledge.</p> <p>19 A Okay.</p> <p>20 Q You understood that?</p> <p>21 A Yes.</p> <p>22 Q Okay. And let's look at 9- -- Page --</p> <p>23 Lines 19 through 21, still on Page 22. And I'll just</p> <p>24 read this. It says, "It should be recognized that there</p> <p>25 is a large and growing number of customers who believe</p>

<p style="text-align: right;">Page 94</p> <p>1 it is imperative that their energy needs be met largely, 2 if not entirely, from renewable sources." Did I read 3 that right? 4 A You did. 5 Q Okay. And so, I'm going to ask you the same 6 kind of questions, is what do you mean by "large and 7 growing number of customers"? 8 A By "large," I mean, what exists now is larger 9 than what existed ten years ago. 10 Q Okay. 11 A Okay? So, I considered that in that context. 12 And "growing" is that it is my opinion that 13 there are more and more customers that are fitting into 14 this category of desiring more renewable generation. 15 Q And have you done any -- any studies of what 16 that number of customers is? 17 A I have not. 18 Q Okay. Have you reviewed any analysis or being 19 made aware of any analysis about what that number of 20 customers is, as you reference in these lines? 21 A I'm not aware of any analysis, but to be very 22 clear, I seem to recall reviewing some -- perhaps it's 23 testimony that has been filed that -- and from another 24 witness -- that makes references to having 25 communications with customers. So, that may be there in</p>	<p style="text-align: right;">Page 95</p> <p>1 the record from another witness, but not from me. 2 Q So, if you reviewed anything in the -- in the 3 realm of quantification of this concept on Page 22, 4 Lines 19 through 21, it would be looking at another 5 witness' testimony, and what was presented in that. 6 A That's correct. I certainly have not 7 undertaken any analysis of my own in regard to an 8 attempt to quantify these customers. 9 Q Okay. And if I ask you the same questions 10 with respect to the rate of growth that you reference 11 here, large and growing -- have you done any analysis 12 that -- about what the rate of growth in this type of 13 customer is? 14 A I have not done such an analysis. 15 Q Okay. And apart from looking at another 16 witness' testimony that, to the extent it contained 17 anything having to do with evidence of a rate of growth, 18 you have also not reviewed any research or analysis in 19 that regard; is that fair? 20 A That's fair, in terms of having it quantified. 21 Q Okay. Have you ever heard of the term 22 "regulatory conc-" -- "compact"? 23 A Yes. 24 Q What -- what is your definition of the 25 regulatory compact?</p>
<p style="text-align: right;">Page 96</p> <p>1 A Well, regulatory compact has a lot of 2 different meanings and can be looked at in different 3 ways, but if I wanted to just kind of describe it 4 succinctly, I would say that it is a -- an 5 understanding, a compact, a -- a "contract" may be too 6 strong of a term, and I don't mean to use that term in a 7 legal sense, but it's just basically an understanding 8 that a regulated utility has certain obligations and 9 responsibilities, and that they are given the ability to 10 serve a set of customers exclusively within a territory, 11 generally, and that they are regulated as a result and 12 that being subject to regulation provides, you know, 13 requirements and benefits. 14 And some of the benefits of being regulated is 15 the fact that you have access to a customer base on a -- 16 generally an exclusive basis, maybe not always, but 17 generally; and that you are allowed a reasonable 18 opportunity to earn a fair return on your reasonable and 19 prudent investments, but in doing so, that utility has a 20 burden to prove that to the regulator. 21 So, there are other concepts and things in 22 that, but I think that kind of encapsulates the -- the 23 general concept. 24 Q You use the term "return on reasonable and 25 prudent investments" or something like that; is that</p>	<p style="text-align: right;">Page 97</p> <p>1 right? 2 A I would agree with that, yes. 3 Q Is -- is that -- are you saying that there's 4 not also a right to earn return of that investment? Is 5 that encapsulated in the regulatory compact? 6 A Yes, it is. 7 Q So, I think you were Commissioner for 16 8 years; is that right? 9 A That's correct. 10 Q And you were chairman twice. 11 A Correct. 12 Q Did you ever provide -- preside over a case 13 where the Commission determined that a utility 14 investment was necessary to provide safe, reliable -- 15 and reliable service at the lowest reasonable cost to 16 its customers and was also prudent? 17 A I think that it's done routinely. You might 18 not find those exact set of words in that sequence that 19 you just recited in an order anywhere, but I think 20 that's the -- you've encapsulated what one of the basic 21 essential requirements of regulation is when a 22 Commission sets rates for a utility. 23 Q Okay. And would it be fair to say that, 24 regardless of the specific words that I put in my 25 question, that you would have, in your 16 years, been a</p>

<p style="text-align: right;">Page 98</p> <p>1 Commissioner and presided over or participated in a 2 decision that -- that did that?</p> <p>3 A Yes.</p> <p>4 Q Okay. Did you ever preside over or 5 participate in a case where the Commission, having 6 determined that an investment was prudently made and 7 necessary to provide safe, reliable service at the 8 lowest reasonable cost, or something like that, should 9 nevertheless -- that such a cost should nevertheless be 10 disallowed at a later time based on changed 11 circumstances?</p> <p>12 A You know, I cannot say with absolute certainty 13 that's never happened. I can say I certainly hope it 14 never happened, especially for the 16 years I was on the 15 Commission, at least with not a dissenting vote.</p> <p>16 Q Okay. So, is it your -- is it your view of 17 regulation, given your expertise that you offer to the 18 Commission, that if investments are made based on those 19 determinations and approved by the Commission, and 20 circumstances change, that utility should still be 21 allowed to earn a return on and a return of that 22 investment until fully recovered?</p> <p>23 A As a general proposition, yes.</p> <p>24 Q Okay.</p> <p>25 A Let me be clear. There could be</p>	<p style="text-align: right;">Page 99</p> <p>1 circumstances -- and I don't think this has happened for 2 a Florida utility, so I'm not trying to suggest 3 otherwise -- but for example, a commission -- let's just 4 say a generic regulatory commission could approve an 5 investment and say, this is prudent and put it in rate 6 base.</p> <p>7 And then, some ten years later, that asset is 8 not being productive because the utility didn't properly 9 maintain it. And they had adequate funds in their rates 10 to maintain that equipment. And if they failed to do 11 so, that may be a basis to disallow that investment.</p> <p>12 So, with exceptions of that nature, I would 13 agree with your general statement.</p> <p>14 Q Okay. So, given that kind of caveat or maybe 15 there was information withheld at the time of approval 16 that turns out to have been fraudulent or -- or 17 whatever, but putting aside those sort of anomalies, 18 assuming none of that happened, and an investment was 19 made, circumstances change, ten years later, it -- it's 20 the -- your understanding of the policy that this 21 Commission has under the laws it implements is that the 22 utility is entitled to earn a return of and a return on 23 that investment until fully recovered?</p> <p>24 A Yes.</p> <p>25 Q Okay. So, given that background, if the</p>
<p style="text-align: right;">Page 100</p> <p>1 Commission approves SolarTogether, based on everything 2 that the company has put before the Commission and, 3 hypothetically, in ten years, some technology comes 4 about where all the subscribers to SolarTogether migrate 5 somewhere else and no longer subscribed, and the 6 investment that's intended to last at least 30 years -- 7 is that fair?</p> <p>8 A Yes.</p> <p>9 Q -- is uncovered in terms of not having those 10 voluntary subscribers pay the participant cost, did -- 11 is it your opinion that, given these principles, the 12 Commission would be obligated to allow the company to 13 recover a return on and return of the unrecovered 14 SolarTogether investment?</p> <p>15 A I would say yes, but when you say "obligated," 16 I don't want to imply that somehow the Commission is 17 legally obligated. The Commission has discretion, but I 18 would hope the Commission would not exercise its 19 discretion to disallow a previously-approved investment 20 simply because economics have changed or something 21 beyond the control of the regulated utility.</p> <p>22 Q Okay. And to -- just to complete the loop on 23 that series of questions, when I said "obligated," I 24 mean, under the policy that it has always -- or at least 25 since you were a Commissioner and forward -- that it is</p>	<p style="text-align: right;">Page 101</p> <p>1 implemented for any investment that they approved as 2 being prudent.</p> <p>3 A Yes.</p> <p>4 Q That's what I meant by "obligated."</p> <p>5 A Okay. I can agree with that -- with that 6 definition of "obligated," I agree.</p> <p>7 Q So, a utility like Florida Power & Light or 8 Duke -- if they did something just like SolarTogether -- 9 they would have an expectation that you would consider 10 reasonable, based on history and the Commission's 11 policies, to recover stranded investment in a project 12 where all of the voluntary subscribers vanished. You --</p> <p>13 A Yes, I would agree with that.</p> <p>14 Q Okay. Let me -- just a few follow-up 15 questions and then we'll be done here. Let's go back to 16 Page 7, Lines 4 through 6.</p> <p>17 A Okay. I'm there.</p> <p>18 Q And I thought you used the phrase "residual 19 benefits" in response to a question Ms. Crawford asked 20 you about that. Do you recall that?</p> <p>21 A You know, I seem to recall using that term, 22 but I don't seem to remember the question or the 23 context.</p> <p>24 Q Nor do I.</p> <p>25 So, I was trying to understand, do you have a</p>

<p style="text-align: right;">Page 102</p> <p>1 definition of residual benefits that you would have 2 use- -- intended if you used that phrase? 3 A Well, I think that, if I had used that phrase, 4 it probably would have been in the context of benefits 5 beyond those allocated to participants, in that they 6 would be residual to the general body of customers. 7 Q Okay. So -- and I -- now I understand why I 8 was kind of wanting to follow up. Is it your 9 understanding that, except for variations in sales or 10 maybe based on weather, that the participants in the 11 SolarTogether program are pretty much going to be 12 guaranteed to get the benefits that are proposed in the 13 SolarTogether project, as long as they pay the -- the 14 buy-in cost? Is that -- is that your understanding? 15 A I'm not comfortable with the word "guarantee," 16 but I think there's a high likelihood that customers 17 would feel comfortable that the benefits that they 18 anticipate probably would materialize. 19 Q Okay. Would the residual benefits that you 20 referred to, the benefits that the non-participants 21 would hope to get, based on how the assumptions that 22 went into the CPVRR analysis that quantified the 23 benefits materialized -- is that what you meant by 24 "residual benefits"? 25 A You've got to repeat the question. I'm sorry.</p>	<p style="text-align: right;">Page 103</p> <p>1 Q Okay. 2 A It's -- it's getting late in the day. 3 Q Yeah, I understand. 4 So, putting aside whether the participant 5 benefits are guaranteed, but they're highly likely -- 6 you agree with that? 7 A I would tend to agree with that, yes. 8 Q Would the benefits that the non-participants 9 would be projected to receive -- would they have the 10 same level of high likelihood or would they be dependent 11 upon the assumptions that went into the CPVRR analysis? 12 A Oh, they would be dependent upon the 13 assumptions. Just like any asset that is acquired or 14 generation that is constructed, the actual 15 materialization of those benefits would be dependent 16 upon the inputs that go into that analysis, and the 17 actual benefits could be less or more than what, you 18 know, the -- the range of assumptions would generate. 19 Q So, is that what you meant by residual 20 benefits? That's what I was kind of getting at. 21 A Yeah, I -- I was -- the re- -- the benefits 22 beyond those to the participants that would go to the 23 general body of customers. 24 Q Okay. You would agree, qualitatively, the 25 likelihood of receipt of benefits is different for</p>
<p style="text-align: right;">Page 104</p> <p>1 participants versus non-participants; is that fair? 2 A You know, I haven't tried to quantify that and 3 I've not done a study to quantify that. 4 Q Okay. 5 A But you know, that may be a question better 6 for another witness. 7 Q Okay. 8 A I've just really not attempted to -- to look 9 at that. My -- the focus of my testimony was that there 10 are benefits for all customers, primarily based upon the 11 CPVRR analysis and then also my -- my assertion and my 12 belief that there's going to be some mitigation of risk 13 associated with lost revenues. 14 Q Okay. Have you done any studies to quantify 15 the risks that -- that you say would be mitigated by the 16 approval of the SolarTogether? 17 A No, I've not attempted to mitigate it, but 18 again, I think the risk -- 19 Q Quantify. 20 A -- is real. I'm -- I'm sorry -- I've not 21 tried to quantify that risk. 22 Q Okay. 23 A I think it would be a difficult thing to 24 try to quantify, but I've not made any attempt. 25 I do know that the potential for lost revenues</p>	<p style="text-align: right;">Page 105</p> <p>1 and the loss of contribution to fixed costs is something 2 that has a long history at the Commission and is 3 something that the Commission is aware of and tries to 4 mitigate that to the extent that it can. 5 I'm not sure the Commission has ever tried to 6 quantify it, but they've made decisions based upon the 7 fact that it would have -- if it materialized, it would 8 have adverse consequences on the general body of 9 customers. 10 Q So, maybe what I should ask you about, in 11 terms of quantification, is did you look at any studies 12 or do any research about the number or type of customers 13 who would be likely to leave the system in absence of 14 SolarTogether? 15 A I have made no such analysis or study. 16 Q Okay. Have you looked at any analysis that 17 FPL or NextEra produced to quantify that risk? 18 A No, I have not. 19 Q Has FPL or NextEra shared with you any 20 information that they have about customers who are at 21 risk, whether they're commercial/industrial, business, 22 or residential? 23 A I would say no, but let me be very clear in -- 24 and complete in my answer. I think I have been -- I 25 have seen, I think, perhaps, in testimony, or maybe in</p>

<p style="text-align: right;">Page 106</p> <p>1 responses to interrogatories, that there has been some 2 quantifications made in terms of what would be the 3 result if the -- if the capacity under SolarTogether 4 were assumed to be net-metered and the impacts of that, 5 and it appeared to be quite large. 6 But I'm not -- I didn't take that study to be 7 projecting that, if SolarTogether is not approved, that 8 all of these customers that would otherwise subscribe 9 would go to a net metering. It's just, it represents 10 the concept -- the real risk, in my opinion -- that 11 customers that want to exercise their choice and put in 12 their own facilities and, perhaps, go to a net-metering 13 structure -- that that could have an adverse impact on 14 customers that choose not to net-meter or don't have the 15 ability to net-meter. 16 Q So, if a customer couldn't net-meter because 17 of rental or geography or just the trees in their 18 neighborhood or whatever, how could they leave? 19 A How could those customers leave? 20 Q Yeah. Are you saying they're kind of trapped? 21 They can't -- they can't leave the system? 22 A Not without moving into a different utility 23 service territory. 24 Q Okay. 25 A Yeah, I think that -- you know, they're pretty</p>	<p style="text-align: right;">Page 107</p> <p>1 much captive customers. And this -- I mean, that's why 2 we have a regulatory compact. And that's why we're 3 considering these issues is that we want to protect 4 captive customers. 5 And what we're seeing here, in my opinion is, 6 maybe the first wave of what I consider potentially is a 7 sea change in regulation of electric utilities in this 8 state; whereas, before, just about all customers were 9 captive to some degree, perhaps some more than others. 10 And you're going to see, with the advent of 11 more cost-effective solar, customers having choices that 12 they've never had before. And I think some of the 13 issues in SolarTogether, I think, helps crystalize some 14 of those issues and help -- perhaps, will help the 15 Commission grasp some of these things and maybe be on 16 the front end of this -- of this wave, perhaps, and do 17 it in a way that benefits all customers and -- so, look 18 at solar and its cost-effectiveness as a -- as an 19 opportunity and how best to do that that protects all 20 customers. 21 Q So, just to -- so we don't dance around the 22 issues, sort of like the elephant in the room here, I 23 think, clearly, we started off early in the deposition 24 talking about these customers who didn't have any 25 choice, so SolarTogether would be an option for them to</p>
<p style="text-align: right;">Page 108</p> <p>1 participate in renewable generation; is that fair? 2 A I think that's one of the big attractions of 3 SolarTogether, yes. 4 Q Okay. And you also testified to mitigation 5 and risk of customers leaving, and -- 6 A I -- yes. 7 Q To the extent those customers were included in 8 the risk of leaving, are we talking about a 9 constitutional amendment that would give customers 10 freedom of choice in terms of who or how their -- their 11 electricity was provided? Is that what this is really 12 about? 13 A No. I want to make clear on that, I'm not 14 making any assumptions about that proposed 15 constitutional amendment. 16 My testimony is based upon the status quo, 17 regulation as we understand it, with the utilities that 18 we have and their vertical integration in the service 19 territories that they have. That's the basis for my 20 testimony. 21 Q Okay. I thought earlier, in Ms. Crawford's 22 questioning, you equated the term "prudence" with "cost 23 recovery." Do you recall that? 24 A I don't recall that, but there is a connection 25 between prudent and cost recovery.</p>	<p style="text-align: right;">Page 109</p> <p>1 Q I think the context of her questions were, if 2 the Commission denied the tariff, but said you could 3 build the facilities -- she was asking you a 4 hypothetical in that regard and you kind of balked at 5 that because you couldn't accept that -- that prudence 6 could come without cost recovery associated with that; 7 is that -- am I mischaracterizing on -- 8 A Yeah, and that was basically -- maybe my 9 inability to understand the question completely and 10 maybe something in there that -- and I'm not suggesting 11 she was suggesting this, but in my mind, I could see a 12 situation where, perhaps, it could be a situation of the 13 Commission telling FPL, well, go ahead and build these 14 facilities; we think they're prudent. And there's no 15 assurance of cost recovery. And I think that would -- 16 that would have a chilling effect on what SolarTogether 17 is trying to accomplish. 18 Q Well, am I mistaken or has FPL not said in 19 some form of response to discovery or something they 20 submitted to the Commission that, even if this tariff 21 and program is denied, you're still -- they are still 22 going to build Projects 1, 2, and 3, out of the five 23 anyway; is that your understanding? 24 A I'm not exactly sure on the numbers, but my 25 understanding is that the projects that are already</p>

<p style="text-align: right;">Page 110</p> <p>1 under construction and anticipated to be part of</p> <p>2 SolarTogether -- that those projects would continue.</p> <p>3 They would be finished and that they would come into</p> <p>4 service at some point --</p> <p>5 Q Okay.</p> <p>6 A -- in the future and provide generation for</p> <p>7 customers.</p> <p>8 Q Okay. Now -- so, FPL clearly undertook to</p> <p>9 commence construction and is planning on commercial</p> <p>10 operation of these facilities prior to the end of the</p> <p>11 four- or five-year -- depending on how you do your</p> <p>12 math -- stay-out provision that's contained in the 2016</p> <p>13 settlement agreement; is that fair?</p> <p>14 A I think that's fair. And I -- I think that's</p> <p>15 also a recognition and acknowledgment that regulation in</p> <p>16 the state of Florida generally has been even-handed and</p> <p>17 that, when a prudent investment is made, that there will</p> <p>18 be eventual cost recovery. And that's a good thing.</p> <p>19 But I think the Commission also needs to</p> <p>20 consider that, if they want to incent this on an</p> <p>21 expedited basis and get the benefits as quickly as</p> <p>22 possible, that there needs to be a mechanism to not have</p> <p>23 the regulatory lag and wait for the next rate case</p> <p>24 for -- for these investments.</p> <p>25 You know, after we get beyond these, how</p>	<p style="text-align: right;">Page 111</p> <p>1 things are going to be treated in the future -- I think</p> <p>2 that needs to be part of the equation as well.</p> <p>3 Q Now, based on your observations of -- I mean,</p> <p>4 we've got a lot of testimonies that you -- you</p> <p>5 understand things because you -- you have observed since</p> <p>6 you left the Commission how the Commission has behaved</p> <p>7 in terms of dealing with large-scale solar facilities</p> <p>8 that are cost-effective; is that right?</p> <p>9 A I've observed it, per- -- perhaps, not</p> <p>10 firsthand, as a --</p> <p>11 Q Okay.</p> <p>12 A -- witness or -- but I've seen -- you know,</p> <p>13 I -- I've generally followed the Commission. I guess</p> <p>14 it's in my blood. I have an interest in it. So, I'm</p> <p>15 generally aware of the things the Commission has done.</p> <p>16 Q Now, have you seen anything that tells you</p> <p>17 that the Commission gave some sort of wink or a nod or a</p> <p>18 green light to the -- to FPL to go ahead and build one,</p> <p>19 two, and three of the -- of the five projects without</p> <p>20 any action by the Commission?</p> <p>21 A I'm not --</p> <p>22 MS. MONCADA: Object to form.</p> <p>23 A Okay.</p> <p>24 Q Can you answer the question? Do you know what</p> <p>25 I'm asking?</p>
<p style="text-align: right;">Page 112</p> <p>1 A I think I know where you're answering [sic],</p> <p>2 and I'm not aware of anything of that nature.</p> <p>3 Q Okay. So, would it be fair to say that FPL</p> <p>4 undertook to build one, two, and three, without regard</p> <p>5 to any action by the Commission or assurances they would</p> <p>6 get recovery?</p> <p>7 MS. MONCADA: Object to the form. I -- can we</p> <p>8 just clarify for the record, it's one and two.</p> <p>9 MR. REHWINKEL: I'm sorry.</p> <p>10 BY MR. REHWINKEL:</p> <p>11 Q I apologize. So, every question I asked you</p> <p>12 that had one, two, and three, I meant one and two.</p> <p>13 A And that's why I previously rejected the</p> <p>14 quantification of one, two, and three, because I</p> <p>15 thought --</p> <p>16 Q Okay.</p> <p>17 A -- it was one and two.</p> <p>18 Q All right. Okay. I apologize. So, my</p> <p>19 questions were, to you, intended to just be about one</p> <p>20 and two.</p> <p>21 A Okay. Fair enough.</p> <p>22 Q Okay.</p> <p>23 A Can you repeat the question, then?</p> <p>24 Q Yeah -- I forgot what the question was, so</p> <p>25 I'll just ask it to you this way: You would agree that</p>	<p style="text-align: right;">Page 113</p> <p>1 the Commission did not give any assurance to FPL that</p> <p>2 they would get cost recovery if they undertook, built,</p> <p>3 and put in service Projects 1 and 2?</p> <p>4 A I am not aware of any.</p> <p>5 Q Okay. And each of those is three 74.5-</p> <p>6 megawatt solar facilities or solar farms. So, there</p> <p>7 would be six in total, six times 74.5, give or take a</p> <p>8 megawatt, right?</p> <p>9 A That's my understanding.</p> <p>10 Q Okay. And would you also agree, based on what</p> <p>11 you know about the Commission's regulation and the PPSA,</p> <p>12 is that, if we didn't have this process, the</p> <p>13 SolarTogether tariff petition, FPL could build as many</p> <p>14 74.5-megawatt solar farms as they wanted and they</p> <p>15 wouldn't have to get any approval from the Public</p> <p>16 Service Commission to do so?</p> <p>17 A I think, under your hypothetical, that's</p> <p>18 probably true that they could, but I wouldn't think that</p> <p>19 would be the prudent thing to do, and I don't think you</p> <p>20 could make the assumption that they would do that</p> <p>21 without some assurances of cost recovery.</p> <p>22 Q Other -- after you get to six -- after six,</p> <p>23 maybe it wouldn't be prudent.</p> <p>24 A Well, if -- those are already under</p> <p>25 construction.</p>

<p style="text-align: right;">Page 114</p> <p>1 Q Yeah.</p> <p>2 A And it would probably be -- here again, I say</p> <p>3 probably because I don't know all of the facts, but</p> <p>4 probably would not be a prudent thing to just stop</p> <p>5 construction and, perhaps, have to still pay vendors for</p> <p>6 not finishing a job and that sort of thing.</p> <p>7 MR. REHWINKEL: Okay. All right. Comm- -- I</p> <p>8 was about to call you Commissioner, Terry. Those</p> <p>9 are all the questions I have. Thank you.</p> <p>10 THE WITNESS: Okay. Thank you.</p> <p>11 MS. CRAWFORD: Are you going to waive signing?</p> <p>12 You want to --</p> <p>13 MS. MONCADA: I have no redirect. That's --</p> <p>14 MS. CRAWFORD: I'm sorry. I'm sorry.</p> <p>15 MS. MONCADA: For the record, I have no</p> <p>16 redirect.</p> <p>17 (Whereupon, the deposition was concluded at</p> <p>18 4:15 p.m., and the witness did not waive reading and</p> <p>19 signing.)</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p style="text-align: right;">Page 115</p> <p style="text-align: center;">CERTIFICATE OF OATH</p> <p>1</p> <p>2</p> <p>3</p> <p>4 STATE OF FLORIDA)</p> <p>5 COUNTY OF LEON)</p> <p>6</p> <p>7</p> <p>8 I, the undersigned authority, certify that the</p> <p>9 above-named witness personally appeared before me and</p> <p>10 was duly sworn.</p> <p>11</p> <p>12</p> <p>13</p> <p>14 WITNESS my hand and official seal this 2nd day</p> <p>15 of January, 2020.</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22 ANDREA KOMARIDIS WRAY</p> <p>23 NOTARY PUBLIC</p> <p>24 COMMISSION #GG365545</p> <p>25 EXPIRES FEBRUARY 09, 2021</p>
<p style="text-align: right;">Page 116</p> <p style="text-align: center;">CERTIFICATE OF REPORTER</p> <p>1</p> <p>2</p> <p>3 STATE OF FLORIDA)</p> <p>4 COUNTY OF LEON)</p> <p>5 I, ANDREA KOMARIDIS WRAY, Court Reporter,</p> <p>6 certify that the foregoing proceedings were taken before</p> <p>7 me at the time and place therein designated; that my</p> <p>8 shorthand notes were thereafter translated under my</p> <p>9 supervision; and the foregoing pages, numbered 1 through</p> <p>10 114, are a true and correct record of the aforesaid</p> <p>11 proceedings.</p> <p>12</p> <p>13 I further certify that I am not a relative,</p> <p>14 employee, attorney or counsel of any of the parties, nor</p> <p>15 am I a relative or employee of any of the parties'</p> <p>16 attorney or counsel connected with the action, nor am I</p> <p>17 financially interested in the action.</p> <p>18 DATED this 2nd day of January, 2020.</p> <p>19</p> <p>20</p> <p>21</p> <p>22 ANDREA KOMARIDIS WRAY</p> <p>23 NOTARY PUBLIC</p> <p>24 COMMISSION #GG365545</p> <p>25 EXPIRES FEBRUARY 09, 2021</p>	<p style="text-align: right;">Page 117</p> <p style="text-align: center;">ERRATA SHEET</p> <p>1</p> <p>2 I have read the transcript of my deposition, Pages 1</p> <p>3 through 114 and hereby subscribe to same, including any</p> <p>4 corrections and/or amendments listed below.</p> <p>5 DATE: _____</p> <p>6 TERRY DEASON</p> <p>7 (IN RE: FPL SOLARTOGETHER PROGRAM)</p> <p>8 PAGE/LINE CORRECTION/AMENDMENT REASON FOR CHANGE</p> <p>9 _____</p> <p>10 _____</p> <p>11 _____</p> <p>12 _____</p> <p>13 _____</p> <p>14 _____</p> <p>15 _____</p> <p>16 _____</p> <p>17 _____</p> <p>18 _____</p> <p>19 _____</p> <p>20 _____</p> <p>21 _____</p> <p>22 DATE OF DEPOSITION: December 10, 2019</p> <p>23 REPORTER: ANDREA KOMARIDIS WRAY</p> <p>24</p> <p>25</p>

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1

ERRATA SHEET

2 I have read the transcript of my deposition, Pages 1
 3 through 114 and hereby subscribe to same, including any
 corrections and/or amendments listed below.

4 DATE: 1-6-2020

Terry Deason
 TERRY DEASON

5 (IN RE: FPL SOLARTOGETHER PROGRAM)

6 PAGE/LINE CORRECTION/AMENDMENT REASON FOR CHANGE

7 11/20 change "esthetics" to "aesthetics"

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22 DATE OF DEPOSITION: December 10, 2019

23 REPORTER: ANDREA KOMARIDIS WRAY

24

25

Deposition of William F. Brannen taken on
December 17, 2019.

Errata of Deposition Completed on January 9, 2020.

Confidential DN. 00190-2020

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 62
PARTY: STAFF HEARING EXHIBITS
DESCRIPTION: Deposition of William F.
Brannen taken on December 17, 2019. Errata
of Deposition completed on Januar...

ERRATA SHEET

DO NOT WRITE ON TRANSCRIPT - ENTER CHANGES HERE
 IN RE: Florida Public Service Commission
 DOCKET NO. 20190061-EI

WITNESS: WILLIAM BRANNEN TAKEN: 12/17/2019

Page	Line	Change	Reason
36	3	"Power Plant Citing Act" to "Power Plant Siting Act"	Correct spelling.
36	20	word "citing" into "siting"	Correct spelling.
44	6	The Question and the Answer is labeled wrong. Starting Line 6 is Brannen's answer, not the question.	
49	13	ENC to E&C	Correct spelling.
53	17	BVD to BYD	
73	14	From "Invest Run" to "Investor owned"	Correct spelling.
79	18	"Intimated about the LMR"	No clear meaning
85	4	From "Valley" to "Valle"	Correct spelling.
85	19	"So8ras" to "So8RA"	
8	11	"department's" should be "departments and"	
8	13	"for an" should be "from an"	
16	13	"of managing" should be "for managing"	
17	11	"company and FPL" should be "company, FPL,"	
17	21	"activity" should be "activities"	
18	17	"risk" should be "risks"	
18	22	"that something" should be "if something"	
21	11	"divide" should be "divine"	
24	11	"to get sort of engineering news record" should be "or sources such as Engineering News Record"	
24	22	"this is a Maria" should be "this is Maria"	
28	7	"hire" should be "higher"	
29	23	"bundled" should be "bubbled"	
32	6	"got" should be "had"	
33	23	"which is" should be "which are"	
34	21	"necessarily dispatchable resources" should be "necessarily a dispatchable resource"	

35	20	"activity" should be "activities"	
44	4 - 6	Continuation of Brannen response, not a question	
44	7 - 8	OPC statement not Brannen response	
44 & 45	9 - 25 & 1	Brannen response not OPC question	
46	1	"I can't think of this" should be "Let me think about this"	
50	7	"panels. The" should be "panels, the"	
50	10	"mean" should be "medium"	
53	11	"WFP3" should be "WFB-3"	
54	16	"APC" should be "EPC"	
55	21	"EPT" should be "EPC"	
67	23	"procurement" should be "procurement."	
67	24	"that that" should be "That"	
67	25	"Oberlin" should be "Overland"	
68	11	"Oberlin" should be "Overland"	
69	7 - 8	Brannen comment not OPC	
69	12	"Individual to" should be "individual who prepared the document to"	
76	7	"I caution" should be "a caution"	
82	7	"miss understood" should be "misunderstood"	
82	15	"in Desoto" should be "and Desoto"	
87	17	"Brennan" should be "Brannen"	
88	8	"either" should be "text"	
92	19	Staff statement not Brannen response	
92	20 - 21	Brannen response	
93 & 94	16 - 25 & 1	Brannen response not OPC question	
94	1 - 11	Staff statement not Brannen response	
94	12	Staff statement not Brannen response	
94	19	Staff statement not Brannen response	
94	20 - 24	Brannen response not Staff question	
94	25	Staff statement not Brannen response	
95 - 96	1 - 25 & 1	Brannen response not Staff question	
95	2	"process" should be "process that"	
95	1	"adhering" should be "adhered"	
95	13	Staff statement not Brannen response	
96	3	Staff statement not Brannen response	
96	7 - 13	Brannen response not Staff question	
96	14	Staff statement not Brannen response	
98	6 - 8	Staff question not Brannen response	

98	15	"activities. The" should be "activities, the"	
98	16	"project" should be "project;"	
102	16	"2020 SoBRA project" should be "SolarTogether projects"	
105	11	"were" should be "we are"	
108	16	"We" should be "Since we"	
108	18	"conditions for" should be "conditions. For"	
111	16	"steer" should be "stair"	
119	12	"products is" should be "project and"	
119	13	"GSUs." should be "GSUs,"	
119	17	"less than in all cases what" should be "less than, in all cases, what".	
122	7	"apparent" should be "applicable"	
135	7	"\$300,000" should be "300,000"	
138	13	"\$300,000" should be "300,000"	
138	16	"\$300,000" should be "300,000"	
139	15 - 16	"reserving to produce in" should be "reserving production in"	
140	23	"ship. The" should be "ship, the"	
145	14	"Solo" should be "Solar"	
146	3	Delete "being"	
147	8	"for Solar to DY2" should be and Frist Solar to BYD"	
148	4	"our" should be "are"	
149	6	"16 and a half" should be "16.5%"	
150	9	"Cring" should be "Sitting"	
151 - 153	22 - 25, 1 - 25 & 1 - 22	Brannen response not OPC question	
153	16	"first" should be "First"	
155	9	"DV suppliers" should be "PV suppliers"	
155	11 - 17	Brannen response not OPC question	
156	12	"balance and" should be "balance of"	
157 - 158	12 - 25 & 1 - 14	Brannen response not OPC question	
157	22	"hire" should be "higher"	
158	18	Brannen response not OPC question	
159	6	"continuous" should be "contiguous"	
159	11	"quitman" should be "Quitman"	
161	18	"Oberlin" should be "Overland"	
163	6	"PDC" should be "AFUDC"	
163	19	"SoBras" to "SoBRA sites"	

163	20	"the number" should be "a number"	
163	24	"projects for the Sobra projects" should be the sites for the Sobra project"	
163	25	"then" should be "the"	
166	2	"that will" should be "that we will"	
166	4	"until later" should be "until a later"	

Under penalties of perjury, I declare that I have read the foregoing document and that the facts stated in it are true.

1/9/2020
Date


WILLIAM BRANNEN

EXHIBIT NO. 63

DOCKET NO: 20190061-EI

WITNESS: Valle

PARTY: FPL

DESCRIPTION: SolarTogether Subscription Availability by
Customer Type

PROFFERED BY: Staff

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 63
PARTY: Staff
DESCRIPTION: SolarTogether Subscription
Availability by Customer Type

SolarTogether Subscription Availability by Customer Type

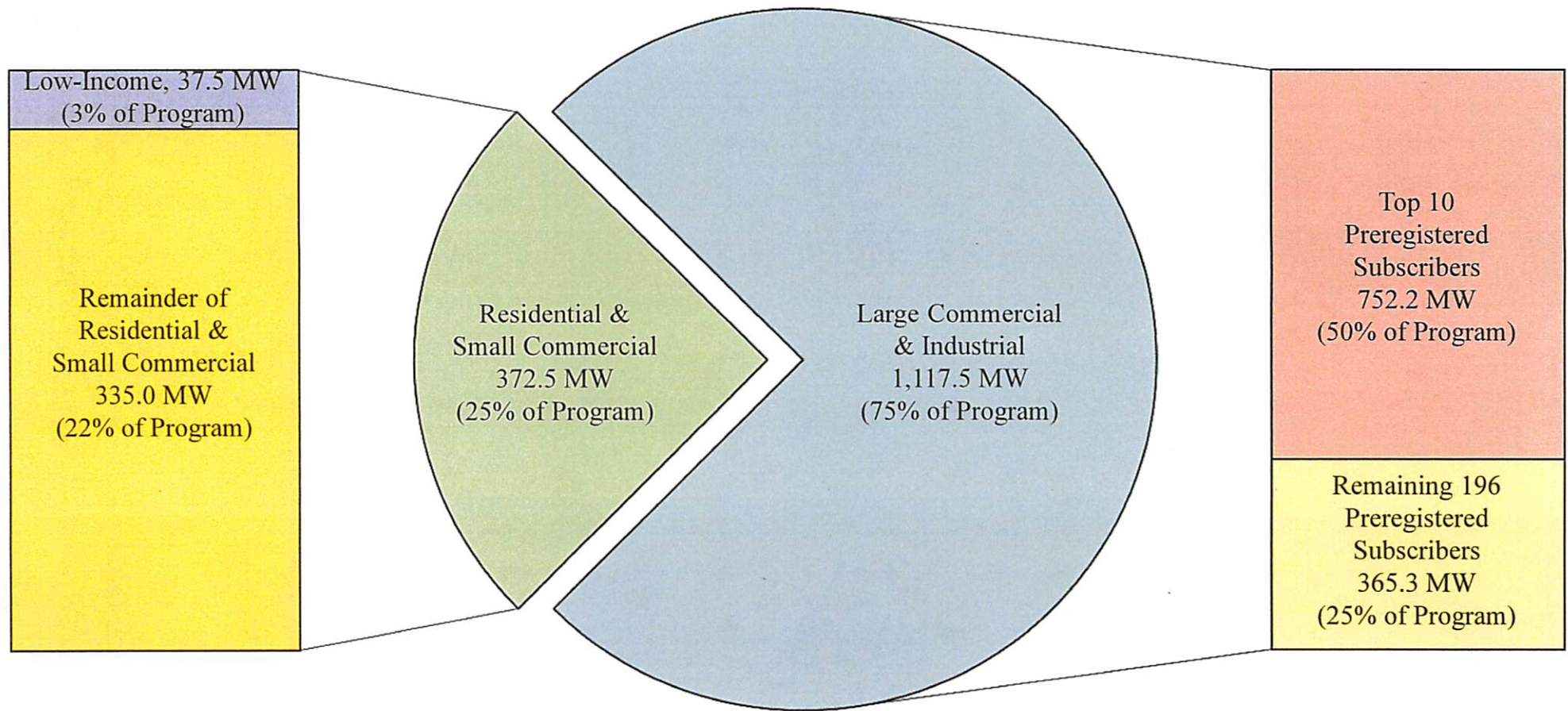


EXHIBIT NO. 64

DOCKET NO: 20190061-EI

WITNESS: Valle

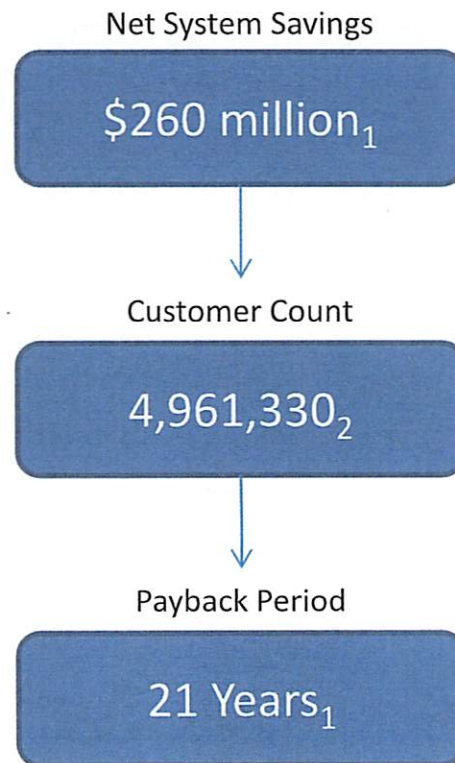
PARTY: FPL

DESCRIPTION: Scenario Savings Allocations for Solar
Facilities and SolarTogether

PROFFERED BY: Staff

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 64
PARTY: Staff
DESCRIPTION: Scenario Savings Allocations
for Solar Facilities and SolarTogether

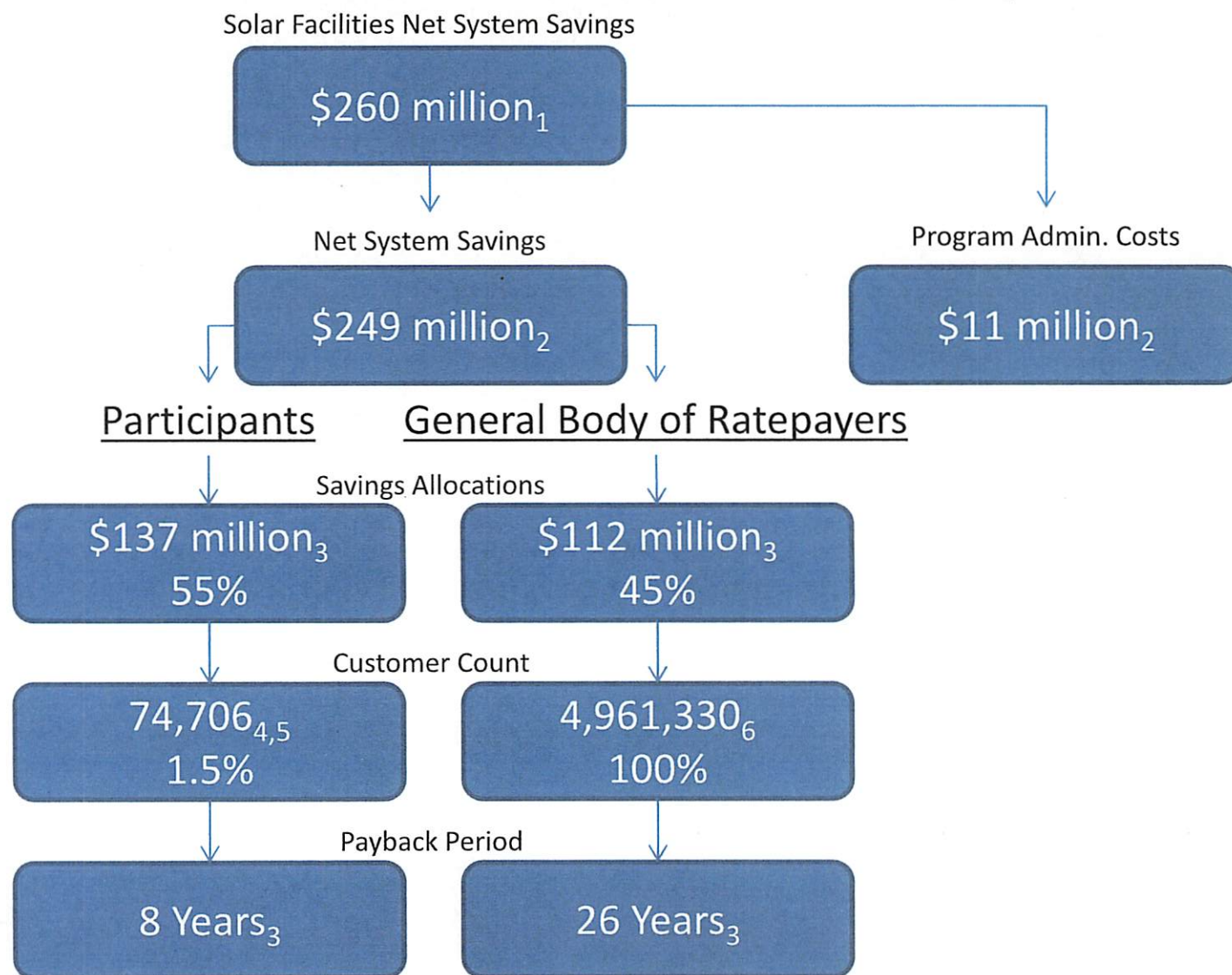
Pre-Tariff Solar Facilities Savings With Carbon (Mid Fuel/Mid CO₂)



[1] FPL's Response to Staff's Thirteenth Set of Interrogatories No. 254.

[2] FPL's Response to Staff's Second Set of Interrogatories No. 183.

Post-Tariff SolarTogether Savings With Carbon (Mid Fuel/Mid CO₂)



[1] FPL's Response to Staff's Thirteenth Set of Interrogatories No. 254.

[2] FPL's Amended Response to Staff's Second Set of Interrogatories No. 190.

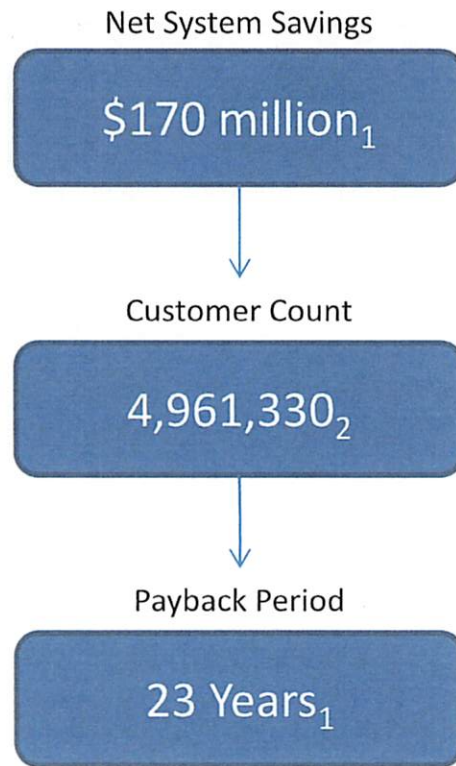
[3] FPL's Response to Staff's Ninth Set of Interrogatories No. 237.

[4] FPL's Response to Staff's First Set of Interrogatories No. 64.

[5] FPL's Response to Staff's First Set of Interrogatories No. 125.

[6] FPL's Response to Staff's Second Set of Interrogatories No. 183.

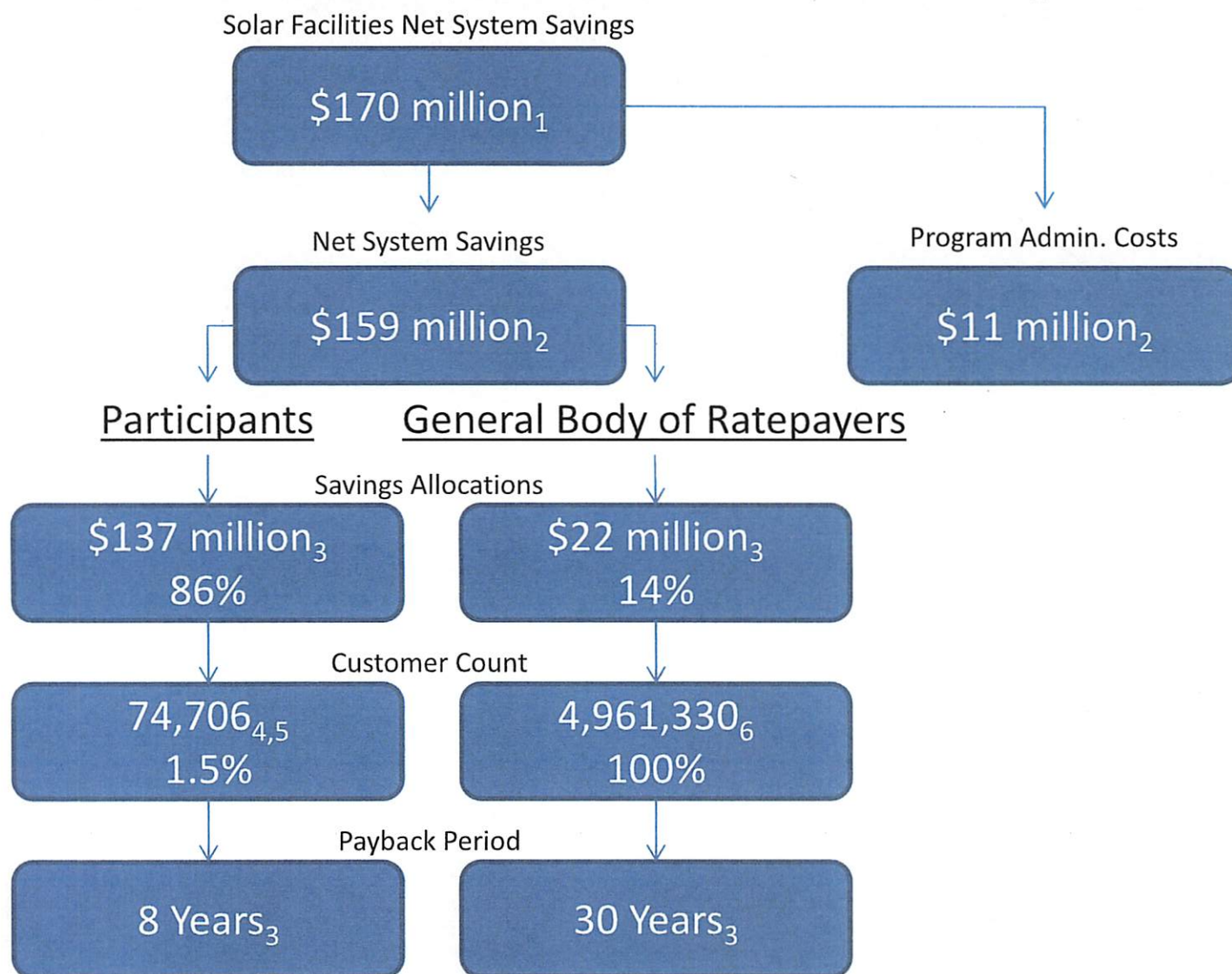
Pre-Tariff Solar Facilities Savings Without Carbon (Mid Fuel/Low CO₂)



[1] FPL's Response to Staff's Thirteenth Set of Interrogatories No. 254.

[2] FPL's Response to Staff's Second Set of Interrogatories No. 183.

Post-Tariff SolarTogether Savings Without Carbon (Mid Fuel/Low CO₂)



[1] FPL's Response to Staff's Thirteenth Set of Interrogatories No. 254.

[2] FPL's Amended Response to Staff's Second Set of Interrogatories No. 190.

[3] FPL's Amended Response to Staff's First Set of Interrogatories No. 237.

[4] FPL's Response to Staff's First Set of Interrogatories No. 64.

[5] FPL's Response to Staff's First Set of Interrogatories No. 125.

[6] FPL's Response to Staff's Second Set of Interrogatories No. 183.

EXHIBIT NOT ENTERED

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 65
PARTY: Staff
DESCRIPTION: Staff's Interrogatories Nos.
139 (CEL 38), 241 (CEL 47), 254 (CEL 50),
209 CEL 42, and 234a (CEL 46)

EXHIBIT NOT ENTERED

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 66
PARTY: Staff
DESCRIPTION: Deposition of Steven R. Sim

EXHIBIT NO. 67

DOCKET NO: 20190061-EI

WITNESS: Steven R. Sim

PARTY: FPL

DESCRIPTION: Levelized System Average Electric Rate of Resource Plans

DOCUMENTS:

PROFFERED BY: Staff

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 67
PARTY: Staff
DESCRIPTION: Levelized System Average
Electric Rate of Resource Plans

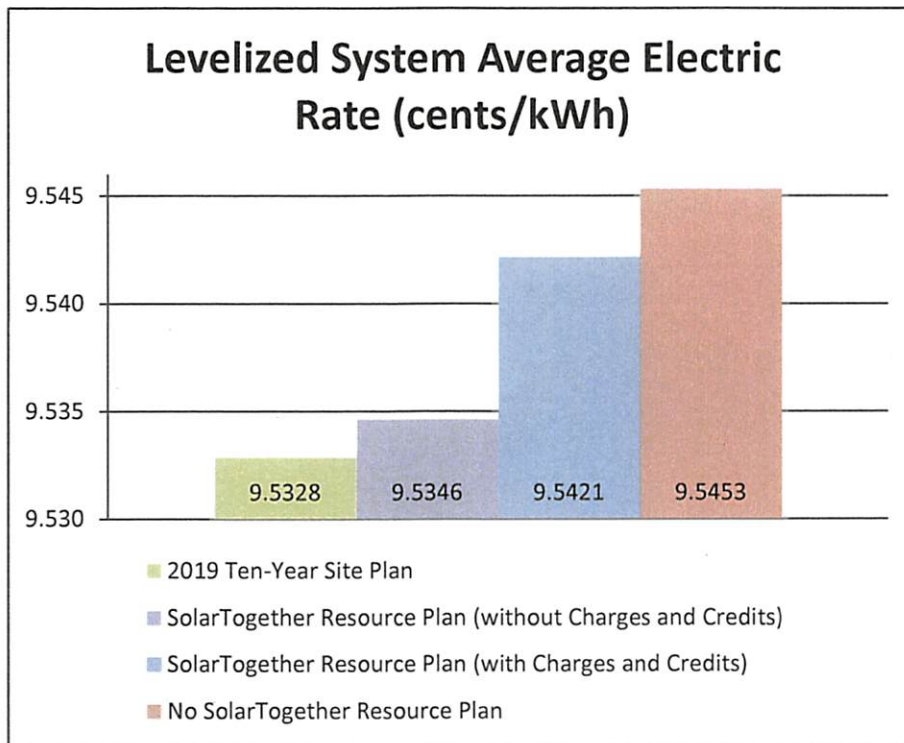


EXHIBIT NO. 68

DOCKET NO: 20190061-EI

WITNESS: Steven R. Sim

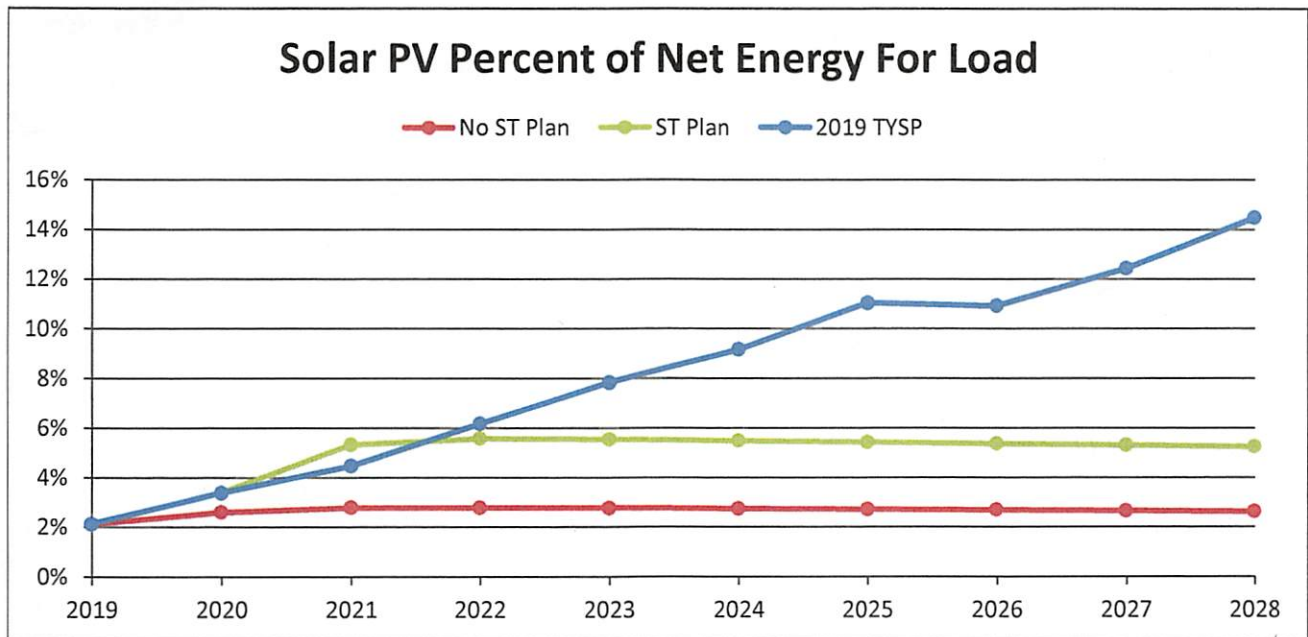
PARTY: FPL

DESCRIPTION: Solar PV Percent of Net Energy Load

DOCUMENTS:

PROFFERED BY: Staff

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 68
PARTY: Staff
DESCRIPTION: Solar PV Percent of Net
Energy Load



Percent of Energy from Solar PV			
Year	No ST Plan	ST Plan	2019 TYSP
2019	2.11	2.11	2.11
2020	2.59	3.37	3.37
2021	2.78	5.31	4.46
2022	2.77	5.55	6.16
2023	2.76	5.52	7.82
2024	2.73	5.47	9.15
2025	2.70	5.41	11.01
2026	2.67	5.36	10.89
2027	2.64	5.29	12.41
2028	2.61	5.23	14.45

EXHIBIT NO. 69

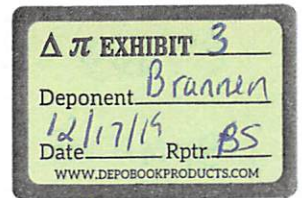
DOCKET NO: 20190061-EI

DESCRIPTION: Brannen Deposition Exhibit No. 3

WITNESS: Bores

PROFFERED BY: Office of Public Counsel

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 69
PARTY: OPC
DESCRIPTION: Brannen Deposition Exhibit
No. 3



In re: Petition by Florida Power & Light Company for
Approval of FPL SolarTogether Program and Tariff

Docket No. 20190061-EI

Filed: October 14, 2019

**FLORIDA POWER & LIGHT COMPANY'S
OBJECTIONS AND RESPONSES TO OFFICE OF PUBLIC
COUNSEL'S EIGHTH SET OF INTERROGATORIES (Nos. 34-38) AND
EIGHTH REQUEST FOR PRODUCTION OF DOCUMENTS (Nos. 32-36)**

Florida Power & Light Company ("FPL") pursuant to Rules 1.340 and 1.350, Florida Rules of Civil Procedure and Rule 28-106.206, Florida Administrative Code, submits the following Objections and Responses to the Office of Public Counsel's ("OPC") Eighth Set of Interrogatories (Nos. 34-38) and Eighth Request for Production of Documents (Nos. 32-36).

I. General Objections

FPL objects to each and every discovery request that calls for information protected by the attorney-client privilege, the work product doctrine, the accountant-client privilege, the trade secret privilege, or any other applicable privilege or protection afforded by law, whether such privilege or protection appears at the time response is first made or is later determined to be applicable for any reason. FPL in no way intends to waive any such privilege or protection. The nature of the documents, if any, will be described in a privilege log prepared and provided by FPL.

FPL is a large corporation with employees located in many different locations. In the course of its business, FPL creates numerous documents that are not subject to Florida Public Service Commission or other governmental record retention requirements. These documents are kept in numerous locations and frequently are moved from site to site as employees change jobs or as business is reorganized. Therefore, it is possible that not every relevant document may have been consulted in developing FPL's responses to the discovery requests. Rather, these responses provide all of the information that FPL obtained after a reasonable and diligent search

conducted in connection with these discovery requests. To the extent that the discovery requests propose to require more, FPL objects on the grounds that compliance would impose an undue burden or expense on FPL.

FPL objects to each discovery request to the extent that it seeks information that is duplicative, not relevant to the subject matter of this docket, and is not reasonably calculated to lead to the discovery of admissible evidence.

FPL objects to each and every discovery request to the extent it is vague, ambiguous, overly broad, imprecise, or utilizes terms that are subject to multiple interpretations but are not properly defined or explained for purposes of such discovery requests. Any responses provided by FPL will be provided subject to, and without waiver of, the foregoing objection.

FPL also objects to each and every discovery request to the extent it calls for FPL to prepare information in a particular format or perform calculations or analyses not previously prepared or performed as unduly burdensome and purporting to expand FPL's obligations under applicable law.

FPL objects to providing information to the extent that such information is already in the public record before a public agency and available through normal procedures or is readily accessible through legal search engines.

FPL objects to each and every discovery request that calls for the production of documents and/or disclosure of information from NextEra Energy, Inc. and any subsidiaries and/or affiliates of NextEra Energy, Inc. that do not deal with transactions or cost allocations between FPL and either NextEra Energy, Inc. or any subsidiaries and/or affiliates. Such documents and/or information do not affect FPL's rates or cost of service to FPL's customers. Therefore, those documents and/or information are irrelevant and not reasonably calculated to

lead to the discovery of admissible evidence. Furthermore, FPL is the party appearing before the Florida Public Service Commission in this docket. To require any non-regulated entities to participate in irrelevant discovery is by its very nature unduly burdensome and overbroad. Subject to, and without waiving, any other objections, FPL will respond to the extent the request pertains to FPL and FPL's rates or cost of service charged to FPL's customers. To the extent any responsive documents contain irrelevant affiliate information as well as information related to FPL and FPL's rates or cost of service charged to its customers, FPL may redact the irrelevant affiliate information from the responsive documents.

Where any discovery request calls for production of documents, FPL objects to any production location other than the location established by FPL, at FPL's Tallahassee Office located at 215 South Monroe Street, Suite 810, Tallahassee, Florida, unless otherwise agreed by the parties.

FPL objects to each and every discovery request and any instructions that purport to expand FPL's obligations under applicable law.

In addition, FPL reserves its right to count discovery requests and their sub-parts, as permitted under the applicable rules of procedure, in determining whether it is obligated to respond to additional requests served by any party.

FPL expressly reserves and does not waive any and all objections it may have to the admissibility, authenticity or relevance of the information provided in its responses.

II. Responses

1. Attached are FPL's responses to OPC's Eighth Set of Interrogatories (Nos. 34-38), subject to FPL's objections, together with the supporting declarations.

2. Attached are FPL's responses to OPC's Eighth Request for Production of Documents (Nos. 32-36), subject to FPL's objections.

Respectfully submitted this 14th day of October 2019.

Maria Jose Moncada
Senior Attorney
William P. Cox
Senior Attorney
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408-0420
(561) 304-5795
(561) 691-7135 (fax)

By: s/ Maria Jose Moncada
Fla. Bar No. 0773301

QUESTION:

Please provide supporting documents for the response provided to OPC's Eighth Set of Interrogatories, Question No. 38.

RESPONSE:

Please see responsive documents attached to this response. Additionally, see internal accounting criteria provided in FPL's response to OPC's Seventh Supplemental Request for Production of Documents No. 17.

Issue description:	Accounting for AFUDC on FPL SolarTogether 1 Project
Company relates to:	FPL
Date of request:	March 22, 2019
Prepared By:	FPL Property Accounting

Background

As filed with the Florida Public Service Commission, FPL will be constructing solar generation projects under the SolarTogether Program. The program is a new voluntary community solar program that will allow FPL customers to subscribe to a portion of the new universal solar capacity and receive a credit for a portion of the system savings produced by that solar capacity. To-date, more than 200 customers have reserved capacity totaling 1,120 MW, with many of these customers reserving a subscription equal to 75 to 100 percent of their annual energy usage.

The plan is to construct 74.5 MWs of universal solar generating facilities on three different parcels for a total of ~225 MW of generation ("SolarTogether 1 Project"). This project will be completed by January 31, 2020. FPL has identified three parcels of land related to the SolarTogether 1 Project.

1. **SolarTogether 1 Project:**
 - a. Northern Preserve
 - b. Sweetbay
 - c. Cattle Ranch

Moss Construction Inc. is the engineering, procurement and construction ("EPC") contractor responsible for the SolarTogether 1 Project. This EPC contractor is obligated to provide liquidated damages in the event of non-performance at the project level (group of three solar sites). Furthermore, FPL's Integrated Supply Chain ("ISC") has executed supply agreements with BYD America LLC to procure panels of the same technology resulting in savings and customer value.

Issue

How will FPL define a "project" for purposes of the solar build to take place throughout the settlement agreement?

Accounting Discussion

Neither the FPSC nor FERC define what constitutes a project for purposes of accruing AFUDC. Therefore, FPL has previously developed a set of criteria based on the guidance provided by both the FERC and FPSC related to the definition of a project and the ability to accrue AFUDC. This criterion is consistent with the ones used in the past for AFUDC projects. Examples of this application are three solar sites constructed by FPL as a project in 2016 and the SoBRA projects constructed in 2017, 2018, and 2019. Based on the application of its criteria for determination of a project, FPL will evaluate the group of sites to determine if each group constitutes three standalone projects or one project. FPL will consider the criteria as noted below:

1. *The work to be performed has the following characteristics:*

a. *One program or project manager.*

- i. The solar sites, commencing construction together, will have one project manager, Bill Brannen, from FPL's Engineering and Construction group responsible for ensuring the success of the collective development and construction of each group of sites. Further, each of the sites within the group will have a dedicated site manager who will report to the overall project manager.**

As noted above, FPL has contracted with one EPC contractor that will be responsible for the group of solar sites. The EPC contractor is responsible to meet performance and timing guarantees at all the solar sites within each group.

b. *One schedule with interrelated, dependent activities*

- i. The solar sites will follow the same construction schedule such that all sites within the group will enter commercial operation on approximately the same date. In addition, all sites will utilize the same technology and design standards to allow for construction synergies.**

c. *A defined start and scheduled in service date(s)*

- i. Each site within the group of solar sites began development and permitting prior to January 2019 and will be placed in service by January 31, 2020¹.**
- ii. In the event that the estimated in-service date is not met for any site, the EPC contractor would be subject to delay penalties (liquidated damages) for each day past due based on its requirements for the applicable group of sites overall.**

¹ Targeted in-service date is January 31, 2020. In addition, the planned construction period will be greater than 12 months and all sites will enter commercial service on approximately the same day.

- d. *A program/project budget*
 - i. The group of sites will have a construction budget for that group and will be managed by the project manager within Engineering & Construction. The installed cost of the group of sites will exceed the AFUDC threshold, which was approximately \$243.4M at the time of management approval at the end of January 2019 and will increase over time. The total cost for the project is approximately \$244.1M before AFUDC.
 - e. *Project duration is in excess of one year*
 - i. As noted above, the group of sites has a construction period of greater than one year. The construction period will commence at the time engineering efforts commence and last greater than one year as noted above.
2. *No work stream or sub activity is discretionary*
- a. As the end goal is to place the solar sites in-service by the above noted date and begin to bill the subscribed customers accordingly, all of the construction activities required to place the asset in-service are required to take place prior to that date. In addition, FPL has executed contracts with the same PV module supplier to procure panels of the same technology. As such, all activities within the group of sites are interrelated and are required to achieve the above noted end goal and cost effectiveness of the project.
3. *The evaluation of the benefits of the project consider all of the component work streams which constitute the project*
- a. As noted above, each solar project must demonstrate that it is cost-effective to the system. The construction of the solar project allows for fuel diversification and savings as well as emissions-free generation. This in turn benefits our subscribed customers by providing low cost generation and lower fuel expense on their bills. By constructing each group of sites simultaneously as one project, FPL will be able to generate savings that will allow each group of sites to be more economical than were each site developed independently. For example, FPL has bid out and contracted the group of sites for EPC to achieve the lowest possible construction cost. The EPC contractor is responsible for the overall construction schedule for the group of sites under the supervision of the FPL project manager. This demonstrates that constructing each group of sites as one project will deliver procurement and construction synergies that are necessary to demonstrate the cost effectiveness to the Commission.

4. *Each major component or sub activity of the project is interdependent to one another in some way such that the defined success requires each sub activity in order for that result to be obtained. In other words, the individual work streams do not have the same value independently as they do to the whole project; the interrelationship optimizes the result.*
 - a. **In addition to the synergies noted in criterion #3 above, EPC contractors are obligated to provide liquidated damages in the event of non-performance at the project level (group of sites) which provides increased protection to customers based on the grouping of sites.**

Conclusion

Based on the above noted facts and circumstances, FPL deems it appropriate to bundle the group of sites as a project for AFUDC recognition purposes.

FPL will establish separate internal orders for each site to track the charges; however, the internal orders will be grouped together for purposes of applying AFUDC. The internal orders will be placed in-service once the sites within each group go into commercial operations.

Issue description:	Accounting for AFUDC on FPL SolarTogether 2 Project
Company relates to:	FPL
Date of request:	March 22, 2019
Prepared By:	FPL Property Accounting

Background

As filed with the Florida Public Service Commission, FPL will be constructing solar generation projects under the SolarTogether Program. The program is a new voluntary community solar program that will allow FPL customers to subscribe to a portion of the new universal solar capacity and receive a credit for a portion of the system savings produced by that solar capacity. To-date, more than 200 customers have reserved capacity totaling 1,120 MW, with many of these customers reserving a subscription equal to 75 to 100 percent of their annual energy usage.

The plan is to construct 74.5 MWs of universal solar generating facilities on three different parcels for a total of ~225 MW of generation ("SolarTogether 2 Project"). This project will be completed by January 31, 2020. FPL has identified three parcels of land related to the SolarTogether 2 Project.

1. SolarTogether 2 Project:
 - a. Twin Lakes
 - b. Blue Heron
 - c. Babcock Preserve

OCI
~~Moss Construction Inc.~~ is the engineering, procurement and construction ("EPC") contractor responsible for the SolarTogether 2 Project. This EPC contractor is obligated to provide liquidated damages in the event of non-performance at the project level (group of three solar sites). Furthermore, FPL's Integrated Supply Chain ("ISC") has executed supply agreements with Trina Solar (U.S.) Inc. to procure panels of the same technology resulting in savings and customer value.

Issue

How will FPL define a "project" for purposes of the solar build to take place throughout the settlement agreement?

Accounting Discussion

Neither the FPSC nor FERC define what constitutes a project for purposes of accruing AFUDC. Therefore, FPL has previously developed a set of criteria based on the guidance provided by both the FERC and FPSC related to the definition of a project and the ability to accrue AFUDC. This criterion is consistent with the ones used in the past for AFUDC projects. Examples of this application are three solar sites constructed by FPL as a project in 2016 and the SoBRA projects constructed in 2017, 2018, and 2019. Based on the application of its criteria for determination of a project, FPL will evaluate the group of sites to determine if each group constitutes three standalone projects or one project. FPL will consider the criteria as noted below:

1. *The work to be performed has the following characteristics:*
 - a. *One program or project manager.*
 - i. **The solar sites, commencing construction together, will have one project manager, Bill Brannen, from FPL's Engineering and Construction group responsible for ensuring the success of the collective development and construction of each group of sites. Further, each of the sites within the group will have a dedicated site manager who will report to the overall project manager.**

As noted above, FPL has contracted with one EPC contractor that will be responsible for the group of solar sites. The EPC contractor is responsible to meet performance and timing guarantees at all the solar sites within each group.

- b. *One schedule with interrelated, dependent activities*
 - i. **The solar sites will follow the same construction schedule such that all sites within the group will enter commercial operation on approximately the same date. In addition, all sites will utilize the same technology and design standards to allow for construction synergies.**
 - c. *A defined start and scheduled in service date(s)*
 - i. **Each site within the group of solar sites began development and permitting prior to January 2019 and will be placed in service by January 31, 2020¹.**
 - ii. **In the event that the estimated in-service date is not met for any site, the EPC contractor would be subject to delay penalties (liquidated damages) for each day past due based on its requirements for the applicable group of sites overall.**

¹ Targeted in-service date is January 31, 2020. In addition, the planned construction period will be greater than 12 months and all sites will enter commercial service on approximately the same day.

d. A program/project budget

- I. The group of sites will have a construction budget for that group and will be managed by the project manager within Engineering & Construction. The installed cost of the group of sites will exceed the AFUDC threshold, which was approximately \$269.1 at the time of management approval at the end of January 2019 and will increase over time. The total cost for the project is approximately \$244.1M before AFUDC.

\$ 243.4M

\$ 269.1M

e. Project duration is in excess of one year

- I. As noted above, the group of sites has a construction period of greater than one year. The construction period will commence at the time engineering efforts commence and last greater than one year as noted above.

2. No work stream or sub activity is discretionary

- a. As the end goal is to place the solar sites in-service by the above noted date and begin to bill the subscribed customers accordingly, all of the construction activities required to place the asset in-service are required to take place prior to that date. In addition, FPL has executed contracts with the same PV module supplier to procure panels of the same technology. As such, all activities within the group of sites are interrelated and are required to achieve the above noted end goal and cost effectiveness of the project.

3. The evaluation of the benefits of the project consider all of the component work streams which constitute the project

- a. As noted above, each solar project must demonstrate that it is cost-effective to the system. The construction of the solar project allows for fuel diversification and savings as well as emissions-free generation. This in turn benefits our subscribed customers by providing low cost generation and lower fuel expense on their bills. By constructing each group of sites simultaneously as one project, FPL will be able to generate savings that will allow each group of sites to be more economical than were each site developed independently. For example, FPL has bid out and contracted the group of sites for EPC to achieve the lowest possible construction cost. The EPC contractor is responsible for the overall construction schedule for the group of sites under the supervision of the FPL project manager. This demonstrates that constructing each group of sites as one project will deliver procurement and construction synergies that are necessary to demonstrate the cost effectiveness to the Commission.

4. *Each major component or sub activity of the project is interdependent to one another in some way such that the defined success requires each sub activity in order for that result to be obtained. In other words, the individual work streams do not have the same value independently as they do to the whole project; the interrelationship optimizes the result.*
 - a. **In addition to the synergies noted in criterion #3 above, EPC contractors are obligated to provide liquidated damages in the event of non-performance at the project level (group of sites) which provides increased protection to customers based on the grouping of sites.**

Conclusion

Based on the above noted facts and circumstances, FPL deems it appropriate to bundle the group of sites as a project for AFUDC recognition purposes.

FPL will establish separate internal orders for each site to track the charges; however, the internal orders will be grouped together for purposes of applying AFUDC. The internal orders will be placed in-service once the sites within each group go into commercial operations.

QUESTION:

Please refer to the Rebuttal Testimony of Mr. Brannen at page 4, line 11 through page 5, line 8. Please identify whether SolarTogether Projects 1 and 2, completed under a single EPC agreement with the Company receiving AFUDC, has a lower projected CPVRR than if the projects were completed by awarding construction contracts on an individual site basis without the Company receiving AFUDC. If the Company did not evaluate this, please explain in detail why it did not evaluate this when it was considering for Projects 1 and 2 whether to use a single EPC agreement for each project versus awarding construction contracts on an individual site basis.

RESPONSE:

FPL engages in a robust solicitation and procurement process for all construction projects and determines the strategy that will result in the lowest cost to build. Based on the results of that process (selected EPC vendor, equipment suppliers, etc.), FPL then applies the FPSC rules and internal accounting policies to determine whether the project qualifies for recovery of allowance for funds used during construction (AFUDC). This process applies irrespective of project scope or generation resource.

FPL adhered to this process with respect to SolarTogether Projects 1 and 2: FPL sought competitive solicitations for the various components of each solar center, including, but not limited to, PV panels, EPC contract, major electrical equipment, substation and interconnection facilities. As has been the case for the past five years, when a contractor provides a bid for multiple sites, there are efficiencies of scale gained and the contractor is then able to pass along discounts to FPL. FPL was only able to accrue the benefits of these discounts as well as other project management and schedule synergies through awarding a single EPC contract for SolarTogether Project 1 and a single EPC contract for SolarTogether Project 2. This process ensured the lowest overall cost of construction.


Once FPL established this contracting structure would result in the lowest overall construction cost, FPL applied the FPSC's rules and the Company's accounting policies to determine whether SolarTogether Projects 1 and 2 qualify for AFUDC. Based on the FPSC's rules and the AFUDC eligibility requirements referenced in Mr. Bores Rebuttal Testimony, Projects 1 and 2 met the eligibility requirements for AFUDC.

FPL also followed this process with respect to SolarTogether Project 3. It obtained the lowest overall construction cost – in this instance, the lowest price required FPL to contract each site separately. FPL then applied FPSC's rules and the Company's accounting policies, and it determined that SolarTogether Project 3 does *not* qualify for AFUDC.

DECLARATION

I sponsored the answers to Interrogatory Nos. 35-36 and co-sponsored No. 37 from Office of Public Counsel's Eighth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EL, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.



Matthew Valle

Date: 10/11/19

DECLARATION

I co-sponsored the answers to Interrogatory Nos. 37-38 from the Office of Public Counsel's Eighth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EL, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.




Scott Bores

Date: 10/11/2019

DECLARATION

I co-sponsored the answer to Interrogatory No. 38 from the Office of Public Counsel's Eighth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EL, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



William F. Brannen

Date: October 11, 2019

DECLARATION

I sponsored the answers to Interrogatory No. 34 from OPC's Eighth Set of Interrogatories to Florida Power & Light Company in Docket No. 20190061-EI, and the response is true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answer identified above, and that the facts stated therein are true.



Juan Enjamio

Date: OCT 14, 2019

In re: Petition by Florida Power & Light Company
for Approval of FPL SolarTogether Program and
Tariff

Docket No. 20190061

Filed: October 14, 2019

**FLORIDA POWER & LIGHT COMPANY'S NOTICE
OF SERVING SUPPLEMENTAL RESPONSES TO OFFICE OF
PUBLIC COUNSEL'S SEVENTH SET OF INTERROGATORIES (No. 17)**

Florida Power & Light Company hereby gives notice of service of its Supplemental
Responses to the Office of Public Counsel's Seventh Set of Interrogatories (No. 17).

Respectfully submitted this 14th day of October 2019.

Maria Jose Moncada
Senior Attorney
William P. Cox
Senior Attorney
Florida Power & Light Company
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By: s/ Maria Jose Moncada
Fla. Bar No. 0773301

CERTIFICATE OF SERVICE

Docket No. 20190061-EI

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished by electronic service on this 14th day of October 2019 to the following:

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By: s/ Maria Jose Moncada
Fla. Bar No. 0773301

QUESTION:

Please provide a complete copy of all analyses and studies performed by, or on behalf of, the Company related to the rebuttal testimony and exhibits of Company witnesses Valle, Brannen, Enjamio, Bores, Deason and Huber. Please provide the analyses and studies electronically in Microsoft Excel format with all formulae, links and underlying worksheets intact.

RESPONSE:

Responsive documents attached. FPL inadvertently excluded these documents in its filing on October 7, 2019.

	Electric Utility Plant	Policy #: FPL – 1.1
		Rev Date: 1/3/2017
		Former Policy #3.1

1. Scope & Overview

This document outlines FPL's accounting policies for significant accounts that are included in Electric Utility Plant (PPE) in FPL's consolidated balance sheets. Policies and procedures for Property Records and the Work Order System of Accounts are discussed in Property Procedures 601 through 604 located on the INFPL website at the Corporate Policies and Procedures website. This policy is organized as follows:

- Section 2 – Electric Utility Plant – FERC account descriptions
- Section 3 – Capitalization criteria and thresholds
- Section 4 – Construction Work in Progress, AFUDC and CIAC
- Section 5 – Additions, Betterments, Replacements and Retirements
- Section 6 – Specific Items

Detail processes and procedures are outlined in procedure manuals and Sarbanes-Oxley documents maintained by Property Accounting. Questions regarding the appropriate accounting for PPE should be directed as follows:

- Transmission, Distribution, General Plant and Land – Manager, Power Delivery Accounting
- Power Generation, Nuclear and Engineering & Construction – Manager, Power Generation Accounting

2. Electric Utility Plant - FERC account descriptions


Plant in Service (101) – This account shall include the original cost of electric plant, included in accounts 301 to 399 owned and used by the utility in its electric utility operations, and having an expectation of life in service of more than one year from date of installation, including such property owned by the utility but held by nominees. This account is included in rate base unless otherwise directed by the commission.

Property under Capital Leases (101.1) – This account shall include the amount recorded under capital leases for plant leased from others and used by the utility in utility operations. The electric property included in this account shall be classified separately according to the detailed accounts (301 to 399) prescribed for electric plant in service.

Electric Plant Purchased or Sold (102) – This account shall be charged with the cost of electric plant acquired as an operating unit or system by purchase, merger, consolidation, liquidation, or otherwise, and shall be credited with the selling price of like property transferred to others pending the distribution to appropriate accounts. Within six months from the date of acquisition or sale of property recorded herein, the utility shall file with the Federal Energy Regulatory Commission (FERC) the proposed journal entries to clear from this account the amounts recorded herein.

FPL defines an operating unit or system as a group or network of interconnected assets in a specific location or territory that are integrated with or dependent on one another in performing a specific function, whether production, transmission or distribution of electricity.

Plant Held for Future Use (105) – This account shall include the original cost of electric plant and land and land rights owned and held for future use in electric service under a definite plan respectively for such use, to include: (1) property acquired but never used by the utility in electric service, but held for such

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service in the future under a definite plan, and (2) property previously used by the utility in service, but retired from such service and held pending its reuse in the future, under a definite plan, in electric service. **Completed Construction not Classified/Electric (106)** – This account shall include the total of the balances of work orders for electric plant which has been completed and placed in service but for which work orders have not been classified for transfer to the detailed electric plant accounts. The classification of electric plant in service by detailed account is required for purposes of reporting to the FERC. The utility shall also report the balance in this account as accurately as practicable according to prescribed account classifications. The purpose of this provision is to avoid any significant omission in Electric Plant in Service. There are three sub accounts used:

- **Utility Plant in Review (106.1)** - This account is used for work orders that will be transferred out to Utility Plant in Service Account 101.
- **Nonutility Property in Review (106.2)** – This account is used for work orders that will be transferred out to Nonutility Property Account 121.
- **Future Use in Review (106.5)** – This account is used for work orders that will be transferred out to Plant held for Future Use Account 105.

Electric Plant Acquisition Adjustments (114) – This account shall include the difference between (1) the cost to the accounting utility of electric plant acquired as an operating unit or system by purchase, merger, consolidation, liquidation, or otherwise to the extent it is less than or equal to fair value, and (2) the original cost, estimated, if not known, of such property, less the amount or amounts credited by the accounting utility at the time of acquisition to accumulated provisions for depreciation and amortization and contributions in aid of construction with respect to such property (i.e. net book value). To the extent the purchase price exceeds fair value, that portion must be recorded to goodwill in Account 186 (Miscellaneous deferred debits) pursuant to FERC policy as stated in 122 FERC ¶ 61,177 (2008).

Asset Retirement Costs – See Policy #3.6, Asset Retirement Obligations


Nuclear Fuel – See Policy #1.4, Nuclear Fuel

Nonutility Property (121) – This account shall include the book cost of land, structures, equipment, or other tangible or intangible property owned by the utility, but not used in utility service and not properly includible in account 105, Electric Plant Held for Future Use.

Construction Work in Progress (107) – This account shall include the total of the balances of work orders for electric plant in process of construction. Work orders shall be cleared from this account as soon as practicable after completion of the job and the asset being placed in-service. Further, if a project, such as a hydroelectric project, a steam station or a transmission line, is designed to consist of two or more units or circuits which may be placed in service at different dates, any expenditures which are common to and which will be used in the operation of the project as a whole shall be included in electric plant in service upon the completion and readiness for service of the first unit. Any expenditure that is identified exclusively with units of property not yet in service shall be included in this account. Expenditures on research, development, and demonstration projects for construction of utility facilities are to be included in a separate subdivision in this account. Records must be maintained to show separately each project along with detail of nature and purpose together with related costs.

Accumulated Provision for depreciation of electric utility plant (108) – See Policy 3.3, Depreciation

Accumulated Provision for amortization of electric utility plant (111) – See Policy 3.3, Depreciation

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		Former Policy #3.1

Note: The above FERC accounts are further described and defined in the FERC Code of Federal Regulations.

Plant Accounts and Property Units

The FERC has specified a **uniform system of accounts** that requires that the plant accounts "be stated on the basis of cost to the utility of plant constructed by it and the original cost, estimated if not known, of plant acquired as an operating unit or system." The FERC further defines original cost as "the cost of such property to the person first devoting it to the public service".

FPL's facilities are grouped by primary plant accounts according to five functional groups as stated below. These primary accounts are suffixed with 3 or 4 digit numbers, to create property retirement unit accounts as described in the appropriate Property Retirement Unit Catalog (PRUC) for each business area. (There are additional accounts in the plant account series which are used for accounting controls and for allocation and overhead purposes, but are not used for property retirement unit purposes.)


- Intangible Plant
- Production Plant
 - Steam
 - Nuclear
 - Other
- Transmission
- Distribution
- General Plant

The Property Retirement Unit Catalog (PRUC) identifies the individual retirement units that comprise the fixed assets of the Company. A retirement unit is defined as the smallest distinct component of property that is identified and costed individually in the plant records. **If an asset or component is not defined as a retirement unit, generally it cannot be capitalized and must be expensed in the appropriate Operations and Maintenance expense account.**

3. Capitalization criteria and thresholds

The criterion for the recording of costs as either capital or expense is established by generally accepted accounting principles (GAAP). FASB Concepts Statement No. 6 defines assets as probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events. Therefore, PPE expenditures that will benefit an organization beyond the current period shall be capitalized, i.e., recorded as an asset. An expenditure that benefits the operations of only the current period is recorded as an expense. A "current period" is defined as one fiscal year. The exceptions to this guideline are as follows:

- Generally, immaterial items, which otherwise qualify as capital costs, are not capitalized (**FPL threshold - \$1,000**).
- Research and development costs are expensed as incurred. For example the design, construction and testing of a prototype truck. If these costs were not considered research and development costs, they could be capitalized.

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- The ratemaking action of a regulator can determine that an item which otherwise qualifies for expense treatment can be capitalized (*Regulated Operations*, ASC 980, see policy #9.1, Accounting for Regulated Operations).
- Developments of software costs have specific guidelines outlining capital vs. expense treatment. See policy #1.7, Accounting for Costs Related to Internal Use Software.
- Leases have specific guidelines under ASC 840.

ASC 970-360 – *Real Estate – General, Property, Plant and Equipment*, provides guidance on accounting for direct and indirect costs associated with the development or construction of a real estate project. It specifically excludes from its scope real estate developed by an enterprise for its own operations. However, due to the lack of any specific guidance regarding the capitalization of costs in developing PPE for use in a company's own operations, the guidance in ASC 970-360 is referenced by analogy.

In addition, FERC allows all overhead construction costs, such as engineering, supervision, general office salaries and expenses, construction engineering and supervision by others than the accounting utility, law expenses, insurance, injuries and damages, relief and pensions, taxes and interest, to be charged to the applicable jobs using a reasonable allocation method.

Direct Costs:

In accordance with the guidance in ASC 970-360, all costs that are clearly associated with the construction of a real estate project should be capitalized. These costs include the portion of payroll-related costs attributable to personnel working directly on the project. Bonuses paid to employees should be included in the total compensation for purposes of allocating payroll-related costs to the project.


Indirect Costs:

Indirect costs that do not clearly relate to projects under development or construction, including most general and administrative expenses, are expensed as incurred. Capitalization of indirect costs is only appropriate when such costs are specifically identifiable with a particular project(s) and are identifiable in the accounting records. FPL considers severance payments made to employees who were hired to work on capital projects to be an indirect project cost. In order for severance payments to be capitalized, the payments must be clearly associated to a particular project(s), which is evidenced by appropriate documentation. For example, FPL believes it would be appropriate to capitalize severance costs paid to an employee who was hired to work on one specific job and was subsequently terminated at the end of that project. However, it would not be appropriate to capitalize severance paid to an employee who was originally hired for a specific capital project, but who was subsequently transferred to another project after the completion of the first project.

Indirect project costs that benefit more than one project should be allocated to the projects benefited based on appropriate statistical bases. For example, construction overhead should be allocated on the basis of construction labor costs.

FERC requires a "provable relationship" in order to capitalize indirect costs and disallows use of percentage distribution based on an assumed relationship between operating expense and cost of construction. If not incremental, an annual study supporting a provable relationship is required. The provable relationship study consists of:

- Relationship of particular function to construction activities
- Proportion of employee's time
- Method of determination – time studies, daily time reports, etc; not allocations.

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Examples of indirect costs include engineering, supervision, insurance, pensions, and taxes.

Additionally, some of the recurring fixed costs of *internal* development departments including *internal* payroll and related benefits for employees who work *directly* on construction stage projects are *capitalizable* if they are necessary costs to get the project to its intended use and place the asset in service. The timing of when these costs are incurred impacts whether or not costs can be capitalized. It must be determined that the capital project is probable and has been approved by accounting. See **Appendix A** for listing of the departments and examples of related activities that are considered capitalizable.

Prepaid Capital:

Prepaid capital consists of amounts paid to vendors for capital items that will not be received within the normal time frame for such items. In exchange for this advanced payment, FPL receives a discounted price on the capital items purchased.

Prepaid capital should be charged to Account 186 (*miscellaneous deferred debits*) when the payment is made. The cash outflow should be classified as an investing activity in the statement of cash flows.

When the capital asset is delivered the payment should be re-classified to one of the following FERC accounts:

1. Account 107 (*construction work in progress-Electric*) if the asset is delivered to a specific project site, or;
2. Account 101 (*electric plant in service*) if the asset goes straight into service or meets the definition of a capital spare part, or;
3. Account 154 (*plant materials and operating supplies*) if the asset is delivered and held for future use on a capital project.


Deposits or advanced payments for capital items

Any deposits or progress payments disbursed on behalf of a construction contract to secure the acquisition of assets that have a long construction lead times should be charged to Account 107 (*construction work in progress-Electric*).

General Plant Furniture, Tools and Equipment

Florida Public Service Commission (FPSC) Rule 25-6.0142 established a minimum capitalization criterion of \$1,000 per unit for each retirement unit recorded to Office Furniture and Equipment, Stores Equipment, Tools, Shop and Garage, Laboratory Equipment, and Communication Equipment Accounts. The account distribution is outlined as follows:

- Tools, shop and garage equipment \geq \$1,000 each item
- Stores Equipment \geq \$1,000 each item
- Laboratory Equipment \geq \$1,000 each item
- Communication Equipment, non fiber optic accounts – refer to the PRUC ^{7A} catalog for fiber optic property units.
- Office furniture and equipment, including miscellaneous power plant office furniture equipment, computer equipment and other miscellaneous equipment are generally capitalized. These items are charged to expense if they meet one of the following criteria:
 - are of small value (less than \$1,000), or

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- have a short life (less than one year), or
- can not be easily controlled/identified

The initial purchase of a complete office furniture set (including, but not limited to book case, desk, cabinet, chair, sofa, table, etc.) is considered the retirement unit. Replacement of or subsequent purchases of individual items of office furniture are to be expensed to the appropriate operations or maintenance account. Retirement units are identified in the PRUC Catalogs. In addition, computer equipment that can be bundled along with the labor costs needed to program, image and deliver the computer equipment may be capitalized.

The cost of small portable tools and safety equipment that are used directly in construction work, but do not meet the definition of a retirement unit shall be allocated to the work that directly benefits from the purchase of these items. This will result in the cost of these tools and equipment being allocated to both capital and O&M, dependent upon the nature of the work performed. The cost of such tools and equipment shall be capitalized to the plant accounts directly benefited as part of the construction.

4. Construction Work in Progress , AFUDC and CIAC

Definition of a Construction Project

A Project is defined as an identifiable unit of capital work including all associated labor, material, and other expenses which result in additions to and/or retirements from utility plant in service. Projects with different plant in-service dates must be recorded separately on unique work orders/internal orders. The scope of a work order/internal order must include all related retirement units required to make the project ready for service.

In certain instances and on an exception basis, some smaller jobs may be grouped together into a single ER if those jobs were projected with a high level of confidence to be completed within the same month.

If such additions and/or retirements, when completed, only become functional or useful when related or additional units of work are complete, then the group of related activities is considered a project. A project may include and involve the installation of numerous retirement units.


Preliminary Project Costs

GL Account 183, Preliminary Survey and Investigation Charges, is used for the recording of preliminary feasibility studies. CFR 18 Pt. 101 states "This account shall be charged with all expenditures for preliminary surveys, plans, investigations, etc. made for the purpose of determining the feasibility of utility projects under contemplation." Generally, this account is used for the larger projects under consideration that are anticipated to be capitalized and after they are approved all costs are transferred to the construction work order. If it is considered probable that the project will not be completed then costs are transferred to O&M. The costs should be transferred to O&M in the month the decision is made that the project will not be completed.

If a project qualifies as capital and construction is certain, Phase I Engineering costs (conceptual and design engineering studies) may be charged directly to capital work orders.

Land and Right-Of-Way Purchases

If land or right-of-way is purchased and construction on the land or right-of-way will commence within 1 year of the completion of the purchase, then the land or right-of-way work order shall remain in Account

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107, Construction Work in Progress, until the construction is completed. Only when the construction of the facility is completed and being used for its intended purpose will both the land and construction work orders be placed in-service. If the construction will commence more than one year from the completion of the land purchase, the land work order should be put in-service to Account 105, Plant Held for Future Use. Land purchases requiring more than 1 year for construction should be reviewed with Property Accounting.

When a land or right-of-way work order is opened, information on the related construction (current or future, budget activity of construction, etc.) is needed in order to determine the accounting treatment for the work order. In addition, land work orders must be properly segmented by its related construction. Land for a transmission line project that consists of more than one work order (where portions of the line will go in-service at different times) must be segmented into different work orders by the portions of land that relate to each line segment work order. Land for the segmented project should not be recorded in only one work order as this will violate regulatory rules.

When a transmission line, substation site prep or substation construction work order is opened, information regarding the related land is needed so that the land can be properly linked to the specific construction activity for accounting purposes and reporting to the regulatory commissions. This is especially important when the land is purchased more than 1 year before the construction commences and is placed in Account 105 for future use.

Site Preparation Costs of Substations

If the construction of a facility consists of more than one work order, i.e. work order #1 is for the clearing and erection of the fence on a substation site and work order #2 is for the structural and electrical portion of the substation, and the construction of work order #2 will commence within 1 year of the completion of work order #1 then both work orders shall remain in Account 107, Construction Work in Progress, until the substation is energized. If the construction of work order #2 will commence more than 1 year from the completion of work order #1 then work order #1 shall be put in-service to Account 105, Plant Held for Future Use.


The construction of a substation should not be split into 2 work orders until it is definitely known that the structural and electrical portion will not commence within 1 year of the site preparation activities. A single construction work order should be created instead. If due to changes in planning, the structural portion becomes delayed so that it will not commence within 1 year of the site preparation, the work order can be re-estimated and closed to Account 105, Plant Held for Future Use.

When a substation is placed in-service and the costs in the construction work order are moved out of account 107, information on the related site preparation work order (if any) and the related land work order is needed in order to move the costs accumulated in these work orders to in-service status at the same time the substation is placed in-service.

Contaminated Soil

Unless the below criteria are met, the removing and disposing of contaminated soil related to environmental regulations would be charged to O&M.

- Removal of Contaminated Soil directly caused to be removed as part of the construction of a new facility shall be capitalized as part of the cost of the new facility.
- Contaminated Soil removed as part of the removal of a retirement unit shall be charged to Account 108.3, Removal Cost, on the work order retiring the retirement unit.

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- Contaminated soil removed as part of the dismantlement of a generating facility shall be charged to the Dismantlement Reserve, Account 108.132.

Any questions related to how to account for contaminated soil should be directed to Property Accounting.

In-Service Date Of Projects

The Company defines a project as all the costs of the activities necessary to install or replace a system or a segment thereof, or to bring the condition of a specific asset to its intended use. A project can include one work order but in most cases it includes many work orders. A project is deemed in service when it is ready for its intended use. The FERC requirements use the term "ready for service".

Land purchased for a substation site is technically ready for service when FPL closes on the property, but if construction of the substation is not complete, then in the context of a project, the land is not ready for service until the substation is completed. Another example would be the construction of a new power plant. The completion of the water treatment and the waste water facilities are not ready for service until the unit which they serve is complete and producing electricity.

Substation and Transmission Line and New Power Plant In-Service Determination: A facility shall be determined ready for service when it is functioning as an integrated facility to serve customers of FPL. A substation or transmission line is not ready for service until energized for the purpose of supplying electricity to customers of FPL.

Transmission line projects that consist of more than one line segment (where portions of the line will go in-service at different times) must be separated into different work orders by line segment. A work order with one or more line segments cannot be proportionally placed in-service and placing incomplete portions of a line in-service before it is completed and energized violates regulatory rules.


Construction of a new power plant and its related switchyard and interconnections: The switchyard and interconnections would not be built if the plant was not constructed and the plant cannot properly function without the switchyard and the interconnections. Therefore the total project must include the plant and its related switchyard and interconnections which should be placed in service at the same time.

Allowance For Funds Used During Construction – AFUDC

Allowance for Funds Used During Construction is recorded monthly in the retail power plant ledger according to FPSC rule 25-6.0141 which states that CWIP or Nuclear Fuel in Process not under lease agreement that is not included in rate base may accrue AFUDC under the following conditions:

Eligibility test:

1. A work order or project becomes eligible once it receives charges if it meets the following requirements: a) estimated additions exceed 0.5 percent of the sum of the total balance in general ledger accounts 101.000 and 106.100 as of the prior month (See step 2 below) and b) the construction period is greater than a year. Note: Projects originally estimated to be completed in less than one year but are suspended for six months or more, or are not ready for service after one year become eligible for AFUDC on a prospective basis only.
2. Each month, Property Accounting will supply the business units with the current project threshold in order to qualify for AFUDC. Work orders that meet the criteria have the AFUDC button flagged within the fixed asset system, PowerPlant, so that the amount of AFUDC can be systematically calculated and applied.

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For FERC purposes, AFUDC is accrued on all capital work orders/projects that are expected to be under construction for more than one year.

An AFUDC rate is calculated annually as per FPSC rule and the FERC regulations including the monthly discounted AFUDC rate, the debt/equity split for the income statement and the debt/equity split to be used in calculating deferred income taxes. The Debt component is credited to AFUDC-Interest Sources and the Equity Component is reflected as a credit to Other Sources of Income. Any questions regarding the currently approved AFUDC rate should be directed to Regulatory Accounting.

Time Test:

The construction period must exceed 12 months to be eligible for AFUDC under rule #25-6.0141.

- The AFUDC time test is performed the month the work order has its first eligible charge (cash voucher, payroll or engineering – includes applied engineering).
- If the calculation of the estimated construction period in months equals or exceeds thirteen (13) months the work order would qualify for the AFUDC time period criteria.

Application of AFUDC on Land and Site Preparation:

AFUDC is not applied on land work orders which are to be transferred to Account 105, Plant Held for Future Use. AFUDC is applied to land work orders when the related on-going construction is eligible for AFUDC. AFUDC is applied to site preparation work orders that are either eligible for AFUDC on their own or eligible under the project concept. If the work order is subsequently transferred to Account 105, Plant Held for Future Use, no AFUDC is reversed. AFUDC is applied on all related land, site preparation and construction work orders when the first work order becomes eligible for AFUDC either on its own or through the project concept.

The AFUDC application is to be suspended prospectively when:

- Construction activity will cease for a period greater than six months due to circumstances within FPL's control. Construction activity is defined to include all preconstruction engineering, legal fees, licensing requirements, etc.
- A work order/project has not received charges for cash voucher, payroll or engineering for a period of six months. Suspension will be automatic on the seventh month.


Note that the FPSC Rule 25-6.0141 requires Commission notification when a capital project is expected to be suspended.

The AFUDC application is not suspended when:

- The construction delay is caused by circumstances beyond FPL's control. (i.e. government action, vendors, acts of God. etc.)
- The work order is part of a larger project and all activities for that project have not ceased.

Accounting Standards Codification 835-20, Capitalization of Interest:

In applying AFUDC, FPL considers the guidance provided in ASC 835-20, *Capitalization of Interest*. Under ASC 835-20-25-5, the capitalization period shall end when the asset is substantially complete and ready for its intended use. Some assets are completed in parts, and each part is capable of being used

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independently while work is continuing on other parts. An example is the RCB coatings. As the painting or coating of each fuel storage container is completed, that asset can be placed in service. For such assets, interest capitalization shall stop on each part when it is substantially complete and ready for use. Some assets must be completed in their entirety before any part of the asset can be used. An example is a facility designed to manufacture products by sequential processes. For such asset, interest capitalization shall continue until the entire asset is substantially complete and ready for use. Some assets cannot be used effectively until a separate facility has been completed. An example is a switchyard and a power plant. One asset can not function without the other; therefore, both assets must be placed in service at the same time. For such assets, interest capitalization shall continue until the separate facility is substantially complete and ready for use. Assets equal to or greater than \$10 million receive AFUDC until the day preceding the in service day. Property Accounting should be notified when an asset(s) of this magnitude exists.

FERC Requirements:

In 1968, the office of the Chief Accountant of FERC issued Accounting Release Number 5 addressing the proper period for capitalization of AFUDC. AR-5 states the following:

"Capitalization of AFUDC stops when the facilities have been tested and are placed in, or ready for, service. This would include those portions of construction projects completed and put into service although the project is not fully completed."


Contribution in Aid of Construction (CIAC):

Requests for new facilities, upgrades of existing facilities or relocations of electric plant resulting in a cost that is incremental to the normal cost of such service will necessitate a cash contribution from the customer known as a contribution in aid of construction ("CIAC"). (Note: The FPSC prescribes the minimum standards of service that FPL must adhere to when providing electric service to a customer.) CIAC is most often required when installing or relocating electrical lines underground or for upgraded highway street lighting and related facilities for government/municipal entities. These requests are made through the distribution, transmission and engineering departments who develop the estimate for the requested scope of work. The engineer designs the job within the respective Work Management System, which develops an estimate that is interfaced to PowerPlant. The PowerPlant system has a reimbursable billing module that utilizes the estimate to develop a bill for the customer, which includes overheads and the related tax, if applicable. The business unit initiating the work is responsible for the CIAC contract and the subsequent billing and collection. All proceeds are due prior to work commencing and are recorded as a customer deposit (government agencies such as FDOT do not have to pay in advance and are billed at the end of the project). Upon completion of the work and closure of the work order, the proceeds are cleared to the appropriate capital or expense accounts to offset the cost of work performed.

5. Additions, Betterments, Replacements and Retirements **(After Acquisition or Construction)**

Addition – represents cost of additions to units of utility property added to existing plant, whether or not as replacements. Additions are capitalized if the addition meets the definition of a retirement unit and results in the affected property being either more useful, more efficient, of greater durability (increased service life) or of greater capacity.

Betterment – an enlargement or improvement of existing structures, facilities, or equipment by the replacement or improvement of parts without replacement of a complete unit. When a betterment consists of the substitution of a superior part for an inferior part of the same kind, the amount of the betterment is the excess cost of the new part over the cost of the part removed, less net salvage. This

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betterment amount is only capitalized if the addition results in the affected property being either more useful, more efficient, of greater durability (increased service life) or of greater capacity.

Replacement – the substitution of a new component for existing components that are worn out, damaged beyond repair, or have become inadequate in service. The substitution has substantially no greater capacity or benefit than the component for which it replaced. When it becomes necessary to replace some part of a unit and if the replacement does not result in substantial change of identity, or physical character of the item, the replacement is considered a repair and charged to operating expense. Replacement is applicable unless the component is defined as a retirement unit, at which point it would be treated as an addition and the replaced item would be retired.

Retirement – the removal of property from service, whether or not in the course of replacement. As an accounting transaction, a retirement may or may not coincide with either the removal from service or the physical removal of the plant affected. The system of accounts requires that the book cost of property permanently removed or not used or useful in service, whether or not replaced, be credited to the electric utility plant account and charged to the Accumulated Provision for Depreciation or Amortization of Electric Utility Plant. Retirement Units are prescribed by FERC although a lower level of detail may be maintained if practice is consistent. (Changes to or additions of retirement units must be filed annually with the FPSC). Any related costs to remove the utility plant from service should be charged to the Accumulated Provision for Depreciation and any proceeds received from the sale of the utility plant should be credited to the Accumulated Provision for Depreciation.


Buildings and Land retired or sold

If a building or land is retired, the net book value (NBV) is credited to the building or land account. If the building or land is sold, the difference between NBV and the sales price (less commissions and other expenses) is recorded as a Gain/Loss from disposition of Utility Plant. The Gain/Loss from the disposition of the property shall be deferred as a regulatory asset or liability and amortized as a gain or loss over a five year period in accordance with FPSC policy. Losses shall be accounted for as regulatory assets in Account 182.3 and amortized to Account 407.3 (Regulatory Debits). Gains will be recorded as regulatory liabilities in Account 254 and amortized to Account 407.4 (Regulatory Credits). The gain or loss from the sale of non-utility property is recorded to 421.1 or 421.2, if the property had never been included in future use or plant in service. Gains and losses associated with transactions where the building or land is currently or was previously recorded in Utility Plant In-Service or Future Use (Rate Base) are required by FPSC policy to be amortized over a 5 year period.

When any property recorded as intangible, such as franchises, intangibles, or other items of limited-term interest in land which are included in land and/or land rights are sold, relinquished or otherwise retired, Account 111 (Accumulated Provision for Amortization of Electric Utility Plant) shall be charged with the amount previously credited as related to such property. The book cost of the property retired, less the amount charged to Account 111 and the net proceeds realized, shall be deferred as a regulatory asset or liability and amortized as a gain or loss over a five year period in accordance with FPSC policy. Losses shall be accounted for as regulatory assets in Account 182.3 and amortized to Account 407.3 (Regulatory Debits). Gains will be recorded as regulatory liabilities in Account 254 and amortized to Account 407.4 (Regulatory Credits).

Unusual or significant utility plant sales

In accordance with FPSC historical practice, gains and losses arising from unusual or significant utility plant sales shall be deferred as regulatory assets or liabilities and amortized as gains or losses over a five year period. Losses shall be accounted for as regulatory assets in Account 182.3 and amortized to Account 407.3 (Regulatory Debits). Gains will be recorded as regulatory liabilities in Account 254 and amortized to Account 407.4 (Regulatory Credits).

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Additions and retirements of minor items of property

In accordance with FPSC rules, a minor item is any part or element of plant which is not designated as a retirement unit, but is a component part of the retirement unit. The addition of a minor item that did not previously exist that results in a substantial addition or betterment should be accounted for in the same manner as for the addition of a retirement unit. If the addition of the minor item does not result in a substantial addition or betterment, the costs would be charged to the appropriate operations and maintenance expense account.

When a minor item of property is retired and not replaced, no entry is recorded to the plant account as the item is being accounted for by its inclusion in the retirement unit of which it is a part.

When a minor item is replaced independently of the retirement unit, the cost of replacement shall be charged to the maintenance account, except that if the replacement results in a substantial betterment the excess of the cost of the replacement over the estimated cost at current prices of replacing without betterment shall be charged to the appropriate utility plant account.

6. Specific Items


The following outlines the accounting policy for specific issues that have arisen over time related to items within the PPE account. The information below reflects excerpts from previous memos (modified where necessary to reflect changes in GAAP or other changes in company policy) written to address the accounting in certain situations and is not comprehensive. Questions regarding the appropriate accounting for specific issues should be directed to the FPL Property Accounting group.

A. Engineering and Construction Overheads (Applied Engineering/EO's)

All engineering and associated costs that can be assignable to a specific capital work order are charged directly. The exceptions are the Distribution, Transmission, Power Generation and Information Management Business Units which allocate engineering costs and executive overhead costs to eligible capital projects based on a standard rate determined through a forecast of projected costs. The costs are charged to an overhead pool which is allocated to open projects using the standard rate. The overhead pool is monitored on a monthly basis and cleared on an annual basis.

B. Capitalized Spare Parts


Refer to Policy #1.6, Capital Spare Parts

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Appendix A

MATRIX OF EXPENDITURE EXAMPLES

Expenditure Type	Not probable or undetermined project	Probable Capital Project with accounting approval*	Construction***	Commercial Operations
Salaries, benefits & bonuses (Except as noted below)	Expense	Expense	Expense	Expense
Construction and Project Development Departments				
➤ Salaries, benefits & bonuses	Expense	Capitalize	Capitalize	Expense
Legal (Commercial)				
➤ Negotiations of project specific engineer, procurement, construction (EPC) and supply agreements, to the extent the contracts are not based on a pre-negotiated master form.	Expense	Capitalize	Capitalize	N/A
➤ Due diligence of construction and procurement related issues.	Expense	Capitalize	Capitalize	N/A
➤ Assistance during construction process with disputes, change orders, contract interpretation.	Expense	Capitalize	Capitalize	N/A
➤ Assistance with project financing.	Expense	Expense	Expense	Expense
➤ Assistance with general construction and procurement contract and project management.	Expense	Capitalize	Capitalize	N/A
Legal (Real Estate)				
➤ Order and review Title Reports or Commitments for drafted Agreements for Projects that have a high likelihood of getting built	Expense	Capitalize	N/A	N/A
➤ Order and review Preliminary Surveys for Projects that have a high likelihood of getting built	Expense	Capitalize	N/A	N/A
➤ Cure all Title Defects affecting the Projects (e.g. obtaining Subordination Non-Disturbance Agreements from landowner lenders, obtaining Title Affidavits, drafting Amendments based on new information received)	Expense	Capitalize	Capitalize	N/A
ISC Costs - during procurement of the EPC process				
➤ ISC works with Engineering to get the specifications on Capital job requirements.	Expense	Capitalize**	Capitalize**	Expense
➤ ISC bids the work and negotiates with the suppliers to mitigate construction and contract risks	Expense	Capitalize**	Capitalize**	Expense
➤ ISC processes change order to the construction jobs	Expense	Capitalize**	Capitalize**	Expense
➤ ISC helps with dispute resolution on construction jobs in relation to contract issues	Expense	Capitalize**	Capitalize**	Expense
➤ ISC moves the material to the jobs or oversees delivery to the construction site	Expense	Capitalize**	Capitalize**	Expense
Transmission Service Group				
➤ Engineering support for project construction & development processes (various engineering-related inputs into individual project construction and development processes)	Expense	Capitalize	Capitalize	N/A
➤ Required reactive studies on new generation projects to determine project is in compliance with regulatory requirements	Expense	Capitalize	Capitalize	N/A
Property Accounting				
➤ PowerPlan Master Data Set Up	N/A	N/A	Capitalize	N/A
➤ Internal order life cycle activities (including review	N/A	N/A	Capitalize	N/A

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and approval, in-service activities, unitization & close processes)				
➤ Business Unit Capital Support (including capitalization requests and analytics)	N/A	N/A	Capitalize	N/A
➤ Other Capital Support Activities (including providing accounting guidance & oversight related to proper recording of prepaids & accelerated purchases)	N/A	N/A	Capitalize	N/A
Environmental				
➤ Preconstruction Surveys (avian, bat monitoring, habitat assessments) can span 2-3 years, but typically >1 year	Expense	Capitalize***	Capitalize***	N/A
➤ Completion of pre-construction avian/bat/wildlife surveys/raptor nest surveys	Expense	Capitalize***	Capitalize***	N/A
➤ Micrositing support with E&C (wetlands, cultural, biological surveys, etc. during construction)	Expense	Capitalize	Capitalize	N/A
➤ Agency Consultation (during final permitting)	Expense	Capitalize	Capitalize	N/A
➤ Litigation Support	Expense	Capitalize	Capitalize	Expense
➤ financing support	Expense	Expense	Expense	Expense
➤ Compliance assurance	Expense	Capitalize	Capitalize	Expense

*Refers to project costs that are deferred in FERC Account 183, Preliminary Survey and Investigation Charges

**Must be related to a specific project. Not just general procurement of items for projects in the future.

*** Includes activities that qualify for capital treatment once the assets are in construction phase.

^if required by law/permit to get the asset ready for use

Issue description:	AFUDC Determination on FPL SolarTogether 3 Projects
Company relates to:	FPL
Date of request:	September XX, 2019
Prepared By:	FPL Property Accounting

Background

As filed with the Florida Public Service Commission, FPL will be constructing solar generation projects under the SolarTogether Program. The program is a new voluntary community solar program that will allow FPL customers to subscribe to a portion of the new universal solar capacity and receive a credit for a portion of the system savings produced by that solar capacity. To-date, more than 200 customers have reserved capacity totaling 1,120 MW, with many of these customers reserving a subscription equal to 75 to 100 percent of their annual energy usage.

The plan is to construct 74.5 MWs of universal solar generating facilities on six different parcels for a total of ~450 MW of generation ("SolarTogether 3A-3F Projects"). These projects will be starting and finishing on various dates, with the last project expected to be complete by December 31, 2020. FPL has identified six separate parcels of land related to the SolarTogether 3A-3F Projects.

1. SolarTogether 3 projects:

- 3A. Lakeside
- 3B. Trailside
- 3C. Union Springs
- 3D. Magnolia Springs
- 3E. Egret
- 3F. Nassau

The projects have procured contractors under separate contracts responsible for the engineering, procurement and construction ("EPC") of each project. The EPC contractors are obligated to provide liquidated damages at the individual project level in the event of non-performance on any of the individual projects.

Issue

How will FPL define a "project" for purposes of the solar build to take place throughout the SolarTogether Program?

Accounting Discussion

Neither the FPSC nor FERC define what constitutes a project for purposes of accruing AFUDC. Therefore, FPL has previously developed a set of criteria based on the guidance provided by both the FERC and FPSC related to the definition of a project and the ability

to accrue AFUDC. This criterion is consistent with the ones used in the past for projects that accrued AFUDC. Examples of this application are three solar projects constructed by FPL as a project in 2016 and the SoBRA projects constructed in 2017, 2018, 2019 and 2020. Based on the application of its criteria for determination of a project, FPL will evaluate the group of projects to determine if each group constitutes six standalone projects or one project. FPL will consider the criteria as noted below:

1. The work to be performed has the following characteristics:

a. One program or project manager.

- i. The solar projects, commencing construction together, have one project manager, Bill Brannen, from FPL's Engineering and Construction group responsible for ensuring the success of the collective development and construction of the six solar projects. Each of the projects have a dedicated on-site manager who report to the overall project manager.**

As noted above, FPL has contracted with two EPC contractors that are responsible for the six solar projects. The EPC contractors are responsible to meet project specific performance and timing guarantees for each individual solar project.

b. One schedule with interrelated, dependent activities

- i. The solar projects have independent start and finish dates with separate construction activities that are not interrelated. There are no synergies between the projects, such that each project has a standalone schedule not dependent on any other project. Further, each of the six the projects will have separate commercial operation dates.**

c. A defined start and scheduled in service date(s)

- i. Each project began development and permitting on various dates prior to December 2019 and each will be placed in service on separate dates with the last project completed by December 31, 2020.**
- ii. Separate liquidated damages are in place for each of the 6 projects. In the event that the estimated in-service date is not met for any project, the EPC contractors would be subject to delay penalties (liquidated damages) for each day past due based on its requirements for the individual project schedule.**

d. A program/project budget

- i. The six projects have separate construction budgets and are managed by Engineering & Construction. None of the individual projects meet the capital cost AFUDC threshold, which was approximately \$243.4M at the time of management approval at the end of January 2019.**

The estimated cost noted above are for purposes of determining whether AFUDC should accrue. It is noted that an individual Site's cost may vary

either upward or downward. Notwithstanding potential variations in the cost of individual sites, FPL continues to expect the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

- e. *Project duration is in excess of one year*
 - i. **As noted above, the six projects have a construction period of greater than one year. The construction period commenced at the time engineering efforts commence and last greater than one year as noted above.**
- 2. *No work stream or sub activity is discretionary*
 - a. **As the end goal is to place the solar projects in-service by their individual planned commercial operation dates and begin to bill the subscribed customers accordingly, all of the construction activities required to place each asset in-service are required to take place prior to that date.**
- 3. *The evaluation of the benefits of the project consider all of the component work streams which constitute the project*
 - a. **Based on the 2019-2020 construction market and resource constraints, FPL has bid out and contracted the projects individually for EPC to achieve the lowest possible construction cost. The EPC contractor is responsible for the construction schedules for each of the six projects under the supervision of the individual FPL on-site managers and portfolio project manager. Further, each of the six projects have separate construction schedules and planned in-service dates, resulting in additional benefits to the subscribed customers. As noted above, each solar project must demonstrate that it is cost-effective to the system. The construction of the solar project allows for fuel diversification and savings as well as emissions-free generation. This in turn benefits our subscribed customers by providing low cost generation and lower fuel expense on their bills. By contracting and constructing each of the projects separately, FPL will be able to generate savings that will allow each of the projects to be more economical than if they were contracted together with one contractor.**
- 4. *Each major component or sub activity of the project is interdependent to one another in some way such that the defined success requires each sub activity in order for that result to be obtained. In other words, the individual work streams do not have the same value independently as they do to the whole project; the interrelationship optimizes the result.*
 - a. **The EPC contractors are obligated to provide liquidated damages in the event of non-performance at the individual project level which provides increased protection to customers based on the separation of projects.**

Conclusion

Based on the above noted facts and circumstances, FPL deems it appropriate to identify the projects as six individual projects and thus not record AFUDC.

FPL will establish separate internal orders for each project to track the charges, and the internal orders will not record AFUDC. Each of the internal orders will be placed in-service once each individual project achieves commercial operations.

Issue description:	AFUDC Determination on FPL SolarTogether 3A – 3F Projects
Company relates to:	FPL
Date of request:	October 4, 2019
Prepared By:	FPL Property Accounting

Background

As filed with the Florida Public Service Commission ("FPSC") in Docket No. 20190061-EI, FPL will be constructing solar generation projects under the FPL SolarTogether Program. The program is a new voluntary community solar program that will allow FPL customers to subscribe to a portion of the new universal solar capacity and receive a credit for a portion of the system savings produced by that solar capacity.

In its petition to the FPSC, FPL initially planned to construct five different projects comprised of 20 universal solar energy centers. In the course of issuing and evaluating request for proposal for the engineering, procurement and construction ("EPC") work associated with the solar energy centers, FPL's Integrated Supply Chain ("ISC") and Engineering & Construction ("E&C") departments concluded that it is more cost beneficial for customers to construct the SolarTogether 3 project as six different projects commensurate with the six energy centers ("SolarTogether 3A-3F Projects"). These projects will start construction and attain commercial operations ("COD") on various dates, with the last project expected to be complete by December 31, 2020. FPL has identified six separate parcels of land related to the SolarTogether 3A-3F Projects as indicated below:

FPL SolarTogether 3 projects:

- 3A. Lakeside
- 3B. Trailside
- 3C. Union Springs
- 3D. Magnolia Springs
- 3E. Egret
- 3F. Nassau

FPL has entered into separate agreements with two contractors responsible for the EPC of each site. The EPC contractors are required to provide liquidated damages at the individual project level in the event of non-performance on any of the individual projects.

Issue

How will FPL define a "project" for purposes of the SolarTogether 3A-3F projects as part of the SolarTogether Program?

Accounting Discussion

Neither the FPSC nor FERC define what constitutes a project for purposes of accruing AFUDC. Therefore, FPL has previously developed a set of criteria to define a project and the ability to accrue AFUDC as noted below. Examples of this application are three solar energy centers constructed by FPL as a project in 2016 and the SoBRA projects constructed in 2017, 2018, 2019 and 2020. Based on the application of its criteria for determination of a project, FPL will evaluate the group of energy centers to determine if each group constitutes six standalone projects or one project. FPL will consider the criteria as noted below:

1. The work to be performed has the following characteristics:

a. One program or project manager.

- i. The solar projects have one project manager, Bill Brannen, from FPL's Engineering and Construction group responsible for ensuring the success of the collective development and construction of the six solar projects. Each of the projects have a dedicated on-site manager who report to the overall project manager.**

As noted above, FPL has contracted with two EPC contractors that are responsible for the six solar projects. The EPC contractors are responsible to meet project specific performance and timing guarantees for each individual solar project.

b. One schedule with interrelated, dependent activities

- i. The solar projects have independent start and finish dates, with each project having its own schedule. Further, each of the six the projects will have separate commercial operation dates.**

c. A defined start and scheduled in service date(s)

- i. Each project has begun development and permitting and will start construction prior to December 2019 and each will be placed in service on separate dates with the last project completed by December 31, 2020.**
- ii. Separate liquidated damage provisions are in place for each of the 6 projects. In the event that the estimated in-service date is not met for any project, the EPC contractors would be subject to delay penalties (liquidated damages) for each day past due based on its requirements for the individual project schedule.**

d. A program/project budget

- i. The six projects have separate construction budgets managed by Engineering & Construction. Individually, none of the projects meet the capital cost AFUDC threshold, which was approximately \$243.4M at the time of management approval at the end of January 2019.**

The individual project costs are only applicable to the six SolarTogether 3A – 3F. The previous SolarTogether 1 & 2 projects were grouped accordingly by meeting the parameters set forth in FPL's internal AFUDC qualification policy. FPL continues to expect the total cost for all the projects to be no more than \$1.79 billion as stated in FPL's Petition.

- e. *Project duration is in excess of one year*
 - 1. **As noted above, the six projects have a construction period of greater than one year. The construction period commenced at the time engineering efforts commence and will last greater than one year.**
- 2. *No work stream or sub activity is discretionary*
 - a. **As the end goal is to place the solar projects in-service by their individual planned CODs and begin to bill the subscribed customers accordingly, all of the construction activities required to place each asset in-service are required to take place prior to that date.**
- 3. *The evaluation of the benefits of the project consider all of the component work streams which constitute the project*
 - a. **FPL's ISC and E&C departments bid out and contracted the energy centers individually based on an assessment they performed that this approach resulted in a lower construction cost than if the energy centers were contracted as a single project. The EPC contractors are responsible for the construction schedules for each of the six projects under the supervision of the individual FPL on-site managers and portfolio project manager.**
- 4. *Each major component or sub activity of the project is interdependent to one another in some way such that the defined success requires each sub activity in order for that result to be obtained. In other words, the individual work streams do not have the same value independently as they do to the whole project; the interrelationship optimizes the result.*
 - a. **The EPC contractors are obligated to provide liquidated damages in the event of non-performance at the individual project level which provides increased protection to customers based on the separation of projects.**

Conclusion

Based on the facts and circumstances noted above, FPL does not meet all of the established criteria to accrue AFUDC and will treat each energy center as a separate project for Solar Together 3A-3F program.

FPL will establish separate internal orders for each project to track the charges, and the internal orders will not record AFUDC. Each of the internal orders will be placed in-service once each individual project achieves commercial operations.

EXHIBIT NO. 70

DOCKET NO: 20190061-EI

DESCRIPTION: Bores Late Filed Deposition Exhibit No. 3

WITNESS: Bores

PROFFERED BY: Office of Public Counsel

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET: 20190061-EI EXHIBIT: 70
PARTY: OPC
DESCRIPTION: Bores Late Filed Deposition
Exhibit No. 3

Issue description:	Accounting for AFUDC on Dry Low NOx ("DLN2.6+") Upgrade, 3 Step Aged Rotor ("3SAR") Upgrade and Steam Turbine Generator ("STG") Upgrades
Company relates to:	FPL
Date of request:	December 20, 2016
Prepared By:	Property Accounting

Background

FPL and GE entered into an agreement dated December 19, 2014 ("Original Contract"), pursuant to which, GE was obligated to supply and install twenty-six (26) new GE .05 compressor sections to be married to FPL's existing GE turbine sections to create a complete unit rotor. This .05 compressor upgrade provides improved combined cycle performance for twenty-six (26) combustion turbines ("CT") units at six (6) of FPL's combined cycle plants. To date, GE has completed the .05 Compressor work at eight (8) Units.

GE now has developed new combustor components and a new turbine section, which are designed to further enhance the production and efficiency of the Frame 7FA combustion turbines. FPL and GE executed an amendment and restatement of the Original Contract ("A&R Contract") on December 22, 2016, pursuant to which, GE shall supply and install (i) (a) with respect to the 18 CTs that have not yet received a .05 Upgrade, new three step aged turbine rotor (3SAR) sections will be married to new .05 compressor sections for 18 CTs, and (b) with respect to the remaining eight (8) CTs that have already received a .05 Upgrade, new 3SAR turbine sections married to the .05 compressor sections currently installed in such CTs, (ii) Dry low NOx (DLN 2.6+) combustor hardware and related parts, and (iii) with respect to Sanford Plant Units 4 & 5 and Fort Myers Unit 2, upgraded steam turbine rotor components (STG). The 3SAR, DLN 2.6+ and STG upgrades are referred to as "additional upgrades" in this memo.

The DLN2.6+ is a combustion system upgrade that combines with the 3SAR turbine rotor upgrade to improve heat rate (fuel savings) and provide additional output. The steam turbine upgrades are required to take the full benefit of the combustion turbine upgrades and also provide additional heat rate improvement. The primary drivers of customer value are the aforementioned system fuel savings, and a secondary driver of customer value is the extended parts life of the DLN 2.6+ hardware and the 3SAR turbine rotor. The benefit of extended parts life is maximized by upgrading the fleet of twenty-six (26) of the combustion turbines, because spare parts inventory required to support DLN 2.6+ hardware and the 3SAR turbine rotors is pooled to support all of these CTs. In other words, FPL will not have to maintain spare parts inventory for both upgraded and non-upgraded plants as a results of upgrading all 26 units.

The performance guarantees in the A&R Contract were updated to reflect the above noted incremental benefits as a result of the additional upgrades combined with the .05 compressor upgrade. If a combined cycle unit fails to achieve the updated performance guarantees, GE is obligated to pay liquidated damages constructed to preserve customer value achieved through system fuel savings. As such, this A&R Contract supersedes the

Original Contract and enhances its scope to include these additional upgrades and additional performance guarantees.

While this A&R Contract does not result in any additional payments associated with the .05 upgrades, it did result in rearrangement of the outage schedule included in the Original Contract in order to accommodate the additional upgrades. FPL accounting noted that as a result of this A&R Contract the outage schedule for the Original Contract was revised such that the outages for the units (six (6) units at Sanford 4 (Unit A-D) and Sanford 5 (Unit B-C)), originally scheduled for .05 compressor upgrade between March 2016 and December 2016, were delayed to enable these units to receive the 3SAR, DLN 2.6+ and STG upgrades along with the .05 compressor upgrade.

Issue 1: Does the above noted delay in the original outage schedule for the .05 compressor upgrade results in suspension of the .05 AFUDC project resulting in reversal of the AFUDC for the months of April, 2016 – November, 2016 and notification to FPSC?

Accounting Guidance:

FPL Policy: As per the FPL Policy 1.1 Electric Utility Plant, The AFUDC application is to be suspended prospectively when:

- A work order/project has not received charges for cash voucher, payroll or engineering for a period of six months. Suspension will be automatic on the seventh month.
- Construction activity will cease for a period greater than six months due to circumstances within FPL's control. Construction activity is defined to include all preconstruction engineering, legal fees, licensing requirements, etc.

The AFUDC application is not suspended when:

- The construction delay is caused by circumstances beyond FPL's control. (i.e. government action, vendors, acts of God. etc.)
- The work order is part of a larger project and all activities for that project have not ceased.

FPSC 25-6.0141 – Allowance for Funds Used During Construction Rule, Item 5: When the construction activities for an ongoing project are expected to be suspended for a period exceeding six (6) months, the utility shall notify the Commission of the suspension and the reason(s) for the suspension, and shall submit a proposed accounting treatment for the suspended project.

GAAP ASC 835-25-4: If the entity suspends substantially all activities related to acquisition of the asset, interest capitalization shall cease until activities are resumed. However, brief interruptions in activities, interruptions that are externally imposed, and delays that are inherent in the asset acquisition process shall not require cessation of interest capitalization.

GAAP ASC 835-25-6: Interest is not to be capitalized during periods when the entity intentionally defers or suspends activities related to the asset. Interest cost incurred during such periods is a holding cost, not an acquisition cost. However, delays that are inherent in the asset acquisition process and interruptions in activities that are imposed by external forces are unavoidable in acquiring the asset and as such do not call for a cessation of interest capitalization.

Response: FPL noted that the .05 compressor rotor upgrades were completed on 8 CT's, including 6 at Ft Myers and 2 at Martin in 2015 and 2016 in accordance with the schedule set forth in the Original Contract. Integrated Supply Chain ("ISC") noted that GE has already met performance guarantees for the six (6) out of these eight (8) units and is on track to achieve the performance guarantees associated with two (2) units that were upgraded first and had performance shortfalls. ISC deems that it is highly probable (more than 80% probability) that GE will be able to cure the performance shortfall for these two (2) units based on the fact that GE was able to meet the performance guarantees for the six (6) units upgraded subsequent to the first two (2) units with performance shortfall.

Further, FPL accounting noted that even though the above noted outages were delayed, the overall project was still incurring costs related to equipment upgrades that were planned and executed in alignment with planned plant outages, including the delayed outages, during the delay period. GE shop work also continued throughout 2016 to prepare seed rotors for the next upgrade outages. These activities required support from PGD project management, plant personnel, ISC materials management, combustion turbine fleet team and central maintenance planning. .05 compressor upgrade project received charges related to these activities (approximately \$1M) primarily related to payroll during the delay period.

In addition; GE engineering activities continued throughout 2016 in preparation for the .05 upgrades. This included balance of plant evaluations of the upgrade plants to ensure the plant could support the additional output from the CT's after the upgrade.

Reasons for Outage Delay:

ISC noted following drivers for the delay in the 2016 schedule outages and related .05 compressor upgrades:

1. In April 2016, PGD made changes to the .05 execution schedule due to requirements for load reserve margin in the summer of 2016. The Sanford 4C and 4D .05 outages were rescheduled for July 2017 – September 2017 so these units could be available during the summer 2016.
2. During the summer of 2016, FPL experienced periods of reduced reserve margin that likely would have temporarily delayed the .05 project to ensure all generating resources were available to meet load demand. Forced outages and outage extensions in summer 2016 totaled approximately 1000 MW in portions of June, 1200 MW in portions of July and 900 MW for portions of August.
3. Following last of the above noted 8 upgrades in March 2016, GE made FPL aware of a new upgrade that was available and could improve performance by

replacing the combustion turbine combustion system and turbine rotor (the 3SAR Upgrade). GE provided preliminary performance improvement data for the 3SAR Upgrade which FPL believed would likely result in significant customer value. To allow time to evaluate the potential of this new upgrade, it was decided to temporarily delay the Sanford 5B, 5C, 4B, 4A .05 upgrades that were scheduled for summer and fall 2016. There was never intent to suspend the .05 project. The primary reason for the delay was to prevent customers from having to pay higher costs for one additional upgrade outage per CT, if the 3SAR Upgrade was determined to be an enhanced project with sufficient customer savings. The execution cost for a major outage is \$2.55 million per CT. The cost of four additional outages is \$10.2 million, with a customer CPVRR impact of approximately \$12 million.

4. The evaluation of the 3SAR project and negotiation of the A&R Contract took longer than expected since this is a first of a kind upgrade for GE and they needed to work through plant specific performance for each of the 5 FPL sites.
5. The four Sanford outages were re-scheduled to be completed at the end of the .05 upgrades, in spring 2018. It was not possible to schedule these upgrades earlier, as the .05 upgrade schedules already requires the maximum labor resources that GE can provide.
6. The 3SAR, DLN 2.6+ and STG upgrade project valuation was completed, and the enhanced project was shown to be \$58 million CPVRR value to the customers.

Conclusion: Based on the above noted points, FPL accounting concluded that the .05 Project was not suspended but was delayed in order to negotiate a better deal for FPL customers by taking advantage of the new upgrades (3SAR, DLN 2.6+ and STG) and to accommodate the peak load demands during summer, 2016 (factor beyond FPL control). Additionally, the overall .05 compressor upgrade project was still incurring costs related to the future outages during the delay period.

Issue 2: Do the above noted additional upgrades constitute a separate AFUDC project or do these additional upgrades constitute a change (enhancement) of the scope for the Original Contract related to the .05 compressor upgrade AFUDC project?

Response: While this A&R Contract does not result in any additional payments associated with the .05 upgrades or change in performance guarantees relates to the .05 upgrades; it would be impractical to look at the additional upgrades as a separate AFUDC project due to the following reasons:

1. Performing .05 compressors, 3SAR, DLN 2.6+ and STG upgrades together will provide the optimal customer benefits in system fuel savings. The level of improvements could not be achieved by only performing a portion of the upgrades individually.

2. FPL Finance performed a customer benefit analysis which resulted in an incremental \$58 million of customer savings over the 30 year life of the project as compared to the .05 compressor upgrades on a standalone basis.
3. GE is obligated to achieve the combined cycle (i) heat rate and (ii) output guarantees set forth in the A&R Contract as a result of .05 compressor and these additional upgrades. The liquidated damages noted in the contract are for the combined performance guarantee as a result of .05 compressor upgrade and the additional upgrades.
4. All of the work is being performed in the same upgrade outage except for the 8 units that already have .05 compressor upgrade.

Conclusion: As such, this A&T Contract is deemed as an enhancement of the Original Contract to incorporate the additional upgrades in order to ensure maximum customer benefits. FPL assessed this A&R contract as change in scope (enhancement) of the .05 compressor upgrade for AFUDC qualification and recognition purposes.

Issue 3: Is STG upgrade part of the above defined AFUDC project as it is related to steam turbine not combustion turbine?

Response: STG upgrades are required for Fort Myers Unit 2 and Sanford Units 4 & 5 in order to maximize the performance benefits from the 3SAR and DLN 2.6+ upgrades. The steam turbines at Fort Myers Unit 2 and Sanford Units 4 & 5 do not have the capacity to accept the additional steam production associated with the 3SAR and DLN 2.6+ upgrades. Below is an analysis of the performance benefits with and without STG upgrades:

Ft Myers – DLN2.6+/3SAR Performance Benefit with and without the steam turbine upgrade:

At 75 degree Fahrenheit ambient temperature, there is zero increased performance benefit without the steam turbine upgrade. With the steam turbine upgrades at 75 degree Fahrenheit, the performance benefit is approximately 100 MW for the entire unit. At 85 degree Fahrenheit ambient temperature, there is approximately 5 MW of increased performance without the steam turbine upgrade. With the steam turbine upgrade at 85 degree Fahrenheit, the performance benefit is approximately 170 MW.

Sanford – DLN2.6+/3SAR Performance Benefit with and without the steam turbine upgrade:

At 75 degree Fahrenheit ambient temperature, there is a performance benefit of approximately 15 MW per unit without the steam turbine upgrade. With the steam turbine upgrade at 75 degree Fahrenheit, the performance benefit is approximately 70 MW per unit. At 85 degree Fahrenheit ambient temperature, there is approximately 65 MW of performance benefit per unit without the steam turbine upgrade. With the steam turbine upgrade at 85 degree Fahrenheit, the performance benefit is approximately 120 MW per unit.

As such, the steam turbine upgrade is integral to realize the performance benefits from the 3SAR/DLN2.6+ upgrade project, as the majority of the performance benefit from the upgrade is not realized until the steam turbine upgrades are completed. Further, FPL would not be performing STG upgrade on a stand-alone basis, due to limited

incremental benefits, in the absence of 3SAR and DLN 2.6+ upgrades. As such, it is appropriate to include the STG upgrades at Fort Myers, Sanford 4 & 5 within the scope of this AFUDC project to ensure maximum customer benefits.

Issue 4: Does the DLN 2.6+, 3SAR, and STG upgrade project satisfy the criteria for accruing AFUDC, and if so, how should the AFUDC be accrued?

Accounting Discussion

FPL's AFUDC policy follows both Electric Plant Instruction 3(17) in Part 101 of the FERC Code of Regulation and Rule 25-6.0141 of the Florida Administrative Code to determining the calculation methodology and the eligibility of projects. FPL also developed a set of additional criteria based on the guidance provided by both the FERC and FPSC related to the definition of a project and the ability to accrue AFUDC. These criteria were applied to the .05 compressor upgrade project in 2015. FPL also applied those criteria to the DLN 2.6+, 3SAR, and STG project as noted below:

1. *The work to be performed has the following characteristics:*
 - a. *One program or project manager.*
 - i. **Project will be managed by Helena Hernandez in PGD Central Maintenance and a dedicated team of GE Project Managers that will remain consistent throughout the entire upgrade project. The teams will move from one outage to the next as they are worked every 55 to 60 days. Refer to Appendix A for the outage schedule.**
 - b. *One schedule with interrelated, dependent activities*
 - i. **Planning and executing a multi-site project provides for efficient use of the skills and teams. Project schedule is to start the above noted upgrades in December 2016 and continue through May 2020, with each outage lasting 55 to 60 days. These outages will be performed consecutively across all sites. Note that outages will not occur in months were the units are needed for peak load. There are no instances where intervals between outages extend greater than 6 months.**
 - ii. **Engineering and permitting work can be leveraged across all units. In advance of the outages beginning, FPL needs to perform engineering activities as the upgrade of the above noted parts represents a significant modification to the existing unit. Note that GE has been working on the engineering work for the outage scheduled in December, 2016 since 2015 in order to be ready to deliver the upgraded parts in case this A&R contract was to be executed. Permitting work for the outage scheduled in December, 2016 is expected to be finalized by February, 2017. ISC anticipates it to be more than 80% probable that FPL will be able to secure permit since it is a change in the existing .05 upgrade permit and not a new permit.**

- iii. **As all of the units being upgraded currently employ the same technology, the engineering across all sites will be fairly standardized, except for some site specific nuances given site layout and configuration. In addition, FPL needs to secure the appropriate environmental permits and will be working to permit all sites to allow the outage schedule to be followed.**
 - c. *A defined start and scheduled in service date(s)*
 - i. **The first upgrade outage is scheduled to commence in December 2016 and the last upgrade outage is scheduled to commence in March 2020, and the expected outage duration of each upgrade outage is 55 to 60 days. Engineering and permitting has already started taking place as Martin Unit 8A is going through DLN 2.6+ and 3SAR upgrades in December 2016. Each unit will return to service at the conclusion of the outage cycle. Refer to Appendix A for the outage schedule.**
 - d. *A program/project budget*
 - i. **Total project budget of approximately \$418 million for equipment, engineering, and outage labor associated with the upgrades and is net of equipment buy backs by GE. The capital and buy back (other recoveries) amounts will be separately accounted for in FPL's books and records. See attached schedule of budget by major work stream and by year.**
 - e. *Project duration is in excess of one year*
 - i. **Project schedule is to start the above noted upgrades in December 2016 and continue through May 2020. Refer to Appendix A for the outage schedule.**
- 2. *No work stream or sub activity is discretionary*
 - a. **As noted above, in order for the investment to provide the maximum benefit to customers, FPL needs to upgrade 3SAR, DLN and STG components together. Key components of the customer benefits are the cost of the upgraded parts and the install labor provided by GE. By upgrading all 26 combustion turbine units and combined cycle plants in a consecutive series, FPL was able to negotiate a discount and better fleet-wide performance guarantees. Choosing to upgrade a standalone site or subset of sites would not prove economical as the purchase price and standalone guarantees would not provide the necessary benefit to justify the investment for our customers.**
- 3. *The evaluation of the benefits of the project consider all of the component work streams which constitute the project*
 - a. **FPL's CPVRR calculation considered all of the costs and benefits of the combined effort in deriving an estimated \$58 million benefits for customers.**

4. *Each major component or sub activity of the project is interdependent to one another in some way such that the defined success requires each sub activity in order for that result to be obtained. In other words, the individual work streams do not have the same value independently as they do to the whole project; the interrelationship optimizes the result.*

a. **By upgrading all 26 its combustion turbine units and combined cycle plants in a consecutive series, FPL was able to negotiate a discount and better fleet-wide performance guarantees deriving an estimated \$58 million of benefit for customers.**

Based on the responses set forth above, the 3SAR, DLN2.6+ and STG upgrades satisfy all of the criteria and should be viewed as one project for purposes of accruing AFUDC.

Issue 5: How should FPL account for the prepayment related to various components of this contract?

Accounting Guidance:

FPL Policy 1.1 Electric Utility Plant:

Prepaid Capital: Prepaid capital consists of amounts paid to vendors for capital items that will not be received within the normal time frame for such items. In exchange for this advanced payment, FPL receives a discounted price on the capital items purchased.

Prepaid capital should be charged to Account 186 (miscellaneous deferred debits) when the payment is made. The cash outflow should be classified as an investing activity in the statement of cash flows.

When the capital asset is delivered the payment should be re-classified to one of the following FERC accounts:

1. Account 107 (construction work in progress-Electric) if the asset is delivered to a specific project site, or;
2. Account 101 (electric plant in service) if the asset goes straight into service or meets the definition of a capital spare part, or;
3. Account 154 (plant materials and operating supplies) if the asset is delivered and held for future use on a capital project.

Deposits or advanced payments for capital items: Any deposits or progress payments disbursed on behalf of a construction contract to secure the acquisition of assets that have a long construction lead times should be charged to Account 107 (construction work in progress-Electric).

FERC:

Operating Plant Instructions 3 section 1: Components of construction cost includes amounts paid for work performed under contract by other companies, firms, or individuals, costs incident to the award of such contracts, and the inspection of such work.

Operating Plant Instructions 3 section 17: Allowance for funds used during construction includes the net cost for the period of construction of borrowed funds used

for construction purposes and a reasonable rate on other funds when so used, not to exceed, without prior approval of the Commission, allowances computed in accordance with the formula prescribed in paragraph (a) of this subparagraph.

Account 107 – Construction Work in Progress:

- A. This account shall include the total of the balances of work orders for electric plant in process of construction.
- B. Work orders shall be cleared from this account as soon as practicable after completion of the job.

GAAP:

ASC 970 Real Estate-General, Topic 360-25-2: Project costs clearly associated with the acquisition, development, and construction of a real estate project shall be capitalized as a cost of that project.”

ASC 835-25-2: The capitalization period is determined by the definition of the circumstances in which interest is capitalizable. Essentially, the capitalization period covers the duration of the activities required to get the asset ready for its intended use , provided that expenditures for the asset have been made and interest cost is being incurred. Interest capitalization continues as long as those activities and the incurrence of interest cost continue.

Per the definitions included in the standards: “The term activities is to be construed broadly. It encompasses physical construction of the asset. In addition, it includes all the steps required to prepare the asset for its intended use. For example, it includes administrative and technical activities during the preconstruction stage, such as the development of plans or the process of obtaining permits from governmental authorities. It also includes activities undertaken after construction has begun in order to overcome unforeseen obstacles, such as technical problems, labor disputes, or litigation.”

ASC 835-25-3: interest should be capitalized once the following conditions have been met:

- a. Expenditures for the asset have been made.
- b. Activities that are necessary to get the asset ready for its intended use are in progress.
- c. Interest cost is being incurred.

Interest capitalization shall continue as long as those three conditions are present.

ASC 835-20-15-5: Interest shall be capitalized for the following types of assets (qualifying assets):

- a. Assets that are constructed or otherwise produced for an entity's own use, including assets constructed or produced for the entity by others for which deposits or progress payments have been made.
- b. Assets intended for sale or lease that are constructed or otherwise produced as discrete projects (for example, ships or real estate developments).
- c. Investments (equity, loans, and advances) accounted for by the equity method while the investee has activities in progress necessary to commence

its planned principal operations provided that the investee's activities include the use of funds to acquire qualifying assets for its operations."

ASC 210 –10–45–4: "Notes to Financial Statements – Overall – Other Presentation Matters." The concept of the nature of current assets contemplates the exclusion from that classification of such resources as the following:

- a. Cash and claims to cash that are restricted as to withdrawal or use for other than current operations, are designated for expenditure in the acquisition or construction of noncurrent assets, or are segregated for the liquidation of long-term debts.
- g. Depreciable Assets

Response: While assessing the accounting treatment for this transaction; FPL considered the general substance of this contract. The transaction allows FPL to prepay for the delivery of the upgraded equipment in the future as per the planned outage schedule. In exchange of making this payment, FPL customers are made whole for the advance payment by negotiating a discount and better fleet-wide performance guarantees deriving an estimated \$58 million of benefit for customers.

FPL reviewed the guidance in ASC 835 and regulatory considerations to ascertain whether this transaction must be recorded as a loan (i.e. financing arrangement), given that the Company is paying in advance of delivery. FPL noted that ASC 835-30-15 does not have specific guidance requiring an entity to account for such transactions as a loan. Furthermore, as per ASC 835-20-05, *the historical cost of acquiring an asset should reflect the costs necessary to bring it to the condition and location necessary for its intended use*. If this transaction were to be accounted for as a loan, it would result in FPL having to reflect interest income in its financials. In order to reflect the interest income, FPL would have to gross up the upgraded parts prices for the discount received resulting in overstating the historical basis for the upgraded parts.

There are also regulatory considerations with respect to this accounting as the amount FPL recovers from its customers would be based on undiscounted price of the asset rather than the actual cost of the asset to FPL (i.e. FPL would be recovering more than actually spent dollars). As such, FPL doesn't believe that recording this transaction as a loan would be appropriate.

FPL capitalizes all costs necessary to get an asset to the condition required for its intended use in line with the accounting guidance noted above. These activities include the procurement of services, labor as well as equipment essential for the construction of generation and other assets. In many cases, it is a common practice to require an initial payment when a major equipment contract is executed. This is usually when the contract is for supply of long lead time equipment that the manufacturer needs to begin manufacturing (i.e. procure raw material and labor and start engineering work) upon execution of the contract to ensure that the long lead time equipment are ready by the committed delivery time.

The above noted upgrades will take place during scheduled outages between now and May, 2020. Due to the long lead time required to produce custom equipment that are being upgraded, FPL has entered into this A&R Contract with GE and has prepaid \$400 million dollars to ensure that the required equipment are available in the future for the

identified outages. FPL deems long lead time as "construction period" for the project since the upgraded equipment are in the process of being constructed by GE in order to get them ready in time for the scheduled outages. As such, FPL considers the initial payment as a necessary cost to have GE construct the upgraded equipment during the long lead time period to get them ready for their intended use in time for the scheduled outages.

Conclusion: Based on the above discussion, payments associated with the outages happening within the long lead time period are recorded Account 107 (Construction work in progress – Electric). Payments associated with the outages beyond the long lead time period are considered advanced payment and are recorded to Account 186 (miscellaneous deferred debits). This general ledger account rolls up to "other" under "other assets" section of FPL's consolidated balance sheet. Note that FPL doesn't record advance payment as a prepaid asset since current assets (e.g. prepaids) should exclude the funds designated for the acquisition or construction of non-current assets (e.g. PPE/CAPEx) in line with above noted ASC 210-10-45-4 accounting guidance.

FPL considers accrual of AFUDC during the long lead time construction period appropriate based on the following factors as they relate to the guidance above:

- The payments are a required cost to bring the asset to the intended use.
- The construction of the equipment during long lead time is a necessary step required to get the asset ready for its intended use.
- The equipment costs are clearly associated with the upgrade project defined above.
- Payments have been made and Interest costs are being incurred.

Once the upgrade is complete on each unit, the upgraded equipment and associated labor will be placed in-service and AFUDC will cease for that portion of the project. Refer to Appendix C for the long lead time related to each part of this project and associated accounting conclusions.
