

<b>Docket No. 20190072-EI</b>					
<b>Comprehensive Exhibit List for Entry into Hearing Record</b>					
<b>July 9, 2019</b>					
<b>EXH #</b>	<b>Witness</b>	<b>I.D. # As Filed</b>	<b>Exhibit Description</b>	<b>Issue Nos.</b>	<b>Entered</b>
<b>STAFF</b>					
1		Exhibit List	Comprehensive Exhibit List		
<b>DUKE ENERGY FLORIDA – DIRECT</b>					
2	Matthew G. Stout	MGS-1	Trenton Solar Power Plant Site Plan	1, 4, 5	
3	Matthew G. Stout	MGS-2	Trenton Solar Power Plant Costs <b>Confidential DN. 03743-2019</b>	1, 4, 5	
4	Matthew G. Stout	MGS-3	Lake Placid Solar Power Plant Site Plan	1, 4, 5	
5	Matthew G. Stout	MGS-4	Lake Placid Solar Power Plant Costs. <b>Confidential DN. 03743-2019</b>	1, 4, 5	
6	Matthew G. Stout	MGS-5	DeBary Solar Power Plant Site Plan	1, 4, 5	
7	Matthew G. Stout	MGS-6	DeBary Solar Power Plant Costs <b>Confidential DN. 03743-2019</b>	1, 4, 5	
8	Matthew G. Stout	MGS-7	Cost Comparison to Other Utilities.	1, 4, 5	
9	Thomas G. Foster	TGF-1	SoBRA II First Year Annualized Revenue Requirement.	4, 5, 6, 7, 8, 9	
10	Benjamin M.H. Borsch	BMHB-1	Solar Power Plant Assumptions.	2, 3, 4	

11	Benjamin M.H. Borsch	BMHB-2	Load Forecast.	2, 3, 4	
12	Benjamin M.H. Borsch	BMHB-3	Fuel Forecast.	2, 3, 4	
13	Benjamin M.H. Borsch	BMHB-4	Cost Effectiveness (CPVRR) Analysis Results.	2, 3, 4	
<b>STAFF HEARING EXHIBITS</b>					
14	Borsch (1-13)		DEF response to Staff 1 <sup>st</sup> Interrogatories Nos. 1 – 13.  <i>[Bates Nos. 00001 – 00017]</i>	1, 2, 5, 6, 7, 8, 9	
15	Borsch (17-21, 31, 32, 34-37)  Stout (14-16, 23-29, 30 and 33)		DEF response to Staff 2 <sup>nd</sup> Interrogatories Nos. 14 - 37.  <b>Confidential DN. 05111-2019</b>  <i>[Bates Nos. 00018 – 00094]</i>	1, 2, 3, 4, 5, 6, 7	
16	Borsch (1,2)		DEF response to Staff 1 <sup>st</sup> Production of Documents Nos. 1-2.  <i>[Bates Nos. 00095 – 00097]</i>	1, 2, 5, 6	
17	Borsch (3 -5)		DEF response to Staff 2 <sup>nd</sup> Production of Documents Nos. 3 - 5.  <b>Response contained on Staff Hearing Exhibits CD for Nos. 3 – 5.</b>  <b>Confidential DN. 05004-2019</b>  <i>[Bates Nos. 00098 – 00098]</i>	1, 2, 5,6	

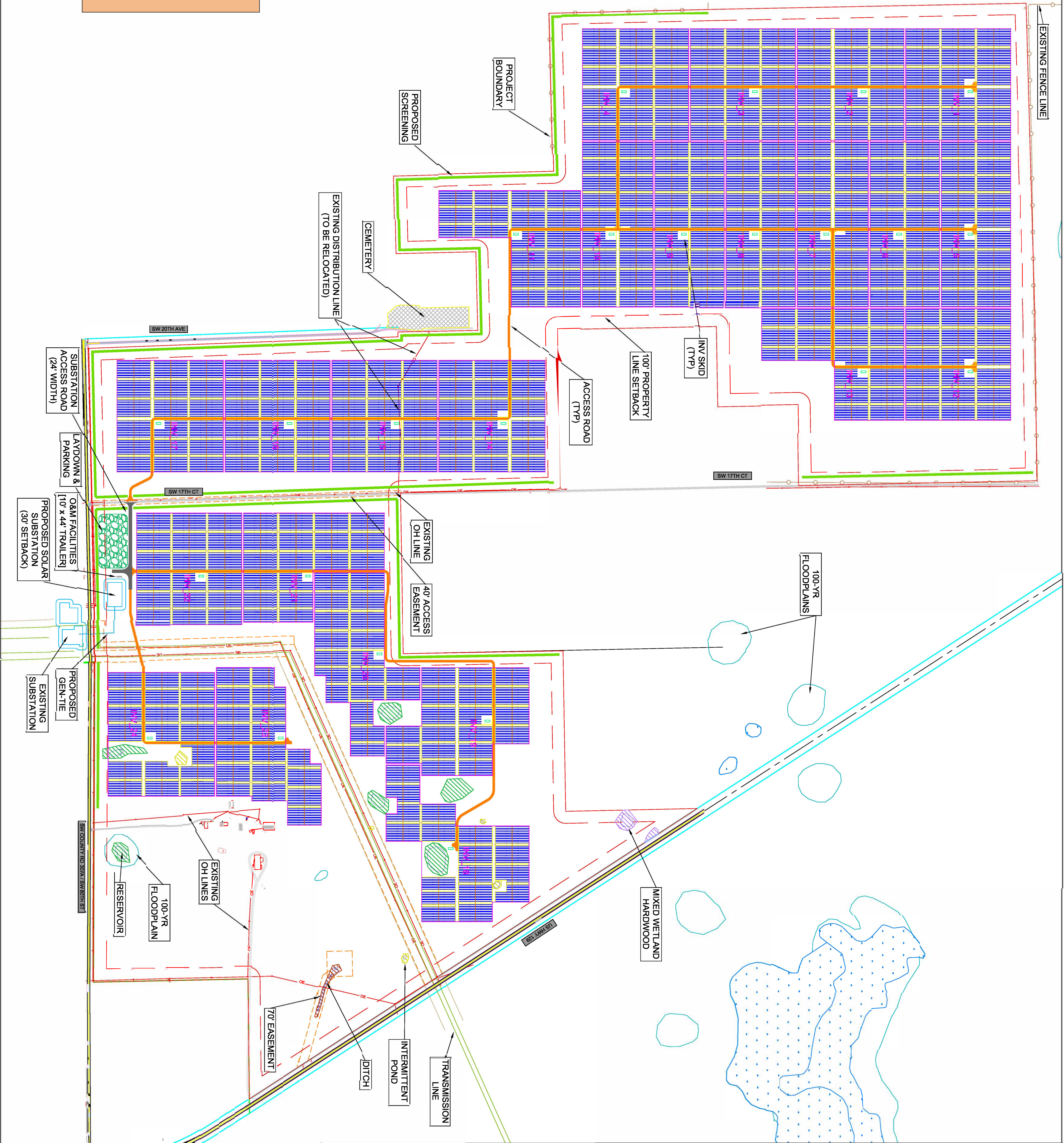
18	Stout (6)		DEF response to Staff 3 <sup>rd</sup> Production of Documents and Supplemental Response No. 6.  <b>Confidential DN. 05111-2019</b>  <i>[Bates Nos. 00099 – 00234]</i>	1, 2	
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Updated Trenton Solar Power Plant Site Plan

Duke Energy Florida  
 Witness: Matthew Stout  
 Exhibit No. (MGS-1)  
 Page 1 of 1

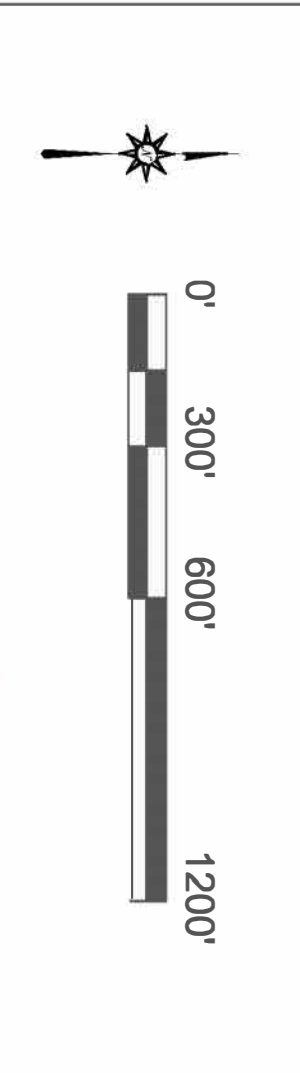
FLORIDA PUBLIC SERVICE COMMISSION  
 DOCKET: 20190072-EI EXHIBIT: 2  
 PARTY: DUKE ENERGY FLORIDA - DIRECT  
 DESCRIPTION: Matthew G. Stout MGS-1



SYSTEM DESCRIPTION			
QUANTITY	DESCRIPTION	UNIT	PERCENT
57,232	JAN7501-380/PR	WP	21.0%
215,908	JAN7501-385/PR	WP	79.0%
273,140	TOTAL MODULES		100.0%
28	PARTIAL TRACKER ROW		
2	FULL TRACKER ROW		
3	MODULES PER TRACKER		
56	MODULES PER TRACKER		
84	MODULES PER TRACKER		
24	INVERTER POWER RATING		
3.36	INVERTER POWER RATING		
24	INVERTER BLOCKS		
3.36 MW (3.36 MVA) SKID	INVERTER BLOCKS		
24	TRANSFORMER		
ATT (1/52 DEG)	TRANSFORMER		
163	TRACKER ROWS		
3143	SMALL ROWS		
332.7K	FULL ROWS		
20.25	FEET		
32.7K	MMWD (FT)		
304.87	MMWD (FT)		
80.64	MMWD (FT)		
74.9	MMWD (FT)		
1.40	AT POI		
1.40	DC/AC RATIO		

**LEGEND:**

- SITE BOUNDARY
- GEN-TIE LINE
- WETLANDS
- 100-YR FLOODPLAIN
- PV CONDITIONING EQUIPMENT PAD
- TRACKER ROWS (66 OR 84 MODULES TALL)
- INTERNAL ROADS (20' WIDTH)
- SUBSTATION ACCESS ROAD (24' WIDTH)
- TRANSMISSION LINE
- EXISTING OH LINE
- EXISTING FENCE LINE
- SUBSTATION



**PRELIMINARY - NOT FOR CONSTRUCTION**

ENGINEER'S SIGNATURE



REV	DATE	DESCRIPTION	DRW	CHK
A	10/29/18	RFP RESPONSE	BJR	
B	12/05/18	POND UPDATE	BJR	
C	01/14/19	JA SOL AR 380W / 385W	BJR	
D	01/17/19	100' SETBACK	BJR	

DATE: 10/15/2018  
 SCALE: NTS  
 DRAWN BY: BJR  
 CHECKED BY: BJR  
 APPROVED BY: BJR  
 REV. NO. BJR  
 PROJECT #:

PROJECT LOCATION:  
**TRENTON**  
 29.630, -82.838

**SITE PLAN**

SHEET  
**G.200**

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**REDACTED**

Duke Energy Florida  
Witness: Matthew Stout  
Exhibit No. \_\_\_\_ (MGS-2)  
Page 1 of 1

**Trenton Solar Project Estimated Installed Cost by  
Category**

Estimated Costs (\$MM)	
Project Output (MW-ac)	74.9
<b>[REDACTED]</b>	
Construction Management	1.1
Development and Permitting <sup>3</sup>	5.8
Transmission Interconnect <sup>4</sup>	0.1
Land <sup>5</sup>	0.0
Total Installed Cost	\$100.2
AFDUC	0.0
Total with AFDUC	\$100.2
Total (\$kW-ac)	1337

1. Includes equipment such as solar panels and project transformer, and any other equipment that was not included in EPC contract.
2. Includes remaining equipment such as racking, posts, inverters, and collection cables and EPC services.
3. Includes items such as lease rental payments during construction, legal fees, development costs, development fees, and title insurance.
4. Interconnection Customer charges identified in the Large Generator Interconnection Agreement.
5. Project occupies land leased to Duke Energy Florida

FLORIDA PUBLIC SERVICE COMMISSION  
DOCKET: 20190072-EI EXHIBIT: 3  
PARTY: DUKE ENERGY FLORIDA – DIRECT  
DESCRIPTION: Matthew G. Stout MGS-2







**REDACTED**

Duke Energy Florida  
Witness: Matthew Stout  
Exhibit No. \_\_\_\_ (MGS-4)  
Page 1 of 1

**Lake Placid Solar Project Estimated Installed Cost by  
Category**

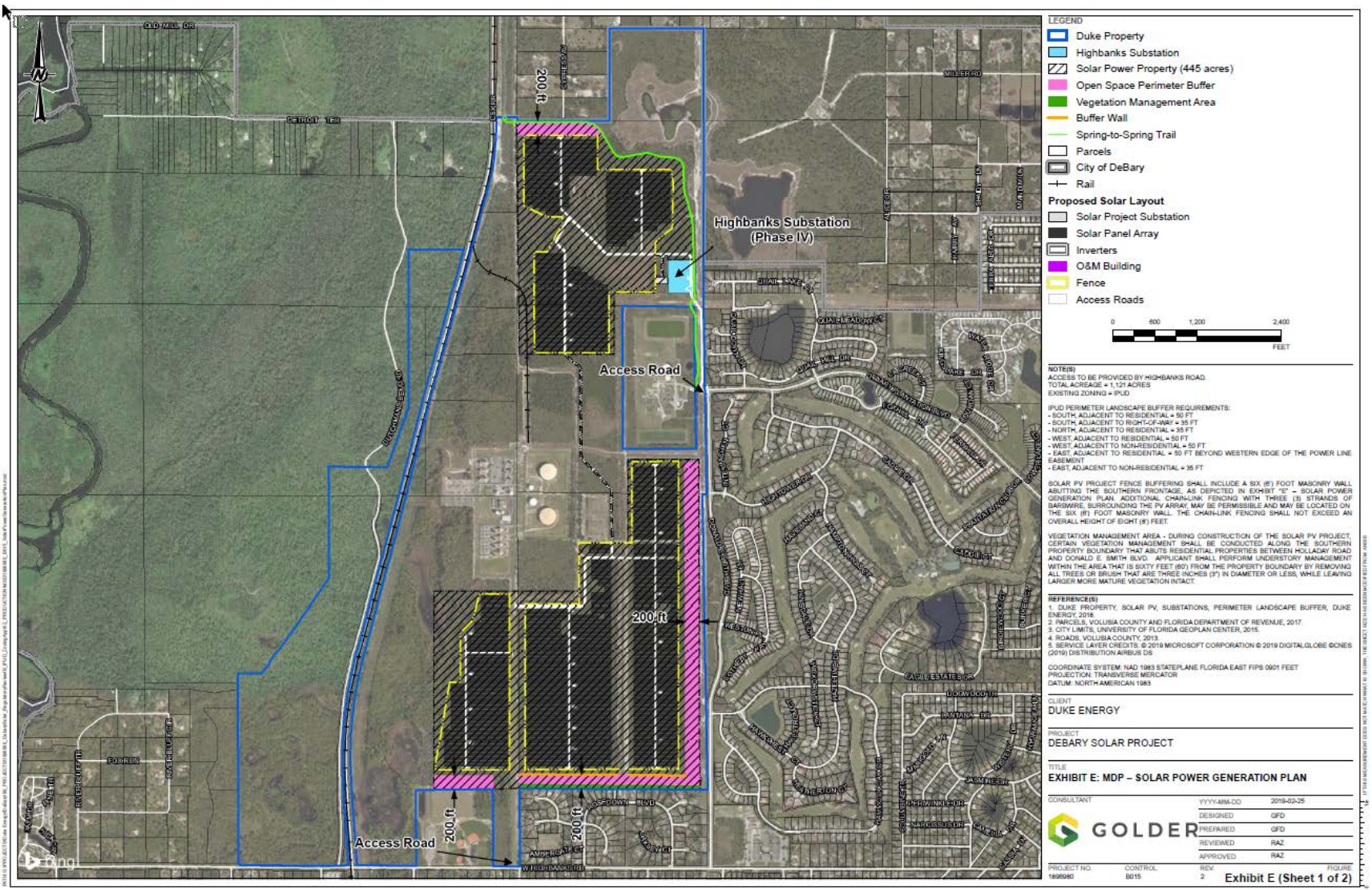
<b>Estimated Costs (\$MM)</b>	
Project Output (MW-ac)	45.0
<b>[REDACTED]</b>	
Construction Management	1.1
Development and Permitting <sup>3</sup>	4.6
Transmission Interconnect <sup>4</sup>	0.1
Land <sup>5</sup>	0.0
<b>Total Installed Cost</b>	<b>\$60.6</b>
AFDUC	0.0
<b>Total with AFDUC</b>	<b>\$60.6</b>
<b>Total (\$kW-ac)</b>	<b>1347</b>

1. Includes equipment such as solar panels and project transformer, and any other equipment that was not included in EPC contract.
2. Includes remaining equipment such as racking, posts, inverters, and collection cables and EPC services.
3. Includes items such as lease rental payments during construction, legal fees, development costs, development fees, and title insurance.
4. Interconnection Customer charges identified in the Large Generator Interconnection Agreement.
5. Project occupies land leased to Duke Energy Florida

FLORIDA PUBLIC SERVICE COMMISSION  
DOCKET: 20190072-EI EXHIBIT: 5  
PARTY: DUKE ENERGY FLORIDA – DIRECT  
DESCRIPTION: Matthew G. Stout MGS-4



FLORIDA PUBLIC SERVICE COMMISSION  
 DOCKET: 20190072-EI EXHIBIT: 6  
 PARTY: DUKE ENERGY FLORIDA – DIRECT  
 DESCRIPTION: Matthew G. Stout MGS-5



DeBarry Solar Power Plant Site Plan

Duke Energy Florida  
 Witness: Matthew Stout  
 Exhibit No. \_\_\_\_ (MGS-5)  
 Page 1 of 1

**REDACTED**

Duke Energy Florida  
Witness: Matthew Stout  
Exhibit No. \_\_\_\_ (MGS-6)  
Page 1 of 1

**DeBary Solar Project Estimated Installed Cost by  
Category**

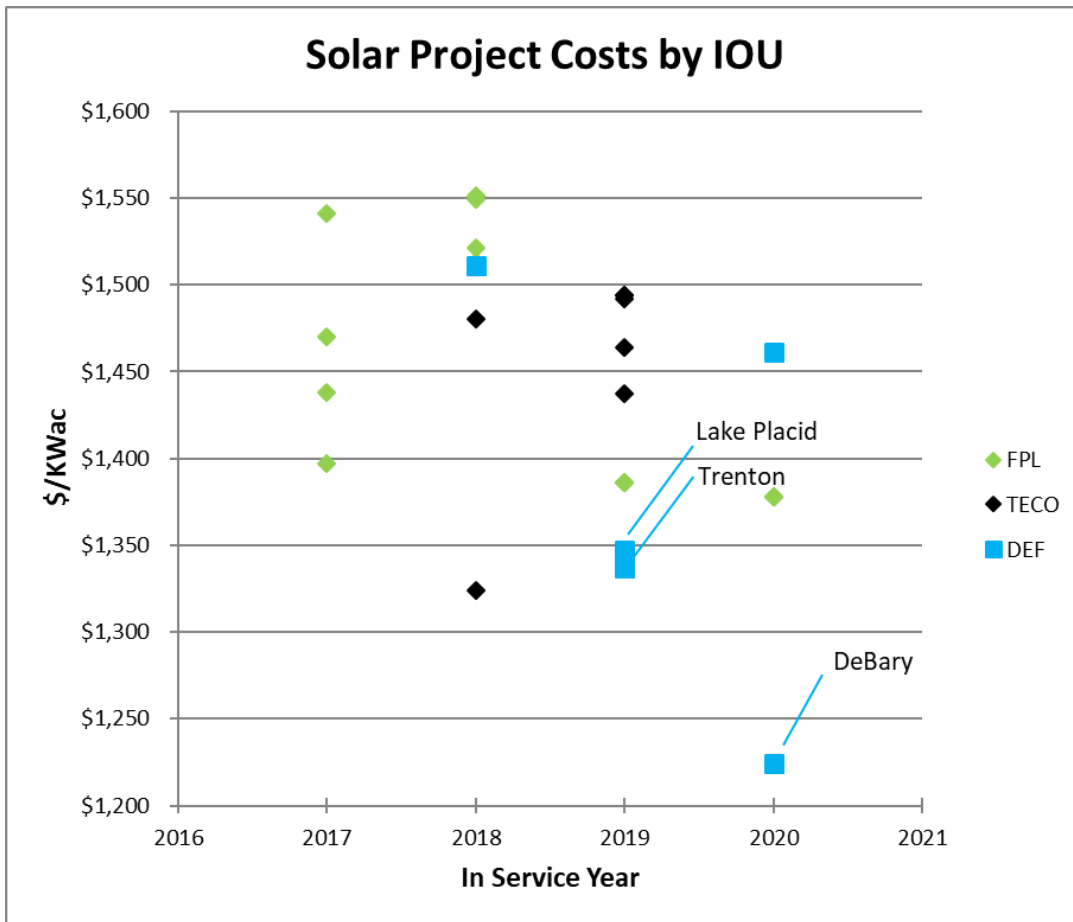
Estimated Costs (\$MM)	
Project Output (MW-ac)	74.5
[REDACTED]	
Construction Management	1.2
Development and Permitting <sup>3</sup>	4.4
Transmission Interconnect <sup>4</sup>	0.1
Land <sup>5</sup>	0.0
<b>Total Installed Cost</b>	<b>\$88.1</b>
AFDUC	3.1
<b>Total with AFDUC</b>	<b>\$91.2</b>
<b>Total (\$kW-ac)</b>	<b>1224</b>

1. Includes equipment such as solar panels and project transformer, and any other equipment that was not included in EPC contract.
2. Includes remaining equipment such as racking, posts, inverters, and collection cables and EPC services.
3. Includes items such as lease rental payments during construction, legal fees, development costs, development fees, and title insurance.
4. Interconnection Customer charges identified in the Large Generator Interconnection Agreement.
5. Project occupies on land owned by Duke Energy Florida.

FLORIDA PUBLIC SERVICE COMMISSION  
DOCKET: 20190072-EI EXHIBIT: 7  
PARTY: DUKE ENERGY FLORIDA – DIRECT  
DESCRIPTION: Matthew G. Stout MGS-6



Cost Comparison to Other Utilities



FLORIDA PUBLIC SERVICE COMMISSION  
DOCKET: 20190072-EI EXHIBIT: 8  
PARTY: DUKE ENERGY FLORIDA – DIRECT  
DESCRIPTION: Matthew G. Stout MGS-7

IOU	Filing Year	Project	In Service Year	\$/kWac <sup>1</sup>
FPL	2017	Coral Farms	2017	\$1,438
	2017	Horizon	2017	\$1,470
	2017	Wildflower	2017	\$1,397
	2017	Indian River	2017	\$1,541
	2018	Loggerhead	2018	\$1,513
	2018	Barefoot Bay	2018	\$1,551
	2018	Hammock	2018	\$1,521
	2018	Blue Cypress	2018	\$1,549
	2018	Miami-Dade	2019	\$1,386 <sup>2</sup>
	2018	Interstate	2019	\$1,386 <sup>2</sup>
	2018	Pioneer Trail	2019	\$1,386 <sup>2</sup>
	2018	Sunshine Gateway	2019	\$1,386 <sup>2</sup>
	2019	Echo River	2020	\$1,378 <sup>3</sup>
	2019	Southfork	2020	\$1,378 <sup>3</sup>
TECO	2017	Payne Creek	2018	\$1,324
	2017	Balm	2018	\$1,480
	2018	Lithia Solar	2019	\$1,494
	2018	Grange Hall	2019	\$1,437
	2018	Peace Creek	2019	\$1,492
	2018	Bonnie Mine	2019	\$1,464
	2018	Lake Hancock	2019	\$1,494
DEF	2018	Hamilton	2018	\$1,511
	2018	Colombia	2020	\$1,409
	2019	Lake Placid	2019	\$1,347
	2019	Trenton	2019	\$1,337
	2019	Debary	2020	\$1,224

<sup>1</sup> \$/kWac is not a perfect metric due to the fact that not all utilities report total costs in the same way each project will have a different system design (DC and AC sizing). A higher DC to AC ratio will result in higher costs on a \$KW/ac basis but will produce more energy over the life of the project.

<sup>2</sup> Estimated average of \$1,386/kWac with a range of \$1,289 to \$1,460/kWac.

<sup>3</sup> Estimated average of \$1,378/kWac with a range of \$1,339 to \$1,407/kWac.



Description	Reference	Lake Placid Project	Trenton Project	DeBary Project
1 Jurisdictional Adjusted Rate Base	Page 2	\$ 57,761	\$ 95,456	\$ 86,916
2 Rate of Return on Rate Base	Pages 3 & 4	<u>6.420%</u>	<u>6.420%</u>	<u>6.450%</u>
3 Net Operating Income Required	Line 1 x Line 2	3,708	6,128	5,606
4 Net Operating Income Achieved	Page 2	<u>(2,078)</u>	<u>(3,421)</u>	<u>(2,846)</u>
5 Net Operating Income Deficiency/(Excess)	Line 3 - Line 4	5,787	9,550	8,452
6 Net Operating Income Multiplier	Note 1	<u>1.344</u>	<u>1.344</u>	<u>1.344</u>
7 Revenue Requirement	Line 5 x Line 6	<u>\$ 7,779</u>	<u>\$ 12,837</u>	<u>\$ 11,361</u>

8 Note 1: Net Operating Income Multiplier is based on MFR C-44 in Docket No. 20090079, except federal tax rate changed to 21%.

FLORIDA PUBLIC SERVICE COMMISSION  
 DOCKET: 20190072-EI EXHIBIT: 9  
 PARTY: DUKE ENERGY FLORIDA – DIRECT  
 DESCRIPTION: Thomas G. Foster TGF-1

Duke Energy Florida, LLC  
SoBRA II First Year Annualized Revenue Requirement  
(\$000)

Docket No. \_\_\_\_\_-EI  
Witness: T.G. Foster  
Exhibit No. \_\_\_\_ (TGF-1)  
Page 2 of 4

Net Plant (13 month average):	Lake Placid Project		Trenton Project		DeBary Project		Jurisd. Factor
	Total Company	FPSC Jurisd.	Total Company	FPSC Jurisd.	Total Company	FPSC Jurisd.	
1 Solar Production Plant	\$59,689	\$57,842	\$99,178	\$96,109	\$90,204	\$87,412	96.905%
2 Accumulated Reserve - Solar Production Plant	(\$995)	(\$964)	(\$1,653)	(\$1,602)	(\$1,503)	(\$1,457)	96.905%
3 Transmission GSU	\$920	\$892	\$988	\$957	\$1,000	\$969	96.905%
4 Accumulated Reserve - Transmission GSU	(\$8)	(\$8)	(\$9)	(\$9)	(\$9)	(\$9)	96.905%
5 Net Plant	\$59,606	\$57,761	\$98,504	\$95,456	\$89,691	\$86,916	
<b>Operating Expenses:</b>	<b>Total Company</b>	<b>FPSC Jurisd.</b>	<b>Total Company</b>	<b>FPSC Jurisd.</b>	<b>Total Company</b>	<b>FPSC Jurisd.</b>	
6 O&M	\$ 889	\$861	\$ 1,351	\$1,309	\$ 880	\$853	96.905%
7 Depreciation Expense - Solar Production Plant	1,990	1,928	3,306	3,204	3,007	2,914	96.905%
8 Depreciation Expense - Transmission GSU	17	16	18	17	18	18	96.905%
9 Dismantlement	104	101	211	204	171	166	96.905%
10 Property Insurance	80	78	132	128	120	116	96.905%
11 Property Tax	184	178	357	346	319	309	96.905%
12 Total Operating Expenses	\$ 3,264	\$ 3,163	\$ 5,375	\$ 5,208	\$ 4,515	\$ 4,375	
13 Jurisdictional Interest Expense		1,115		1,842		1,660	
14 Operating Expenses		<u>FPSC Jurisd.</u> \$ (3,163)		<u>FPSC Jurisd.</u> \$ (5,208)		<u>FPSC Jurisd.</u> \$ (4,375)	
15 Income Tax - Operating Expenses (Line 12 x tax rate)		802		1,320		1,109	
16 Income Tax - Interest Expense (Line 13 x tax rate)		283		467		421	
17 Jurisdictional Net Operating Income		<u>\$ (2,078)</u>		<u>\$ (3,421)</u>		<u>\$ (2,846)</u>	



### Lake Placid & Trenton Projects

	System Per Sys Per Book	Proration Adjustment	System Per Books Adj'd	Retail Per Books	Pro Rata Adj	Specific Adj	Adjusted Retail	Cap Ratio	Cost Rate	Weighted Cost
1 Common Equity	\$7,123,416	\$ 811	\$ 7,124,227	\$ 6,398,129	\$ (368,357)	\$ (15,257)	\$ 6,014,516	42.24%	10.50%	4.44%
2 Long Term Debt	\$6,495,521	739	6,496,261	5,834,165	(335,888)		5,498,277	38.60%	4.82%	1.86%
3 Short Term Debt	\$229,543	26	229,569	206,171	(11,870)		194,301	1.36%	2.79%	0.04%
4 Cust Dep Active	\$197,900	23	197,922	197,922	(11,395)		186,527	1.31%	2.37%	0.03%
5 Cust Dep InActive	\$1,901	0	1,901	1,901	(109)		1,792	0.01%		
6 Invest Tax Cr	\$114,015	13	114,028	102,406	(5,896)		96,510	0.68%	7.79%	0.05%
7 Deferred Inc Tax	\$2,975,187	(1,612)	2,973,575	2,670,510	(153,748)	(265,713)	2,251,048	15.80%		
8 <b>Total</b>	<b>\$ 17,137,482</b>	<b>\$ -</b>	<b>\$ 17,137,482</b>	<b>\$ 15,411,204</b>	<b>\$ (887,262)</b>	<b>\$ (280,970)</b>	<b>\$ 14,242,972</b>	<b>100.00%</b>		<b>6.42%</b>

**Proration Adjustment to Reflect Projected ADFIT Consistent with Projection Year**

	Month	ADIT Bal.	Deprec-Related ADFIT Bal.	Deprec-Related ADFIT Activity	Days to Prorate	Future Days in Period	Prorated Deprec-Related ADFIT Activity	Prorated Deprec-Related ADFIT Bal.
9	Jan-20	\$ 2,904,709	\$ 1,918,495					\$ 1,918,495
10	projected Feb-20	\$ 2,920,512	\$ 1,922,332	\$ 3,838	31	336	\$ 3,523	1,922,018
11	projected Mar-20	\$ 2,935,466	\$ 1,926,167	3,835	29	307	3,217	1,925,235
12	projected Apr-20	\$ 2,950,790	\$ 1,929,844	3,676	31	276	2,772	1,928,007
13	projected May-20	\$ 2,963,957	\$ 1,933,444	3,601	30	246	2,420	1,930,427
14	projected Jun-20	\$ 2,975,787	\$ 1,937,091	3,647	31	215	2,142	1,932,569
15	projected Jul-20	\$ 2,985,246	\$ 1,940,575	3,484	30	185	1,761	1,934,330
16	projected Aug-20	\$ 2,994,429	\$ 1,943,972	3,397	31	154	1,429	1,935,759
17	projected Sep-20	\$ 3,004,221	\$ 1,947,326	3,354	31	123	1,127	1,936,887
18	projected Oct-20	\$ 3,014,195	\$ 1,950,447	3,121	30	93	793	1,937,680
19	projected Nov-20	\$ 3,025,854	\$ 1,953,495	3,048	31	62	516	1,938,196
20	projected Dec-20	\$ 3,038,383	\$ 1,956,608	3,114	30	32	272	1,938,468
21	projected Jan-21	\$ 2,963,887	\$ 1,961,416	4,808	31	1	13	1,938,481
22	13 Mo Avg Bal	\$ 2,975,187	\$ 1,940,093		<u>366</u>		\$ 19,987	\$ 1,938,481
23							13 Mo Avg Bal	<u>1,940,093</u>
24							Proration Adj.	<u>\$ (1,612)</u>

Duke Energy Florida, LLC  
SoBRA II First Year Annualized Revenue Requirement  
Rate of Return on Rate Base and Accumulated Deferred Income Tax Calculation  
(\$000)

Docket No. \_\_\_\_\_-EI  
Witness: T.G. Foster  
Exhibit No. \_\_\_\_\_(TGF-1)  
Page 4 of 4

**DeBary Project**

	System Per Sys Per Book	Proration Adjustment	System Per Books Adj'd	Retail Per Books	Pro Rata Adj	Specific Adj	Adjusted Retail	Cap Ratio	Cost Rate	Weighted Cost
1 Common Equity	\$7,306,826	\$ 993	\$ 7,307,819	\$ 6,557,342	\$ (372,984)	\$ (15,243)	\$ 6,169,115	42.66%	10.50%	4.48%
2 Long Term Debt	\$6,572,909	893	6,573,802	5,898,705	(335,520)		5,563,185	38.46%	4.81%	1.85%
3 Short Term Debt	\$192,229	26	192,255	172,512	(9,813)		162,699	1.12%	2.33%	0.03%
4 Cust Dep Active	\$197,900	27	197,926	197,926	(11,258)		186,668	1.29%	2.37%	0.03%
5 Cust Dep InActive	\$1,901	0	1,901	1,901	(108)		1,793	0.01%		
6 Invest Tax Cr	\$135,079	18	135,097	121,224	(6,895)		114,328	0.79%	7.80%	0.06%
7 Deferred Inc Tax	\$2,989,453	(1,958)	2,987,494	2,680,693	(152,479)	(261,694)	2,266,520	15.67%		
8 <b>Total</b>	<b>\$ 17,396,296</b>	<b>\$ -</b>	<b>\$ 17,396,296</b>	<b>\$15,630,304</b>	<b>\$ (889,057)</b>	<b>\$ (276,938)</b>	<b>\$ 14,464,308</b>	<b>100.00%</b>		<b>6.45%</b>

**Proration Adjustment to Reflect Projected ADFIT Consistent with Projection Year:**

	Month	ADIT Bal.	Deprec-Related ADFIT Bal.	Deprec-Related ADFIT Activity	Days to Prorate	Future Days in Period	Prorated Deprec-Related ADFIT Activity	Prorated Deprec-Related ADFIT Bal
9	Apr-20	\$ 2,950,790	\$ 1,929,844					\$ 1,929,844
10 projected	May-20	\$ 2,963,957	\$ 1,933,444	\$ 3,601	30	336	\$ 3,315	1,933,158
11 projected	Jun-20	\$ 2,975,787	\$ 1,937,091	3,647	31	305	3,047	1,936,206
12 projected	Jul-20	\$ 2,985,246	\$ 1,940,575	3,484	30	275	2,625	1,938,830
13 projected	Aug-20	\$ 2,994,429	\$ 1,943,972	3,397	31	244	2,271	1,941,101
14 projected	Sep-20	\$ 3,004,221	\$ 1,947,326	3,354	31	213	1,957	1,943,059
15 projected	Oct-20	\$ 3,014,195	\$ 1,950,447	3,121	30	183	1,565	1,944,624
16 projected	Nov-20	\$ 3,025,854	\$ 1,953,495	3,048	31	152	1,269	1,945,893
17 projected	Dec-20	\$ 3,038,383	\$ 1,956,608	3,114	30	122	1,041	1,946,933
18 projected	Jan-21	\$ 2,963,887	\$ 1,961,416	4,808	31	91	1,199	1,948,132
19 projected	Feb-21	\$ 2,976,146	\$ 1,966,230	4,814	31	60	791	1,948,923
20 projected	Mar-21	\$ 2,983,502	\$ 1,970,967	4,737	28	32	415	1,949,339
21 projected	Apr-21	\$ 2,986,489	\$ 1,975,607	4,641	31	1	13	1,949,351
22	13 Mo Avg Bal	\$ 2,989,453	\$ 1,951,309		365		\$ 19,508	\$ 1,949,351
23							13 Mo Avg Bal	1,951,309
24							Proration Adj.	\$ (1,958)



Solar Power Plant Assumptions					
Solar Energy Centers	In-service date	Name Plate Capacity (Mwac)	Projected 1st Year Net Capacity Factor	Capital Cost (\$M)	Capital Cost (\$/Kwac)
Trenton	Dec-19	74.9	28.6%	\$100.17	\$ 1,337
Lake Placid	Dec-19	45.0	28.6%	\$60.61	\$ 1,347
DeBary	Mar-20	74.5	24.5%	\$91.20	\$ 1,224

FLORIDA PUBLIC SERVICE COMMISSION  
 DOCKET: 20190072-EI EXHIBIT: 10  
 PARTY: DUKE ENERGY FLORIDA – DIRECT  
 DESCRIPTION: Benjamin M.H. Borsch  
 BMHB-1

Load Forecast			
Year	Summer Firm Peak MW	Winter Firm Peak MW	Net Energy for Load Mwh
2019	9,019	9,023	43,205,985
2020	8,953	9,239	43,619,762
2021	9,026	8,611	43,948,753
2022	9,082	8,958	44,518,946
2023	8,836	8,696	44,466,377
2024	8,907	8,768	44,812,808
2025	8,766	8,583	44,731,864
2026	8,839	8,633	45,057,379
2027	8,920	8,688	45,405,099
2028	9,027	8,741	45,916,074
2029	9,129	8,788	46,350,968
2030	9,212	8,852	46,744,066
2031	9,255	8,860	46,132,672
2032	9,361	8,961	46,659,740
2033	9,449	8,991	47,027,594
2034	9,558	9,063	47,520,278
2035	9,669	9,138	48,026,523
2036	9,391	8,848	48,605,287
2037	9,497	8,894	49,057,272
2038	9,606	8,968	49,554,273
2039	9,717	9,040	50,044,837
2040	9,836	9,147	50,613,122
2041	9,950	9,188	51,066,883
2042	10,071	9,262	51,582,651
2043	10,200	9,354	52,143,914

FLORIDA PUBLIC SERVICE COMMISSION  
 DOCKET: 20190072-EI EXHIBIT: 11  
 PARTY: DUKE ENERGY FLORIDA – DIRECT  
 DESCRIPTION: Benjamin M.H. Borsch  
 BMHB-2



Fuel Forecasts											
Fuel Mid Price Forecast				Fuel High Price Forecast				Fuel Low Price Forecast			
(2019 TYSP)				(2019 TYSP)				(2019 TYSP)			
Year	Natural Gas Base Cost Regular Supply Z3	CRN Coal	Distillate Oil	Year	Natural Gas Base Cost Regular Supply Z3	CRN Coal	Distillate Oil	Year	Natural Gas Base Cost Regular Supply Z3	CRN Coal	Distillate Oil
\$/MMBTU				\$/MMBTU				\$/MMBTU			
2019	2.91	2.44	15.79	2019	2.91	2.44	15.79	2019	2.91	2.44	15.79
2020	2.72	2.45	15.89	2020	2.72	2.45	15.89	2020	2.72	2.45	15.89
2021	2.65	2.51	16.17	2021	2.82	2.51	16.17	2021	2.65	2.51	16.17
2022	2.65	2.57	16.31	2022	3.52	2.57	16.31	2022	2.65	2.57	16.31
2023	2.70	2.59	15.72	2023	4.74	2.59	15.72	2023	2.70	2.59	15.72
2024	2.99	2.76	15.26	2024	5.89	2.76	15.26	2024	2.85	2.76	15.26
2025	3.44	2.86	14.93	2025	6.42	2.88	14.93	2025	3.09	2.86	14.93
2026	3.95	2.97	15.02	2026	6.84	2.99	15.02	2026	3.40	2.95	15.02
2027	4.34	3.09	15.37	2027	6.88	3.12	15.37	2027	3.61	3.07	15.37
2028	4.65	3.13	15.79	2028	6.89	3.14	15.79	2028	3.76	3.06	15.79
2029	5.12	3.17	16.49	2029	7.42	3.20	16.49	2029	4.03	3.11	16.49
2030	5.68	3.25	17.00	2030	8.17	3.28	17.00	2030	4.43	3.17	17.00
2031	5.91	3.66	17.32	2031	8.50	3.70	17.32	2031	4.60	3.58	17.32
2032	6.21	3.76	17.64	2032	8.97	3.80	17.64	2032	4.78	3.66	17.64
2033	6.53	3.86	17.98	2033	9.47	3.90	17.98	2033	4.95	3.75	17.98
2034	6.74	3.95	18.34	2034	9.94	4.01	18.34	2034	5.05	3.84	18.34
2035	6.41	3.98	18.68	2035	9.58	4.03	18.68	2035	4.78	3.85	18.68
2036	6.44	4.06	19.15	2036	9.65	4.12	19.15	2036	4.71	3.92	19.15
2037	6.81	4.14	19.63	2037	10.26	4.21	19.63	2037	4.92	3.99	19.63
2038	7.33	4.25	20.12	2038	11.04	4.31	20.12	2038	5.24	4.08	20.12
2039	7.83	4.36	20.62	2039	11.75	4.42	20.62	2039	5.59	4.16	20.62
2040	8.07	4.47	21.14	2040	12.16	4.55	21.14	2040	5.73	4.28	21.14
2041	8.27	4.59	21.67	2041	12.46	4.67	21.67	2041	5.88	4.38	21.67
2042	8.48	4.70	22.21	2042	12.77	4.78	22.21	2042	6.02	4.49	22.21
2043	8.69	4.82	22.76	2043	13.09	4.90	22.76	2043	6.17	4.60	22.76
2044	8.91	4.94	23.33	2044	13.42	5.03	23.33	2044	6.33	4.72	23.33
2045	9.13	5.06	23.92	2045	13.75	5.15	23.92	2045	6.49	4.84	23.92
2046	9.36	5.19	24.52	2046	14.10	5.28	24.52	2046	6.65	4.96	24.52
2047	9.59	5.32	25.13	2047	14.45	5.41	25.13	2047	6.81	5.08	25.13
2048	9.83	5.45	25.76	2048	14.81	5.55	25.76	2048	6.98	5.21	25.76
2049	10.08	5.59	26.40	2049	15.18	5.69	26.40	2049	7.16	5.34	26.40
2050	10.33	5.73	27.06	2050	15.56	5.83	27.06	2050	7.34	5.47	27.06

FLORIDA PUBLIC SERVICE COMMISSION  
 DOCKET: 20190072-EI EXHIBIT: 12  
 PARTY: DUKE ENERGY FLORIDA – DIRECT  
 DESCRIPTION: Benjamin M.H. Borsch  
 BMHB-3

Cost Effectiveness (CPVRR) Analysis Results			
CPVRR Through Year 2050 2019\$M	Tranche 2 Cases - Tranche 1 Cases		
	Low Fuel Prices	Mid Fuel Prices	High Fuel Prices
Lake Placid	127	127	127
Trenton	79	79	79
DeBary	110	110	110
Conventional Generation	(119)	(119)	(119)
Fuel Cost	(188)	(227)	(329)
Variable Costs	(22)	(22)	(22)
Environmental Costs without Carbon	(1)	(1)	(0)
<b>Total Solar Savings before CO2 Costs</b>	<b>(15)</b>	<b>(54)</b>	<b>(156)</b>
CO2 Cost	(50)	(51)	(49)
<b>CPVRR (Savings)</b>	<b>(65)</b>	<b>(105)</b>	<b>(205)</b>

FLORIDA PUBLIC SERVICE COMMISSION  
 DOCKET: 20190072-EI EXHIBIT: 13  
 PARTY: DUKE ENERGY FLORIDA – DIRECT  
 DESCRIPTION: Benjamin M.H. Borsch BMHB-4

14

DEF response to Staff 1<sup>st</sup> Interrogatories  
Nos. 1 – 13.

FLORIDA PUBLIC SERVICE COMMISSION  
DOCKET: 20190072-EI EXHIBIT: 14  
PARTY: STAFF HEARING EXHIBITS  
DESCRIPTION: Borsch (1-13)



**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

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In re: Duke Energy Florida, LLC's Petition  
for a Limited Proceeding to Approve Second  
Solar Base Rate Adjustment

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Docket No. 20190072-EI

Filed: June 13, 2019

**DUKE ENERGY FLORIDA, LLC'S RESPONSE TO  
STAFF'S FIRST SET OF INTERROGATORIES (NOS. 1-13)**

Duke Energy Florida, LLC ("DEF"), responds to the Staff of the Florida Public Service Commission's ("Staff") First Set of Interrogatories to DEF (Nos. 1-13) as follows:

**INTERROGATORIES**

1. Please refer to witness Borsch's Direct Testimony, page 9, lines 11 - 14; witness Borsch's Direct Testimony filed in Docket No. 20180149-EI; and DEF's Ten Year Site Plan filed April 1, 2019 (2019 TYSP), for the following questions.

- a. Please identify the entity or entities that developed DEF's CO<sub>2</sub> allowance price projections.
- b. Please describe DEF's CO<sub>2</sub> price forecast methodology used to derive the CO<sub>2</sub> price forecasts in the instant docket. For approximately how long has DEF used this same or very similar methodology?
- c. Please identify any differences between the CO<sub>2</sub> emission price forecasts used in Docket No. 20180149-EI and the company's latest CO<sub>2</sub> price projection used in development of DEF's 2019 TYSP and the instant docket.
- d. Referring to witness Borsch's Direct Testimony, page 9, lines 13 - 14, please explain how DEF's CO<sub>2</sub> price projections are consistent with the goal of 40% reduction in CO<sub>2</sub> emissions by 2030.
- e. To date, has DEF incurred any costs related to emissions of CO<sub>2</sub>? If yes, please provide details as well as the method of cost recovery. If not, when will be the first year that DEF contends that it may be assessed costs for emitting CO<sub>2</sub>?

**Answer:**

- a. The CO<sub>2</sub> price projections in this filing were developed internally by Duke Energy.
- b. The CO<sub>2</sub> price forecast used in this filing and in the 2019 TYSP was initially prepared in 2017 and based on the Duke Energy goal of achieving a 40% reduction in emissions from the 2005 baseline by 2030. To create this price forecast, Duke Energy estimated the CO<sub>2</sub> reductions that would be required to meet this goal and

used Duke's production cost modeling tools to create an estimate of the costs that would be incurred to meet those reduction targets. In the absence of actual market information, Duke Energy assumed that the emissions reduction costs would be representative of the market and that these costs could be used as a proxy for CO2 emission prices. Based on the set reduction targets, DEF and its customers could incur these costs either through increased operating costs to achieve the reductions or through market purchases. From the standpoint of total system cost and CPVRR, these would yield effectively the same result.

- c. The CO2 price forecasts used in this docket are the same as those used in the development of the 2019 TYSP.
  - d. The CO2 price projections used in this analysis were developed for the Duke Energy enterprise to reach the 40% by 2030 reduction target from a 2005 baseline year. Duke performed modeling to identify under what scenarios the fleet would reach this reduction target including increased carbon free generation, coal to gas transition and other reduction options. The CO2 price was used as a forcing input to penalize the economics of higher emitting units so that the model(s) would react by increasing the dispatch and construction of lower emitting generation.
  - e. DEF has never incurred costs related to its CO2 emissions. Although it is uncertain if or when DEF might be affected by a CO2 emission rule, DEF uses a projection of carbon emissions costs starting in 2025 because DEF believes that this is the first realistic year in which a national carbon policy could be implemented and that this is a reasonable case under which to consider carbon costs.
2. Please refer to witness Borsch's Exhibit BMHB-4 for the following questions.
- a. Please identify the sources and dates of all environmental compliance costs related to forecasts DEF used in developing its CPVRR analysis of the proposed three solar projects.
  - b. Please provide a detailed explanation of the sensitivity analysis DEF performed, if any, regarding forecasted market prices for CO<sub>2</sub> in testing the robustness of the projected cost savings.
  - c. Has DEF considered the compliance costs associated with other air emissions, such as SO<sub>2</sub> and NO<sub>x</sub>, in its Cost Effectiveness Analysis of its proposed three solar projects? If yes, please discuss DEF's SO<sub>2</sub> and NO<sub>x</sub> price forecast methodology and identify the approximate length of a time DEF has employed this same or very similar forecast methodology; if not, please explain why not.

**Answer:**

- a. DEF models a variety of environmental attributes in its analyses. These include the prices for NO<sub>x</sub> and SO<sub>2</sub> allowances and the costs of reagents required to maintain compliance with applicable air permits. Duke Energy contracts with Evolution Markets, a broker of energy and environmental attributes, which provides the

allowance forecasts. Duke Energy produces a projection of reagent prices based on trends in the observed history and market prices.

- b. DEF does not perform a sensitivity on CO2 prices. There is currently no market for CO2 allowances and no specific regulation that would inform such sensitivities. DEF presents the carbon costs/savings separately from the other costs so that the results without the application of the carbon costs can be used to infer the impact of the carbon costs and the results if there were no carbon regulations (See Exhibit BMHB-4).
- c. Yes. DEF considers costs required to maintain compliance with all applicable environmental permits in its analyses. DEF models prices for NOx and SO2 allowances as well as prices for reagents required to reduce emissions in compliance with unit air permits. DEF calculates emissions rates and reagent requirements for each unit on a per MWhr basis using the price forecasts described in the response to 2.a above. DEF then uses these as inputs to the production cost model which calculates the environmental costs for the operation of each unit. These costs are summed on an annual basis and used to create differential CPVRR. As the solar projects result in reductions in fossil fueled generation, this produces a savings in these costs. DEF has used this methodology for more than 10 years.

3. Please explain how the Company develops its forecasts of Net Energy for Load, Summer Net Firm Demand, and Winter Net Firm Demand.

**Answer:**

Please refer to the Duke Energy Florida, LLC Ten Year Site Plan - April 2019 (“DEF’s TYSP”). The forecast assumptions are detailed on Pages 2-31 to 2-25 and the methodology write-up can be found on pages 2-35 to 2-41.

4. If any of the Company’s load-related models are disaggregated, please detail how DEF achieved its final results (i.e. summation of models, etc.).

**Answer:**

DEF forecast models use monthly data and are disaggregated by class-of-business (Residential, Commercial, Industrial, Other Public Authority (OPA) and Street Lighting (SL)). The residential Class is disaggregated by modeling Average kWh Use per customer (RUPC) and number of billed customer accounts (RCusts) separately. Residential MWh sales is the result of multiplying Res MWh = RUPC x RCusts.

As stated in DEF’s TYSP, the residential and commercial classes estimate energy sales by class end use and the industrial class disaggregates sales by Phosphate sector and Non-phosphate sector.



5. Please identify the software package(s) used in developing the Company's Model(s) filed in this proceeding.

**Answer:**

DEF uses the Itron, Inc. modeling approach called the "Statistically Adjusted End-Use Methodology (SAE) which requires their licensed Metrix ND and Metrix LT software.

6. Does DEF review the accuracy of its previous load and demand forecasts by comparing the actual data for a given year to the data forecasted three, four, and five years prior?

a. If the response is affirmative, please explain the method used in such review and provide the results of such review for each forecast using the Company's Ten-Year Site Plans filed with the Florida Public Service Commission (Commission) from 2011 to 2015 with supporting workpapers in MS Excel format.

b. If the response is negative, please explain why DEF does not perform such a review.

**Answer:**

a. Yes. Please see Excel file labeled "TYSP Error Fan\_2019.xlsx" bearing bates number 20190072-DEF-000001 through 20190072-DEF-000006.

b. N/A

7. Please identify the source(s) and date(s) of DEF's fuel price forecast presented in (BMHB-3).

**Answer:**

DEF's Fuel price forecast referred to in this section of testimony was developed in the fall of 2018 for use in the 2019 Ten-Year Site Plan. As described in the Ten-Year Site Plan and in DEF's response to Ten-Year Site Plan Supplemental Data Request Question #73, the fuel forecasts are developed from the use of short-term spot market prices available from widely used market indices for natural gas and distillate oil. These indices are blended in later years with spot market forecast prices available from DEF's industry recognized fuel price consultant. The methodology for the coal price forecast is similar except that the early year prices are based on DEF's existing coal delivery contracts.

8. Please identify the date, if known, of DEF's next/updated fuel price forecast that will be used for Company/business planning purposes.

**Answer:**

DEF will update the fuel price forecast in the fall of 2019 for the development of the 2020 TYSP.

9. Please discuss DEF's fuel price forecasting methodology. Please also remark on the approximate length of time DEF has employed this same or very similar fuel price forecasting methodology for business planning purposes.

**Answer:**

As discussed in the Ten-Year Site Plan and above, DEF contracts with an industry recognized consultant to prepare a forecast of the future spot prices for key fuels including natural gas, distillate oil, and a variety of coal types based on quality and mine location. The fundamental forecast is a long-term proprietary forecast prepared by a nationally recognized third-party consulting company. In addition, DEF obtains the spot price based on the NYMEX futures index for natural gas and distillate oil. DEF's fuel purchase and planning teams work with these forecasts to blend the forecasts to account for current market behavior and expected future trends driven by market fundamentals including expected future impacts of such forces as shifts in the national generation mix, development of natural gas export capacity and the potential for carbon emissions regulation. The current DEF forecast relies on the market projection in the initial five years and blends the market value with the fundamental forecast over the following five-year period so that the projected prices reach alignment with the fundamental forecast toward the end of the ten-year period. DEF has employed this same or very similar methodology for more than five years.

10. Has DEF compared the mid-fuel price forecast shown on Exhibit (BMHB-3) to any other publically [sic] available source of forecasted fuel prices, such as the Energy Information Administration (EIA)? If so, please discuss the results of any analysis performed.

**Answer:**

Yes. DEF compares its forecast to the Energy Information Administration (EIA) fundamental price forecasts presented in the Annual Energy Outlook (AEO). The AEO 2018 forecast of natural gas prices is a fundamental forecast in all years. Under current market conditions, NYMEX contracts (upon which the NYMEX index is based) are being made at essentially constant (flat) prices over the next several years. This reflects current and expected market conditions including a relative surplus of gas supply compared to the demand. As a result, the DEF forecast shows almost no price escalation over the first 4 - 5 years of the period. The EIA forecast begins at a higher value based on what EIA considers to be a market equilibrium price and escalates from year one. DEF's fundamental price beginning beyond year 10 shows a similar escalation rate but is offset lower to account for DEF's view of the near-term market conditions.

11. Please refer to the Direct Testimony of DEF witness Borsch, Exhibit (BMHB-4).

- a. Please fully explain how the Company developed the \$227 million projected value of fuel savings (*Mid Fuel Prices*) presented in this Exhibit.
- b. Please elaborate on the sensitivity analyses DEF performed with regard to forecasted fuel prices in testing the robustness of the projected cost savings.

**Answer:**

- a. To project the value of the fuel savings, DEF creates two scenarios, a reference case and a change case and then calculates the difference in the fuel costs between the two scenarios. Specifically, DEF created a resource plan based on the forecast load to be served by a generation portfolio without future additional solar, beyond plants in-service and approved, and a second resource plan based on the same load forecasts to be served by a generation portfolio including the proposed solar projects (Trenton, Lake Placid and Debarry). These resource plans were developed using System Optimizer (SO) from ABB, which is DEF's generation resource optimization tool. DEF then simulated the operation of these two portfolios using PROSYM (also from ABB) which is DEF's production cost optimization tool. PROSYM creates an hourly dispatch over the study period and calculates the fuel burned and the cost of that fuel for each scenario. DEF then calculates the annual values in the fuel cost and calculates the CPVRR for each case from which it obtains the differential values.
- b. DEF produced high and low fuel price scenarios by creating high and low-price forecasts for natural gas and coal prices. In the Annual Energy Outlook (AEO) prepared by the Energy Information Administration (EIA), in addition to the reference case, EIA provides scenario cases referred to as the High Oil and Gas Resource and Technology Case and the Low Oil and Gas Resource and Technology Case. These cases provide low and high (respectively) fuel price scenario cases. DEF utilized the Low Resource Scenario case in the development of the high fuel price case for this analysis. Specifically, DEF created a scenario that began with the first 2 years of the NYMEX market price projection and then created a ratio between the DEF reference price and the AEO case price so that the DEF high price sensitivity would be above the DEF reference case by approximately the same percentage as the AEO high price case is above the AEO reference case. The low-price case was created in the same manner, applying the ratio of the prices so that a low-price forecast was created that was lower than the DEF reference price by the same percentage that the EIA low price (high technology case price) is from the EIA reference case price.

12. Please provide the percent error in DEF's delivered natural gas price forecasts 3 to 5 years out using data which supported DEF'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.

<b>Accuracy of Natural Gas Price Forecasts</b>	
<b>Year</b>	<b>Natural Gas Price Annual Forecast Error Rate (%)</b>
	<b>Years Prior</b>



	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			

**Answer:**

Forecasts made in 2011 - 2015 underestimated the impact of the then new fracking technology for natural gas extraction. Actual prices for delivered gas in 2008 were above \$10/mmBtu and in some periods above \$12/mmBtu. It took several years for forecast trends to fully encompass the impacts of these new market dynamics in long term forecasts. Thus, DEF, its consultants at the time, EIA, and most industry participants forecast a higher price of gas during that period. As seen in these tables, the gap narrowed significantly over this period as forecasts assimilated the long-term effects of changes in technology and market structure.

Accuracy of Natural Gas Price Forecast			
Year	Natural Gas Price Annual Forecast Error Rate		
	Years Prior		
	5	4	3
2016	73%	42%	29%
2017	41%	31%	23%
2018	30%	27%	2%
Average	48%	33%	18%

Natural Gas Price Forecasts			
Year	Natural Gas Price Annual Forecast (\$/MMBtu)		
	Years Prior		
	5	4	3
2016	7.07	5.80	5.28
2017	6.03	5.56	5.23
2018	5.89	5.73	4.62
Average	6.33	5.70	5.04

Natural Gas Price			
Year	Natural Gas Price Annual Actuals (\$/MMBtu)		
	Years Prior		
	5	4	3
2016	4.09	4.09	4.09
2017	4.26	4.26	4.26
2018	4.52	4.52	4.52
Average	4.29	4.29	4.29

13. Please provide the percent error in DEF's delivered coal price forecasts 3 to 5 years out using data which supported DEF'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			

**Answer:**

Accuracy of Coal Price Forecast			
Year	Coal Price Annual Forecast Error Rate		
	Years Prior		
	5	4	3
2016	17%	3%	-19%
2017	8%	-16%	6%
2018	-8%	12%	14%
Average	6%	0%	0%

Coal Price Forecasts			
Year	Coal Price Annual Forecast (\$/MMbtu)		
	Years Prior		
	5	4	3
2016	4.24	3.74	2.93
2017	3.71	2.89	3.63
2018	2.95	3.58	3.65
Average	3.63	3.40	3.40

Coal Price			
Year	Coal Price Actuals/MMbtu)		
	Years Prior		
	5	4	3
2016	3.62	3.62	3.62
2017	3.44	3.44	3.44
2018	3.20	3.20	3.20
Average	3.42	3.42	3.42

**DUKE ENERGY FLORIDA**  
**TYSP Forecast Error Evaluation Form**  
 Data is not weather adjusted

Year	Actual System	DEF System Summer Peak Forecast, No DLC Activated																	
	Summer Peak (MW)	TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	TYSP 2009	TYSP 2010	TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018	
2002	9,034	8,524																	
2003	8,476	8,305	8,371																
2004	9,125	8,402	8,533	8,716															
2005	9,681	8,580	8,666	8,812	9,102														
2006	9,689	8,757	9,013	9,193	9,350	9,458													
2007	10,449	8,915	9,250	9,414	9,617	9,758	10,137												
2008	10,036	9,153	9,414	9,576	9,820	10,008	10,382	10,089											
2009	10,261	9,397	9,579	9,711	9,962	10,187	10,439	10,144	10,242										
2010	9,600	9,616	9,750	9,899	10,302	10,538	10,722	10,402	10,220	9,715									
2011	9,277	9,866	9,943	10,047	10,496	10,748	10,948	10,622	10,358	9,571	9,436								
2012	9,026		10,131	10,187	10,695	10,964	11,160	10,983	10,713	9,841	9,610	9,629							
2013	8,776			10,356	10,902	11,165	11,389	11,210	10,983	10,025	9,761	9,415	9,669						
2014	9,218				11,106	11,375	11,739	11,403	11,000	9,915	9,766	9,464	9,742	9,509					
2015	9,218					11,589	11,962	11,621	11,225	10,004	9,848	9,677	9,911	9,750	9,655				
2016	9,646						12,196	11,817	11,400	10,161	9,762	9,701	10,176	9,865	9,720	9,533			
2017	9,293							12,016	11,602	10,301	9,859	9,986	10,275	10,064	9,986	9,770	9,617		
2018	9,271								11,801	10,452	9,954	10,159	10,455	10,213	10,139	9,893	9,745	9,497	

Year	Actual	DEF System Summer Peak Forecast Variances - %																	
	Summer Peak (MW)	TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	TYSP 2009	TYSP 2010	TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018	
2002	9,034	6.0%																	
2003	8,476	2.1%	1.2%																
2004	9,125	8.6%	6.9%	4.7%															
2005	9,681	12.8%	11.7%	9.9%	6.4%														
2006	9,689	10.6%	7.5%	5.4%	3.6%	2.4%													
2007	10,449	17.2%	13.0%	11.0%	8.7%	7.1%	3.1%												
2008	10,036	9.6%	6.6%	4.8%	2.2%	0.3%	-3.3%	-0.5%											
2009	10,261	9.2%	7.1%	5.7%	3.0%	0.7%	-1.7%	1.2%	0.2%										
2010	9,600	-0.2%	-1.5%	-3.0%	-6.8%	-8.9%	-10.5%	-7.7%	-6.1%	-1.2%									
2011	9,277	-6.0%	-6.7%	-7.7%	-11.6%	-13.7%	-15.3%	-12.7%	-10.4%	-3.1%	-1.7%								
2012	9,026		-10.9%	-11.4%	-15.6%	-17.7%	-19.1%	-17.8%	-15.7%	-8.3%	-6.1%	-6.3%							
2013	8,776			-15.3%	-19.5%	-21.4%	-22.9%	-21.7%	-20.1%	-12.5%	-10.1%	-6.8%	-9.2%						
2014	9,218				-17.0%	-19.0%	-21.5%	-19.2%	-16.2%	-7.0%	-5.6%	-2.6%	-5.4%	-3.1%					
2015	9,218					-20.5%	-22.9%	-20.7%	-17.9%	-7.9%	-6.4%	-4.7%	-7.0%	-5.5%	-4.5%				
2016	9,646						-20.9%	-18.4%	-15.4%	-5.1%	-1.2%	-0.6%	-5.2%	-2.2%	-0.8%	1.2%			
2017	9,293							-22.7%	-19.9%	-9.8%	-5.7%	-6.9%	-9.6%	-7.7%	-6.9%	-4.9%	-3.4%		

20190072.EI Staff Hearing Exhibits 00011



2018 9,271 -21.4% -11.3% -6.9% -8.7% -11.3% -9.2% -8.6% -6.3% -4.9% -2.4%

Actual System		DEF System Winter Peak Forecast, No DLC Activated																
Year	Winter Peak (MW)	TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	TYSP 2009	TYSP 2010	TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018
2002	10,202	9,749																
2003	10,507	9,773	9,796															
2004	8,748	9,774	9,890	10,084														
2005	10,226	9,961	10,060	10,350	10,636													
2006	10,146	10,139	10,277	10,446	10,537	10,479												
2007	9,182	10,358	10,746	10,885	11,021	10,992	11,137											
2008	10,282	10,549	10,871	11,007	11,211	11,190	11,490	11,482										
2009	11,313	10,808	11,050	11,155	11,412	11,526	11,608	11,293	11,388									
2010	12,860	11,035	11,239	11,373	11,772	11,898	12,071	11,753	11,445	11,009								
2011	10,534	11,318	11,455	11,531	11,996	12,096	12,326	12,004	11,604	10,895	10,798							
2012	8,722		11,675	11,689	12,214	12,340	12,663	12,484	11,989	11,222	10,919	10,437						
2013	8,032			11,876	12,438	12,565	12,978	12,800	12,325	11,496	11,080	10,249	10,133					
2014	8,329				12,662	12,791	13,237	12,898	12,240	11,093	11,113	9,946	10,251	9,965				
2015	9,473					12,999	13,499	13,154	12,486	11,182	11,243	10,621	10,888	10,257	10,603			
2016	8,513						13,813	13,411	12,704	11,235	11,359	10,794	11,032	10,511	10,743	10,571		
2017	7,538							13,655	12,951	11,410	11,352	10,806	11,133	10,473	10,714	10,550	10,138	
2018	10,320								13,189	11,561	11,495	10,971	11,298	10,742	10,828	10,658	10,261	10,236
2019	7,248									11,716	11,889	11,390	11,480	10,895	10,980	10,806	10,372	10,316

Actual		DEF System Winter Peak Forecast Variances - %																
Year	Winter Peak (MW)	TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	TYSP 2009	TYSP 2010	TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018
2002	10,202	4.6%																
2003	10,507	7.5%	7.3%															
2004	8,748	-10.5%	-11.5%	-13.2%														
2005	10,226	2.7%	1.6%	-1.2%	-3.9%													
2006	10,146	0.1%	-1.3%	-2.9%	-3.7%	-3.2%												
2007	9,182	-11.4%	-14.6%	-15.6%	-16.7%	-16.5%	-17.6%											
2008	10,282	-2.5%	-5.4%	-6.6%	-8.3%	-8.1%	-10.5%	-10.5%										
2009	11,313	4.7%	2.4%	1.4%	-0.9%	-1.8%	-2.5%	0.2%	-0.7%									
2010	12,860	16.5%	14.4%	13.1%	9.2%	8.1%	6.5%	9.4%	12.4%	16.8%								
2011	10,534	-6.9%	-8.0%	-8.6%	-12.2%	-12.9%	-14.5%	-12.2%	-9.2%	-3.3%	-2.4%							
2012	8,722		-25.3%	-25.4%	-28.6%	-29.3%	-31.1%	-30.1%	-27.2%	-22.3%	-20.1%	-16.4%						
2013	8,032			-32.4%	-35.4%	-36.1%	-38.1%	-37.3%	-34.8%	-30.1%	-27.5%	-21.6%	-20.7%					
2014	8,329				-34.2%	-34.9%	-37.1%	-35.4%	-32.0%	-24.9%	-25.1%	-16.3%	-18.7%	-16.4%				
2015	9,473					-27.1%		-29.8%	-28.0%	-24.1%	-15.3%	-15.7%	-10.8%	-13.0%	-10.7%			
2016	8,513						-38.4%	-36.5%	-33.0%	-24.2%	-25.1%	-21.1%	-22.8%	-19.0%	-20.8%	-19.5%		
2017	7,538							-44.8%	-41.8%	-33.9%	-33.6%	-30.2%	-32.3%	-28.0%	-29.6%	-28.5%	-25.6%	
2018	10,320								-21.8%	-10.7%	-10.2%	-5.9%	-8.7%	-3.9%	-4.7%	-3.2%	0.6%	0.8%

20190072.EI Staff Hearing Exhibits 00012

Actual System		Net Energy for Load (NEL) Forecast GWH																	
Year	NEL (GWH)	TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	TYSP 2009	TYSP 2010	TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018	
2002	42,567	42,200																	
2003	43,911	42,440	43,108																
2004	45,268	43,223	43,962	45,161															
2005	46,878	44,148	45,206	45,745	46,722														
2006	46,041	45,280	46,521	47,120	46,993	46,167													
2007	47,633	45,944	47,413	48,044	48,329	47,759	48,194												
2008	47,658	46,943	48,348	49,047	49,446	49,076	49,468	48,734											
2009	44,124	48,123	49,399	50,147	50,299	50,148	50,609	49,768	48,556										
2010	46,160	49,284	50,467	51,263	51,998	52,006	52,516	51,615	48,765	43,819									
2011	42,490	50,437	51,583	52,356	53,052	53,219	53,776	52,913	49,846	42,750	42,047								
2012	41,214		52,722	53,478	54,278	54,434	55,017	54,695	52,485	44,443	44,253	41,534							
2013	40,772			54,608	55,516	55,704	56,321	56,045	53,647	45,877	45,637	40,973	40,786						
2014	40,975				56,999	56,948	57,732	56,905	52,759	46,458	46,367	42,552	41,565	39,801					
2015	42,280					58,211	59,074	58,166	53,117	46,815	46,794	43,633	42,549	40,490	41,426				
2016	42,854						60,460	59,448	53,644	46,477	46,176	43,596	43,421	41,098	41,947	41,277			
2017	42,919							60,836	54,612	46,343	46,128	43,823	43,824	41,375	42,365	41,932	41,475		
2018	44,224								55,614	46,932	46,674	44,533	44,452	41,995	42,779	42,417	41,887	43,060	

Actual		DEF System Net Energy For Load Forecast Variances - %																	
Year	NEL (GWH)	TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	TYSP 2009	TYSP 2010	TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018	
2002	42,567	0.9%																	
2003	43,911	3.5%	1.9%																
2004	45,268	4.7%	3.0%	0.2%															
2005	46,878	6.2%	3.7%	2.5%	0.3%														
2006	46,041	1.7%	-1.0%	-2.3%	-2.0%	-0.3%													
2007	47,633	3.7%	0.5%	-0.9%	-1.4%	-0.3%	-1.2%												
2008	47,658	1.5%	-1.4%	-2.8%	-3.6%	-2.9%	-3.7%	-2.2%											
2009	44,124	-8.3%	-10.7%	-12.0%	-12.3%	-12.0%	-12.8%	-11.3%	-9.1%										
2010	46,160	-6.3%	-8.5%	-10.0%	-11.2%	-11.2%	-12.1%	-10.6%	-5.3%	5.3%									
2011	42,490	-15.8%	-17.6%	-18.8%	-19.9%	-20.2%	-21.0%	-19.7%	-14.8%	-0.6%	1.1%								
2012	41,214		-21.8%	-22.9%	-24.1%	-24.3%	-25.1%	-24.6%	-21.5%	-7.3%	-6.9%	-0.8%							
2013	40,772			-25.3%	-26.6%	-26.8%	-27.6%	-27.3%	-24.0%	-11.1%	-10.7%	-0.5%	0.0%						
2014	40,975				-28.1%	-28.0%	-29.0%	-28.0%	-22.3%	-11.8%	-11.6%	-3.7%	-1.4%	2.9%					
2015	42,280					-27.4%	-28.4%	-27.3%	-20.4%	-9.7%	-9.6%	-3.1%	-0.6%	4.4%	2.1%				
2016	42,854						-29.1%	-27.9%	-20.1%	-7.8%	-7.2%	-1.7%	-1.3%	4.3%	2.2%	3.8%			
2017	42,919							-29.5%	-21.4%	-7.4%	-7.0%	-2.1%	-2.1%	3.7%	1.3%	2.4%	3.5%		
2018	44,224								-20.5%	-5.8%	-5.3%	-0.7%	-0.5%	5.3%	3.4%	4.3%	5.6%	2.7%	

Year	Actual System Customers	DEF System Customer Forecast																
		TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	TYSP 2009	TYSP 2010	TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018
2002	1,475,587	1,468,003																
2003	1,511,324	1,489,564	1,500,477															
2004	1,548,440	1,508,795	1,523,708	1,540,101														
2005	1,577,981	1,528,789	1,546,102	1,567,693	1,574,447													
2006	1,613,443	1,551,611	1,570,755	1,595,069	1,603,600	1,608,403												
2007	1,636,813	1,576,834	1,596,923	1,623,037	1,632,925	1,639,122	1,645,969											
2008	1,637,249	1,603,431	1,624,099	1,651,611	1,662,016	1,669,301	1,679,343	1,662,325										
2009	1,629,734	1,630,482	1,651,774	1,680,503	1,690,993	1,699,499	1,712,064	1,694,687	1,639,432									
2010	1,634,191	1,657,236	1,679,447	1,708,932	1,719,780	1,729,379	1,744,641	1,727,055	1,649,751	1,629,536								
2011	1,642,376	1,686,942	1,710,533	1,736,295	1,748,339	1,758,708	1,777,280	1,759,469	1,670,011	1,642,845	1,642,842							
2012	1,655,546		1,733,663	1,762,757	1,776,709	1,787,722	1,810,126	1,791,810	1,696,126	1,663,026	1,663,023	1,651,398						
2013	1,671,220			1,788,650	1,804,949	1,816,528	1,843,147	1,824,240	1,726,408	1,688,549	1,688,549	1,669,205	1,673,018					
2014	1,695,711				1,833,114	1,845,178	1,876,090	1,856,553	1,757,554	1,715,811	1,715,811	1,696,574	1,696,482	1,692,614				
2015	1,721,551					1,873,800	1,908,680	1,888,544	1,788,202	1,743,531	1,743,531	1,729,077	1,723,531	1,718,930	1,719,415			
2016	1,748,131						1,940,633	1,918,178	1,817,295	1,770,640	1,770,640	1,758,211	1,750,008	1,745,332	1,745,429	1,748,147		
2017	1,775,472							1,947,284	1,844,978	1,797,062	1,797,062	1,786,510	1,777,249	1,771,848	1,772,592	1,776,705	1,778,929	
2018	1,802,714								1,871,706	1,823,014	1,823,014	1,813,830	1,805,116	1,797,281	1,800,353	1,805,008	1,809,791	1,806,086

Year	Actual System Customers	DEF System Customer Forecast Variances - %																
		TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	TYSP 2009	TYSP 2010	TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018
2002	1,475,587	0.5%																
2003	1,511,324	1.5%	0.7%															
2004	1,548,440	2.6%	1.6%	0.5%														
2005	1,577,981	3.2%	2.1%	0.7%	0.2%													
2006	1,613,443	4.0%	2.7%	1.2%	0.6%	0.3%												
2007	1,636,813	3.8%	2.5%	0.8%	0.2%	-0.1%	-0.6%											
2008	1,637,249	2.1%	0.8%	-0.9%	-1.5%	-1.9%	-2.5%	-1.5%										
2009	1,629,734	0.0%	-1.3%	-3.0%	-3.6%	-4.1%	-4.8%	-3.8%	-0.6%									
2010	1,634,191	-1.4%	-2.7%	-4.4%	-5.0%	-5.5%	-6.3%	-5.4%	-0.9%	0.3%								
2011	1,642,376	-2.6%	-4.0%	-5.4%	-6.1%	-6.6%	-7.6%	-6.7%	-1.7%	0.0%	0.0%							
2012	1,655,546		-4.5%	-6.1%	-6.8%	-7.4%	-8.5%	-7.6%	-2.4%	-0.4%	-0.4%	0.3%						
2013	1,671,220			-6.6%	-7.4%	-8.0%	-9.3%	-8.4%	-3.2%	-1.0%	-1.0%	0.1%	-0.1%					
2014	1,695,711				-7.5%	-8.1%	-9.6%	-8.7%	-3.5%	-1.2%	-1.2%	-0.1%	0.0%	0.2%				
2015	1,721,551					-8.1%	-9.8%	-8.8%	-3.7%	-1.3%	-1.3%	-0.4%	0.2%	0.1%				
2016	1,748,131						-9.9%	-8.9%	-3.8%	-1.3%	-1.3%	-0.6%	-0.1%	0.2%	0.2%	0.0%		
2017	1,775,472							-8.8%	-3.8%	-1.2%	-1.2%	-0.6%	-0.1%	0.2%	0.2%	-0.1%	-0.2%	
2018	1,802,714								-3.7%	-1.1%	-1.1%	-0.6%	-0.1%	0.3%	0.1%	-0.1%	-0.4%	-0.2%

Actual Retail Summer Peak	DEF Retail Summer Peak Forecast, No DLC Activated																	
	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP	TYSP

Year	(MW)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
2002	7,842	7,365																
2003	7,593	7,567	7,684															
2004	8,058	7,689	7,853	7,942														
2005	8,565	7,817	8,002	8,122	8,154													
2006	8,432	7,962	8,164	8,303	8,357	8,352												
2007	8,861	8,115	8,334	8,486	8,554	8,576	8,816											
2008	8,524	8,279	8,510	8,672	8,727	8,786	9,044	8,746										
2009	8,643	8,448	8,691	8,863	8,899	8,986	9,247	8,953	8,631									
2010	8,328	8,624	8,879	9,047	9,089	9,181	9,453	9,138	8,687	8,428								
2011	8,343	8,800	9,070	9,224	9,278	9,376	9,661	9,340	8,837	8,461	8,488							
2012	7,946		9,259	9,395	9,465	9,568	9,864	9,544	9,021	8,562	8,564	8,536						
2013	8,195			9,561	9,651	9,759	10,069	9,747	9,267	8,723	8,705	8,611	8,732					
2014	8,404				9,836	9,946	10,270	9,941	9,465	8,822	8,791	8,759	8,871	8,705				
2015	8,446					10,142	10,479	10,146	9,667	8,905	8,870	8,972	9,038	8,944	8,843			
2016	8,753							10,698	10,326	9,813	8,956	8,933	9,146	9,199	9,207	9,073	9,018	
2017	8,485								10,506	9,991	9,042	9,027	9,330	9,381	9,477	9,235	9,140	8,866
2018	8,459									10,163	9,137	9,120	9,503	9,561	9,626	9,387	9,315	8,992

**Actual Retail Summer Peak DEF Retail Summer Peak Forecast Variances - %**

Year	(MW)	TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	TYSP 2009	TYSP 2010	TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018
2002	7,842	6.5%																
2003	7,593	0.3%	-1.2%															
2004	8,058	4.8%	2.6%	1.5%														
2005	8,565	9.6%	7.0%	5.4%	5.0%													
2006	8,432	5.9%	3.3%	1.5%	0.9%	1.0%												
2007	8,861	9.2%	6.3%	4.4%	3.6%	3.3%	0.5%											
2008	8,524	3.0%	0.2%	-1.7%	-2.3%	-3.0%	-5.7%	-2.5%										
2009	8,643	2.3%	-0.5%	-2.5%	-2.9%	-3.8%	-6.5%	-3.5%	0.1%									
2010	8,328	-3.4%	-6.2%	-8.0%	-8.4%	-9.3%	-11.9%	-8.9%	-4.1%	-1.2%								
2011	8,343	-5.2%	-8.0%	-9.6%	-10.1%	-11.0%	-13.6%	-10.7%	-5.6%	-1.4%	-1.7%							
2012	7,946		-14.2%	-15.4%	-16.0%	-17.0%	-19.4%	-16.7%	-11.9%	-7.2%	-7.2%	-6.9%						
2013	8,195			-14.3%	-15.1%	-16.0%	-18.6%	-15.9%	-11.6%	-6.1%	-5.9%	-4.8%	-6.2%					
2014	8,404				-14.6%	-15.5%	-18.2%	-15.5%	-11.2%	-4.7%	-4.4%	-4.1%	-5.3%	-3.5%				
2015	8,446					-16.7%	-19.4%	-16.8%	-12.6%	-5.2%	-4.8%	-5.9%	-6.6%	-5.6%	-4.5%			
2016	8,753						-18.2%	-15.2%	-10.8%	-2.3%	-2.0%	-4.3%	-4.9%	-4.9%	-3.5%	-2.9%		
2017	8,485							-19.2%	-15.1%	-6.2%	-6.0%	-9.1%	-9.6%	-10.5%	-8.1%	-7.2%	-4.3%	
2018	8,459								-16.8%	-7.4%	-7.2%	-11.0%	-11.5%	-12.1%	-9.9%	-9.2%	-5.9%	-2.7%

**Actual Retail Winter Peak DEF Retail Winter Peak Forecast, No DLC Activated**

Year	(MW)	TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	TYSP 2009	TYSP 2010	TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018
------	------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------



2002	8,590	8,147																	
2003	8,974	8,413	8,397																
2004	7,585	8,581	8,577	8,676															
2005	8,627	8,695	8,726	8,842	8,865														
2006	8,679	8,818	8,880	9,009	9,035	9,066													
2007	7,607	8,957	9,042	9,171	9,214	9,252	9,426												
2008	8,454	9,101	9,195	9,336	9,386	9,456	9,701	9,447											
2009	9,085	9,260	9,355	9,506	9,556	9,632	9,881	9,578	9,371										
2010	10,686	9,419	9,516	9,677	9,723	9,810	10,059	9,754	9,345	9,159									
2011	8,909	9,603	9,705	9,839	9,890	9,984	10,244	9,931	9,427	9,122	9,173								
2012	7,817		9,890	9,995	10,049	10,149	10,422	10,102	9,561	9,203	9,247	9,045							
2013	7,201			10,145	10,208	10,312	10,601	10,282	9,761	9,343	9,379	9,056	9,224						
2014	7,671				10,367	10,477	10,781	10,450	9,927	9,438	9,464	9,141	9,309	9,070					
2015	8,438					10,641	10,951	10,616	10,087	9,523	9,542	9,316	9,443	8,881	9,222				
2016	7,649							11,174	10,783	10,217	9,571	9,604	9,488	9,585	9,133	9,399	9,227		
2017	6,837								10,939	10,378	9,641	9,695	9,650	9,739	9,385	9,517	9,353	8,941	
2018	9,249									10,531	9,737	9,785	9,815	9,904	9,654	9,630	9,460	9,063	8,985
2019	6,676										9,836	9,877	9,984	10,086	9,807	9,782	9,608	9,174	9,118

Year	Actual Retail Winter Peak (MW)	DEF Retail Winter Peak Forecast Variances - %																	
		TYSP 2002	TYSP 2003	TYSP 2004	TYSP 2005	TYSP 2006	TYSP 2007	TYSP 2008	TYSP 2009	TYSP 2010	TYSP 2011	TYSP 2012	TYSP 2013	TYSP 2014	TYSP 2015	TYSP 2016	TYSP 2017	TYSP 2018	
		2002	8,590	5.4%															
2003	8,974	6.7%	6.9%																
2004	7,585	-11.6%	-11.6%	-12.6%															
2005	8,627	-0.8%	-1.1%	-2.4%	-2.7%														
2006	8,679	-1.6%	-2.3%	-3.7%	-3.9%	-4.3%													
2007	7,607	-15.1%	-15.9%	-17.1%	-17.4%	-17.8%	-19.3%												
2008	8,454	-7.1%	-8.1%	-9.4%	-9.9%	-10.6%	-12.9%	-10.5%											
2009	9,085	-1.9%	-2.9%	-4.4%	-4.9%	-5.7%	-8.1%	-5.2%	-3.1%										
2010	10,686	13.5%	12.3%	10.4%	9.9%	8.9%	6.2%	9.6%	14.3%	16.7%									
2011	8,909	-7.2%	-8.2%	-9.5%	-9.9%	-10.8%	-13.0%	-10.3%	-5.5%	-2.3%	-2.9%								
2012	7,817		-21.0%	-21.8%	-22.2%	-23.0%	-25.0%	-22.6%	-18.2%	-15.1%	-15.5%	-13.6%							
2013	7,201			-29.0%	-29.5%	-30.2%	-32.1%	-30.0%	-26.2%	-22.9%	-23.2%	-20.5%	-21.9%						
2014	7,671				-26.0%	-26.8%	-28.8%	-26.6%	-22.7%	-18.7%	-18.9%	-16.1%	-17.6%	-15.4%					
2015	8,438					-20.7%	-22.9%	-20.5%	-16.3%	-11.4%	-11.6%	-9.4%	-10.6%	-5.0%	-8.5%				
2016	7,649						-31.5%	-29.1%	-25.1%	-20.1%	-20.4%	-19.4%	-20.2%	-16.2%	-18.6%	-17.1%			
2017	6,837							-37.5%	-34.1%	-29.1%	-29.5%	-29.2%	-29.8%	-27.2%	-28.2%	-26.9%	-23.5%		
2018	9,249								-12.2%	-5.0%	-5.5%	-5.8%	-6.6%	-4.2%	-4.0%	-2.2%	2.1%	2.9%	
2019	6,676									-32.1%	-32.4%	-33.1%	-33.8%	-31.9%	-31.8%	-30.5%	-27.2%	-26.8%	

20190072.EI Staff Hearing Exhibits 00016


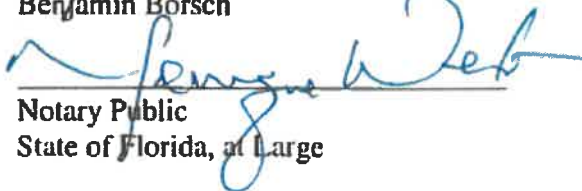
**AFFIDAVIT**

STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 10<sup>th</sup> day of June, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BENJAMIN BORSCH, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory numbers 1 through 13, from STAFF'S FIRST SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC. (NOS.1-13), in Docket No. 20190072-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 10<sup>th</sup> day of June, 2019.

  
Benjamin Borsch  
  
Notary Public  
State of Florida, at Large



My Commission Expires:

June 28, 2019

15

DEF response to Staff 2<sup>nd</sup> Interrogatories

Nos. 14 - 37.

**Confidential DN. 05111-2019**

FLORIDA PUBLIC SERVICE COMMISSION  
DOCKET: 20190072-EI EXHIBIT: 15  
PARTY: STAFF HEARING EXHIBITS  
DESCRIPTION: Borsch(17-21, 31, 32,  
34-37)Stout(14-16, 23-29, 30 and 33)

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

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In re: Duke Energy Florida, LLC's Petition  
for a Limited Proceeding to Approve Second  
Solar Base Rate Adjustment

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Docket No. 20190072-EI

Filed: June 24, 2019

**DUKE ENERGY FLORIDA, LLC'S REDACTED RESPONSE TO  
STAFF'S SECOND SET OF INTERROGATORIES (NOS. 14-37)**

Duke Energy Florida, LLC ("DEF"), responds to the Staff of the Florida Public Service Commission's ("Staff") Second Set of Interrogatories to DEF (Nos. 14-37) as follows:

**INTERROGATORIES**

14. **Cost-Effectiveness.** Please refer to DEF witness Stouts' exhibit MGS-2. For the Trenton Project please provide separate engineering, procurement and construction costs; development costs including third party development fees, permitting fees and costs; actual land costs, land lease rental payment costs for the useful life of the facilities and land acquisition costs, taxes; utility costs to support or complete development; transmission interconnection costs; installation labor and equipment costs; costs associated with electrical balance of system, structural balance of system, inverters, and modules; AFUDC at the weighted average cost of capital and other traditionally allowed rate base costs.

REDACTED

**Answer:**

Trenton Solar Project Estimated Installed Cost by Category (\$MM):

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Engineering, procurement and construction costs: [REDACTED]

Development costs including third party development fees: \$5.8M

Permitting fees and costs: included in Development costs.

Actual land costs: project occupies land leased to Duke Energy Florida.

Land lease rental payment costs for the useful life of the facilities and land acquisition costs: land lease costs during construction is \$0.3M, land lease costs for the useful life is provided in DEF's response to question 25. c.

Taxes: applicable taxes and imbedded in other their respective cost category.

Utility costs to support or complete development: \$1.0M

Transmission interconnection costs: Interconnection Customer charges identified in the Large Generator Interconnection Agreement are \$0.1M, excludes Network Upgrades.



Installation labor and equipment costs: included in engineering, procurement and construction costs.

Costs associated with electrical balance of system: included in engineering, procurement and construction costs.

Structural balance of system: included in engineering, procurement and construction costs.

Inverters: included in engineering, procurement and construction costs.

Modules: [REDACTED]

AFUDC: \$0.0M

15. **Cost-Effectiveness.** Please refer to DEF witness Stouts' exhibit MGS-4. For the Lake Placid Project please provide separate engineering, procurement and construction costs; development costs including third party development fees, permitting fees and costs; actual land costs, land lease rental payment costs for the useful life of the facilities and land acquisition costs, taxes; utility costs to support or complete development; transmission interconnection costs; installation labor and equipment costs; costs associated with electrical balance of system, structural balance of system, inverters, and modules; AFUDC at the weighted average cost of capital and other traditionally allowed rate base costs.

REDACTED

Answer:

Lake Placid Solar Project Estimated Installed Cost by Category (\$MM):

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Engineering, procurement and construction costs: [REDACTED]

Development costs including third party development fees: \$3.5M

Permitting fees and costs: included in Development costs.

Actual land costs: project occupies land leased to Duke Energy Florida.

Land lease rental payment costs for the useful life of the facilities and land acquisition costs: land lease costs during construction is \$0.1M, land lease costs for the useful life is provided in DEF's response to question 26. c.

Taxes: applicable taxes and imbedded in other their respective cost category.

Utility costs to support or complete development: \$0.7M

Transmission interconnection costs: Interconnection Customer charges identified in the Large Generator Interconnection Agreement are \$0.1M, excludes Network Upgrades.

Installation labor and equipment costs: included in engineering, procurement and construction costs.

Costs associated with electrical balance of system: included in engineering, procurement and construction costs.

Structural balance of system: included in engineering, procurement and construction costs.

Inverters: included in engineering, procurement and construction costs.

Modules: [REDACTED]

AFUDC: \$0.0M

16. **Cost-Effectiveness.** Please refer to DEF witness Stouts' exhibit MGS-6. For the DeBary Project please provide separate engineering, procurement and construction costs; development costs including third party development fees, permitting fees and costs; actual land costs and land acquisition costs, taxes; utility costs to support or complete development; transmission interconnection costs; installation labor and equipment costs; costs associated with electrical balance of system, structural balance of system, inverters, and modules; AFUDC at the weighted average cost of capital and other traditionally allowed rate base costs.

REDACTED

**Answer:**

DeBary Solar Project Estimated Installed Cost by Category (\$MM):

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Engineering, procurement and construction costs: [REDACTED]

Development costs including third party development fees: \$4.4M

Permitting fees and costs: included in Development costs.

Actual land costs and land acquisition costs: project occupies land already owned by Duke Energy Florida.

Taxes: applicable taxes and imbedded in other their respective cost category.

Utility costs to support or complete development: included in Development costs.

Transmission interconnection costs: Interconnection Customer charges identified in the Large Generator Interconnection Agreement are \$0.1M, excludes Network Upgrades.

Installation labor and equipment costs: included in engineering, procurement and construction costs.

Costs associated with electrical balance of system: included in engineering, procurement and construction costs.

Structural balance of system: included in engineering, procurement and construction costs.

Inverters: included in engineering, procurement and construction costs.

Modules: [REDACTED]

AFUDC: \$3.1M

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17. **Cost-Effectiveness.** For the Combined Projects please provide the annual and cumulative values over the period 2019-2051 (in nominal and net present value) for each of the following categories: equipment and installation, incremental fixed O&M, fuel savings, emission savings separated by type, avoided replacement costs, avoided capacity purchases, avoided fixed O&M, avoided variable O&M, land lease rental payments and transmission upgrades. Please provide the response in electronic (Excel) format.

- a. Please explain in detail the assumptions used to determine the value of each of the components evaluated in this analysis.
- b. Explain whether DEF's emissions savings include CO2 emissions. If so, provide a sensitivity analysis without those costs and provide the revised annual and cumulative values for each category in electronic format.
- c. Please provide a sensitivity of the fuel savings based upon a low fuel price forecast and a high fuel price forecast, with revised annual and cumulative values for each category in electronic form.

**Answer:**

The study period is 2019 to 2050. Please see attachment 20190072-EI-STAFF 2nd ROG-Q17.xlsx bearing bates number 20190072-DEF-001021 through 20190072 through 20190072-DEF-001054.



18. **Resource Planning.** Please complete the table based on your most recent planning for each of the scenarios listed below for the period 2019 to 2051 and please provide in electronic (excel) format.

- a. No Projects.
- b. The Combined Projects.

Year	Installed Capacity (MW)	Firm Import Capacity (MW)	Firm Export Capacity (MW)	QF Capacity (MW)	Total Available Capacity (MW)	System Firm Summer Peak Demand (MW)	Reserve Margin Before Maintenance (MW)	Schedule d Maintenance (MW)	Reserve Margin After Maintenance (MW)

**Answer:**

Please see attachments 20190072-EI-STAFF 2nd ROG-Q18a.xlsx and 20190072-EI-STAFF 2nd ROG-Q18b.xlsx bearing bates number 20190072-DEF-001055 through 20190072-DEF-001056.

19. **Resource Planning.** Please provide a table with DEF's resource plans, including new units, unit retirements, and firm PPAs for the period 2019-2051, for the following scenarios. Please make sure this table includes technology type, MW and year of installation for each addition.

- a. Neither Project.
- b. The Combined Projects.

**Answer:**

Please see attachment 20190072-EI-STAFF 2nd ROG-Q19.xlsx, bearing bates number 20190072-DEF-001057 through 20190072-DEF-001058.

20. **Resource Planning.** For the combined projects please provide the following:
- a. Please explain how the firm summer capacity contribution to peak is calculated.
  - b. Please explain how summer firm capacity is affected by solar panel degradation.
  - c. Please explain how the firm winter capacity contribution to peak is calculated.
  - d. Please explain how the firm winter capacity, if any, is affected by the solar panel degradation.

**Answer:**

- a. Because solar power is intermittent, and the generation is not dispatchable, it may not be well correlated with load in the peak hour. DEF considered that for the initial quantities of solar placed on the DEF system it is appropriate to consider a range of summer hours with high loads and the expected plant output in determining the equivalent firm capacity for these units.

DEF prepares an hourly load forecast for each year of the forecast period. As described in the TYSP, this forecast is based on a weather normal projection and adjusted for factors such as day of the week. DEF also projects an expected typical year solar production forecast based on historical measurements of solar irradiance and cloud cover. The most typical year for each month is selected as the best fit, and the hourly irradiance data from that month used for the forecast. For example, if July 2015 was closest to the average irradiance of all Julys in the historical dataset, then the forecast would use the hourly values from July 2015 for all future Julys. This forecast is specific to plant locations and technologies. In this case, DEF was interested in creating a “generic” value that could be applied to a group of similar solar facilities. Accordingly, DEF drew from a data set based on a central north Florida location and a Single Axis Tracking technology with a 1.48:1 DC:AC ratio. These characteristics are representative of both the Hamilton and Columbia projects. Because these two forecasts are drawn from different data sets, DEF then “load matches” the data based on the general premise that load will be higher in the summer on days with less cloud cover. To continue the previous example, the historical load for each day in July 2015 would be ranked 1 to 31, and the forecasted load for future Julys would be ranked, and the irradiance (and calculated solar output) would be matched to the correspondingly ranked day. So, for example, if the highest load day in July 2015 was the third best irradiance day in July 2015, future July peak days would also have the third best irradiance day in July. The most important feature of this methodology is to avoid forecasting low solar output on summer days with high load; typically, summer days with high load are sunny, and forecasting low solar output on those days would understate Solar’s contribution on those days of high load demand. It is recognized, however, that this correlation will not be exact for a variety of reasons including the fact that the solar production is geographically separate from the primary load centers.

DEF used the load-matched data, which aligns the solar production for each hour of a given year with the projected load, to identify the hours to be considered in this analysis. Specifically, DEF examined the hours in the months of May-September (3672 hours) and selected the top 10% of the load hours, the hours in the top decile of highest loads during the summer period (367 hours). DEF then ranked these hours according to their solar production, i.e. the percentage of the plant rating that could be expected during those hours. Finally, DEF selected the lowest 2/3 of these hours based on solar production. This last step balances DEF's need for a level of conservatism to ensure reliability with a desire to adequately value the contribution of the solar units to the system during high load summer hours. The calculation described resulted in an equivalent firm summer capacity rating of 57% of the plant nameplate rating for single-axis tracking technologies. DEF uses an equivalent firm summer capacity rating of 45% of the plant nameplate rating for fixed tilt technologies.

- b. The summer capacity is reduced each year by 0.5% which is the expected annual degradation of the panel performance.
- c. DEF currently ascribes zero capacity value to the Solar projects at the time of the winter peak. DEF's winter peak hour is projected to occur in the hour ending 8 am on a January morning. This is consistent with the occurrence of significant winter peaks in past years (e.g. 2010). At this time, the solar production is projected to be negligible due to the low angle of the winter sun. DEF has not performed specific calculations to arrive at a specific value. DEF considers this to be an area for further study and update as additional operating data is received from the subject projects and other projects that come into service on the DEF system.
- d. Since DEF currently ascribes zero capacity value to the Solar projects at the time of the winter peak, the annual solar panel degradation has no impact on the firm winter capacity.

21. **Resource Planning.** Please provide the expected annual outputs, projected nameplate, firm summer capacity and capacity factors of the solar facilities listed below for the period 2019-2051. Provide the response in tabular electronic form in Excel.

- a. The Trenton Project.
- b. The Lake Placid Project.
- c. The DeBary Project.

**Answer:**

Please see attachment 20190072-EI-STAFF 2nd ROG-Q21.xlsx, bearing bates numbers 20190072-DEF-001059 through 20190072-DEF-001061.



22. **Bill Impact.** For each of the scenarios listed below, please provide an estimate of the monthly residential bill impact (\$/1000-kwh-mo) for the period 2019-2051.

- a. No Projects.
- b. The Combined Projects.

**Answer:**

DEF has calculated the estimated impact on monthly residential bills for the period of 2019-2050 based on the dollars provided in response to Question 17; 2050 was the last year in-scope for the SoBRA 2 project analysis, based on a 30-year life of the projects. Please see the attachment bearing bates number 20190072-DEF-001062. This attachment shows the monthly residential bill impact (\$/1000-kwh-mo) differential between the scenarios a. and b. and assumes perfect ratemaking as opposed to modeling periodic rate cases.

23. **Cost-Effectiveness.** Please refer to DEF's witness Stout's testimony, Page 11, Lines 17-23 and Page 12, Lines 1-5.

- a. DEF decided to adopt long term leases for the Trenton and Lake Placid projects that exceed useful life of the projects. Why would it not have been prudent to renegotiate the leases?
- b. Was the net present value (NPV) of the costs of land over the life of the project the only consideration? If not, please provide the screening criteria of the selection process that constituted the selection of the Trenton and Lake Placid Projects.

**Answer:**

- a. The initial lease term for the Trenton project is twenty (20) years and DEF has the ability to extend the lease terms for six (6) consecutive five-year periods but is not obligated to extend the term. This give DEF the option to lease the land for up to fifty (50) years which aligns with the estimated useful life of the project.

The initial lease term for the Lake Placid project is thirty (30) years, which aligns with the estimated useful life of the project. DEF has the ability to extend the lease terms for two consecutive five-year periods but is not obligated to extend the term.

- b. Adequate site control right is a critical component to the construction and long-term operation of any solar facility. With respect to the Trenton and Lake Placid projects, the developers had already signed long term leases with the landowners with rent priced in line with the current market and with terms that exceed the useful life of the facilities, should DEF be able to extend the operating life.

24. **Cost-Effectiveness.** Please refer to DEF’s witness Stout’s testimony, Page 9, Lines 2-5.

- a. The Trenton and Lake Placid projects were selected from over 60 submitted projects. Please identify which of the 60 plus projects required purchase, leasing or adoption of a current lease, and the NPV over the course the project. Please use the following table.

Project Name	Land for Purchase (Y/N)	Land for Lease (Y/N)	Land under current Long-Term Lease(Y/N)	Net Present Value of Land over Service Life of Plant

**Answer:**

- a. The table below provides a summary of the site control characteristics of the projects that were made available to DEF. Please note that DEF did not obtain this level of detail for all of the approximately 60 projects referenced in Mr. Stout’s testimony, because the majority of those projects were eliminated from consideration for a variety of other reasons (e.g., lack of follow up from developer, land not suitable for solar, etc.). Please also note that not all developers shared the details of their site control arrangements nor did DEF conduct due diligence to verify the accuracy of all site control characteristics shared pertaining to each project. It should also be noted that the MW site, acres under site control, land purchase price and lease rates vary from project to project.

REDACTED

Project Name	County	MWac	Acres	Form of Site Control (Lease / Purchase)	NPV of Lease cost of 30-yr or Land Purchase Cost
Columbia	Columbia	74.9	700	Lease	
Hamilton	Hamilton	74.9	565	Lease	
Trenton	Gilchrist	74.9	570	Lease	
Lake Placid	Highland	45.0	379	Lease	
Project 1	Manatee	74.5	730	Purchase	
Project 2	Gilchrist	74.5	391	Purchase	
Project 3	Columbia	74.5	601	Purchase	
Project 4	Levy	70.0	520	Lease	
Project 5	Suwannee	74.9	538	Lease	

Project 6	Levy	74.8	500	Lease
Project 7	Gilchrist	74.5	480	Lease
Project 8	Gilchrist	30.0	308	Lease
Project 9	Alachua	60.0	714	Lease
Project 10	Citrus	40.0	533	Purchase
Project 11	Sumter	74.9	617	Purchase
Project 12	Taylor	47.0	300	Lease
Project 13	Citrus	74.5	500	Lease
Project 14	Citrus	74.5	500	Lease
Project 15	Polk	74.5	677	Lease
Project 16	Polk	74.5	546	Lease
Project 17	Gilchrist	40.0	301	Lease
Project 18	Suwannee	48.0	230	Lease
Project 19	Hamilton	50.0	282	Lease

25. **Cost-Effectiveness.** Please provide the cost breakdown for Development and Permitting for the Trenton project as stated for witness Stout's Exhibit MGS-2, specifically:

- a. Please provide the parcel(s) information for the land being leased for the project.
- b. Please provide the cost of permitting for the site.
- c. Please provide the yearly cost of land lease per year.
- d. Please provide the Construction cost, labor and materials, for the project.
- e. Please provide the cost of Development Fees.
- f. Please provide the cost of Title Insurance.
- g. Please provide the cost of legal fees during construction.

**Answer:**

- a. The project is leasing portions of Gilchrist County Property Appraiser Parcel IDs: 05-10-15-0000-0001-0010, 06-10-15-0000-0002-0000, 07-10-15-0000-0002-

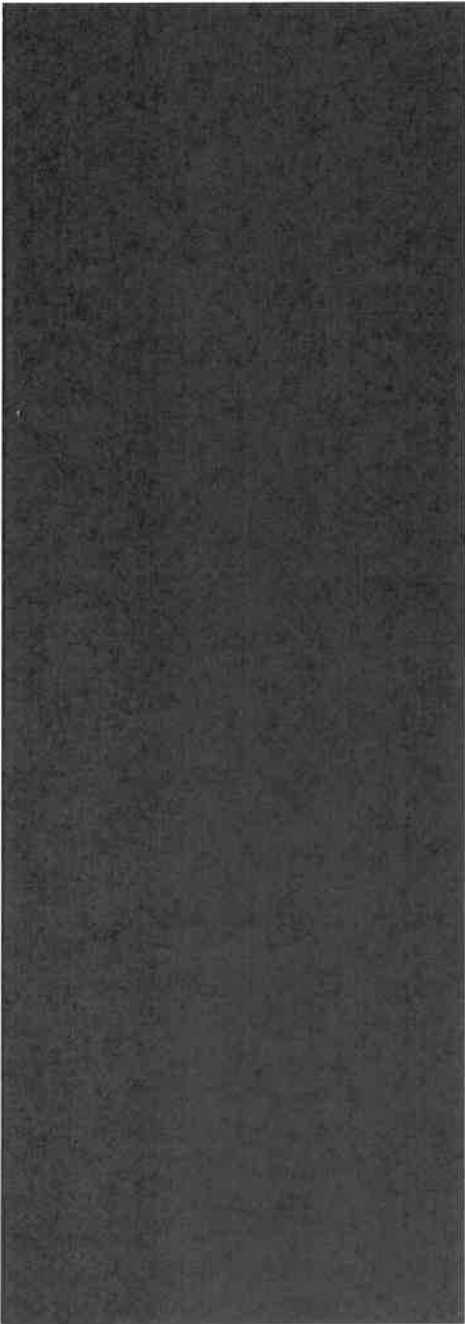
0000, 08-10-12-0000-0001-0000, 05-10-15-0000-0001-0010, and 06-10-15-0000-0002-0000.

b. Please see DEF's response to question 14.

c. REDACTED

**Trenton - Estimated Annual Land Lease Cost**

**(Values in \$000s)**

<u>Year</u>	<u>Land Lease</u>
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

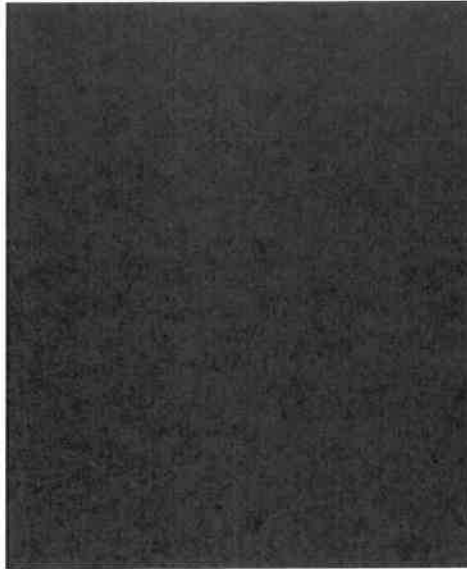
2045

2046

2047

2048

2049



- d. Please see DEF's response to question number 14.
- e. Please see DEF's response to question number 14.
- f. The cost of Title Insurance is \$50,000 (budgeted), \$58,115 (actual).
- g. The cost of legal fees during construction is estimated at \$50,000.

26. **Cost-Effectiveness.** Please provide the cost breakdown for Development and Permitting for the Lake Placid Project as stated for witness Stout’s Exhibit MGS-4 specifically:

- a. Please provide the parcel(s) information for the land being leased for the project.
- b. Please provide the cost of permitting for the site.
- c. Please provide the yearly cost of land lease per year.
- d. Please provide the Construction cost, labor and materials, for the project.
- e. Please provide the cost of Development Fees.
- f. Please provide the cost of Title Insurance.
- g. Please provide the cost of legal fees during construction.

**Answer:**

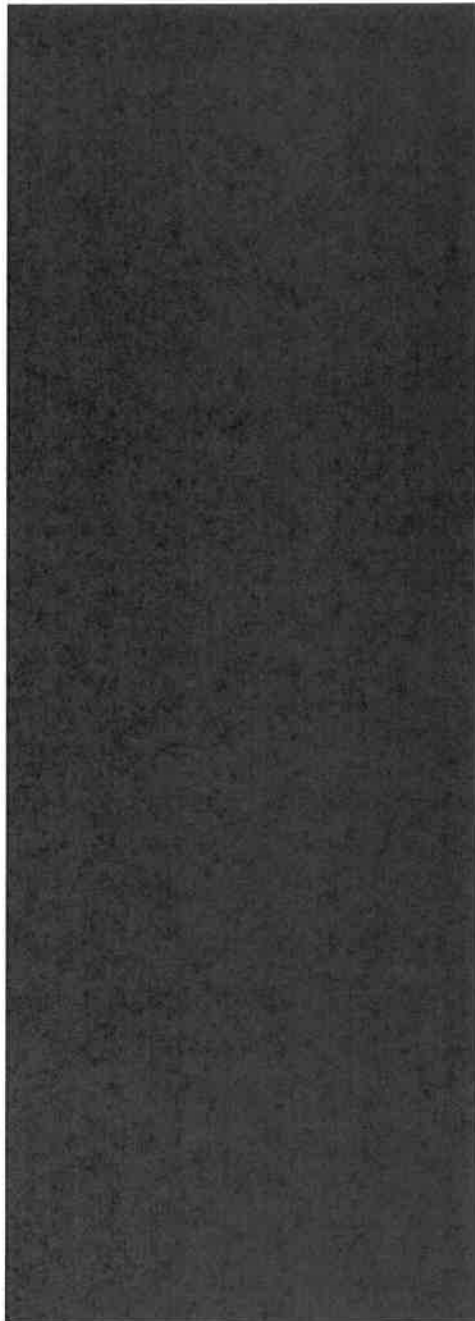
- a. The project is leasing portions of Highlands County Property Appraiser parcel IDs: C-24-36-29-A00-0010-0000, C-24-36-29-A00-0050-0000, C-13-36-29-A00-0020-0000, C-18-36-30-A00-0010-0000, C-19-36-30-A00-0120-0000 with easements over portions of parcels C-19-36-30-A00-0120-0000, C-30-36-30-A00-0110-0000, C-30-36-30-A00-0100-0000, and P-30-36-30-A00-0080-0000.
- b. Please see DEF’s response to question number 15.
- c. REDACTED

**Lake Placid - Estimated Annual Land Lease Cost**

(Values in \$000s)

<u>Year</u>	<u>Land Lease</u>
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



- d. Please see DEF's response to question number 15.
- e. Please see DEF's response to question number 15.
- f. The cost of Title Insurance is \$56,500.
- g. The cost of legal fees during construction is estimated at \$50,000.

27. **Cost-Effectiveness.** Please provide the cost breakdown for Development and Permitting for the DeBary Project as stated for witness Stout's Exhibit MGS-6 specifically:

- a. Please provide the parcel(s) information for the land being leased for the project.
- b. Please provide the cost of permitting for the site.
- c. Please provide the Construction cost, labor and materials, for the project.
- d. Please provide the cost of Development Fees.
- e. Please provide the cost of Title Insurance.
- f. Please provide the cost of legal fees during construction.

**Answer:**

- a. The project will be constructed on portions of Volusia County Property Appraiser Parcel IDs: 802100000010, 802100000012, 802800000020 and 802900000050.
- b. Please see DEF's response to question number 16.
- c. Please see DEF's response to question number 16.
- d. Please see DEF's response to question number 16.
- e. The cost of Title Insurance is estimated at \$50,000.
- f. The cost of legal fees during construction is estimated at \$50,000.

28. **Cost-Effectiveness.** Please refer to the Direct Testimony of DEF witness Matthew G. Stout, page 7, line 22. What is the DeBary Project start construction date?

**Answer:**

The start of construction for the DeBary Project is anticipated to occur in July 2019 with site clearing and preparation work.



29. **Cost-Effectiveness.** Please refer to the Direct Testimony of DEF witness Matthew G. Stout, page 12, line 3 and Exhibit Nos. MGS-2 and MGS-4. What is the cost (in \$ and \$/kWac) of the Trenton and Lake Placid projects if the cost of the 30 years land rental is included in the installation cost?

**Answer:**

The cost of the Trenton project would increase by approximately \$3.1MM or \$41/kW-ac if the land lease was substituted for a land purchase resulting in an equivalent net present value (NPV) of the revenue requirements. This would result in an installed cost of \$103.2MM or \$1,378/kW-ac.

The cost of the Lake Placid project would increase by approximately \$3.4MM or \$75/kW-ac if the land lease was substituted for a land purchase resulting in an equivalent NPV of revenue requirements. This would result in an install cost of \$64.0MM or \$1,422/kW-ac.

30. **Cost-Effectiveness.** Please provide the yearly cost of leasing the land per year for each project.

**Answer:**

Please see DEF's response to question numbers 25.c and 26.c.

31. **Resource Planning.** Please provide the solar panel degradation for each type of panel for each project.

**Answer:**

DEF assumes that the solar panel output will degrade by 0.5% each year.

32. **Resource Planning.** What is the useful life of each project, and how was it determined?
- a. What is the solar photovoltaic generating unit (solar panel module) expected useful life for each project?

**Answer:**

DEF assumes a thirty-year useful economic life for all of our solar power plants. The 30-year life was approved in Order No. PSC-2016-0115-PAA-EI.

33. **Resource Planning.** Please provide the typical solar panel module specifications, including dimensions (width, length, and height) for each project.

**Answer:**

The typical solar panel module specifications for the Trenton Project are 1,001mm x 2,005mm x 30mm, Lake Placid module specifications are 992mm x 1,956mm x 40mm, and DeBary module specifications are 1,000mm x 2,015mm x 35mm.



34. **Need.** Please refer to witness Borsch's Direct testimony, page 2, lines 16-19. The witness states that his testimony addresses compliance matters of DEF's 2017 Second Revised and Restated Settlement. Paragraph 15(c) states, in part, that the Commission's evaluation includes an analysis regarding "whether, when considering all relevant factors, DEF needs the solar project(s)." Please list and define "all relevant factors" the Commission should evaluate to assess the question of "need."

**Answer:**

The relevant factors include the need for adequate electricity at a reasonable cost, the Need for fuel diversity and supply reliability and consideration of whether renewable energy sources are utilized.

DEF's planned interconnection of 700 MW of utility owned solar generation including the Hamilton and Columbia projects provides cost-effective reliable, clean, and flexible solar energy that will diversify its fuel mix over the long-term, provide firm summer capacity, and defer the need for future gas-fired generation. The 700 MW of large-scale solar projects contemplated under the 2017 Settlement will address DEF's need to improve its fuel mix given its coal retirements and reliance on natural gas going forward and contribute to customer fuel price stability. Further, these facilities will provide renewable emission-free generation that will contribute to the need to curb carbon dioxide emissions and meet any future climate change policy mandates. Finally, DEF's solar facilities will meet the need for solar generation facilities that will be dispatchable and integrated into DEF's entire resource portfolio and available for potential technology changes or retrofits to benefit DEF customers over their useful life.

35. **Need.** Please refer to witness Borsch's Direct testimony, page 10, lines 12-13. Please state DEF's current fuel mix (before the combined solar generation projects are included), compared to what DEF's fuel mix will be when the combined solar generation projects are included.

**Answer:**

Please see attachment 20190072-EI-STAFF 2nd ROG-Q35.xlsx, bearing bates number 20190072-DEF-001063. The benefits of increasing fuel diversity relative to the Trenton, Lake Placid, and DeBary projects alone are modest. DEF anticipates the construction of additional solar capacity beyond these projects. For reference, DEF presents the current values, values with Trenton, Lake Placid, and DeBary, and values including the addition of the 700 MW contemplated in DEF's 2017 settlement.

36. **Reserve Margin.** Please provide the reserve margin in percentage of net firm system peak for years 2019 to 2051 for the following scenarios. Please provide in electronic (excel) format.

- a. No Project.
- b. The Combined Projects.

**Answer:**

Please see attachment 20190072-EI-STAFF 2nd ROG-Q36.xlsx, bearing bates number 20190072-DEF-001064.

37. **Cost-Effectiveness.** For each of the scenarios listed below provide the avoided fossil fuels (avoided oil barrels, avoided natural gas MMcf, avoided coal short tons) for the years 2019 to 2051. Please explain how calculations were made for each fuel. Provide the response in tabular electronic format in Excel.

- a. No Project.
- b. The Combined Projects.

**Answer:**

Please see attachment 20190072-EI-STAFF 2nd ROG-Q37.xlsx, bearing bates number 20190072-DEF-001065

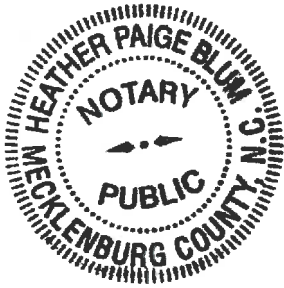
**AFFIDAVIT**

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

I hereby certify that on this 18<sup>th</sup> day of June, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared MATTHEW G. STOUT, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory numbers 14, 15, 16, 23, 24, 25, 26, 27, 28, 29, 30, and 33, from STAFF'S SECOND SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC. (NOS. 14-37) in Docket No. 20190072-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 18<sup>th</sup> day of June, 2019.



A handwritten signature in blue ink, appearing to read "MATTHEW G. STOUT".

Matthew G. Stout

Heather Paige Blum  
Notary Public  
State of North Carolina

Heather Paige Blum  
My Commission Expires: 1-9-2023

**AFFIDAVIT**

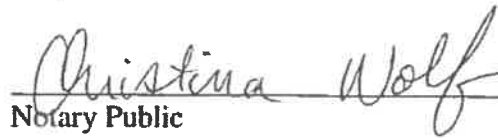
STATE OF FLORIDA

COUNTY OF PINELLAS

I hereby certify that on this 18<sup>th</sup> day of June, 2019, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared BENJAMIN BORSCH, who is personally known to me, and he acknowledged before me that he provided the answers to interrogatory numbers 17, 18, 19, 20, 21, 31, 32, 34, 35, 36, and 37) from STAFF'S SECOND SET OF INTERROGATORIES TO DUKE ENERGY FLORIDA, LLC. (NOS. 14-37) in Docket No. 20190072-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this \_\_\_\_\_ day of \_\_\_\_\_, 2019.

  
Benjamin Borsch

  
Notary Public  
State of Florida



CHRISTINA WOLF  
Commission # GG 146409  
Expires September 27, 2021  
Bonded Thru Budget Notary Services

My Commission Expires: 9/27/21

17. **Cost-Effectiveness.** For the Combined Projects please provide the annual and cumulative values over the period 2019-2051 (in nominal and net present value) for each of the following categories: equipment and installation, incremental fixed O&M, fuel savings, emission savings separated by type, avoided replacement costs, avoided capacity purchases, avoided fixed O&M, avoided variable O&M, land lease rental payments and transmission upgrades. Please provide the response in electronic (Excel) format.

- Please explain in detail the assumptions used to determine the value of each of the components evaluated in this analysis.
- Explain whether DEF's emissions savings include CO2 emissions. If so, provide a sensitivity analysis without those costs and provide the revised annual and cumulative values for each category in electronic format.
- Please provide a sensitivity of the fuel savings based upon a low fuel price forecast and a high fuel price forecast, with revised annual and cumulative values for each category in electronic form.

**Mid Fuel with Carbon Case**

Nominal \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBary	Land Lease Rental Payments	Incremental FOM Trenton	Incremental FOM Lake Placid	Incremental FOM DeBary	Fuel Costs Savings	Emissions SO2 Savings	Emissions NOx Savings	Emissions CO2 Savings	Other Environmental Savings	Avoided FOM	Avoided Variable O&M
2019	-	-	-	-	-	-	-	0.4	(0.0)	0.0	-	(0.0)	-	(0.1)
2020	(13.7)	(8.3)	(9.3)	(0.7)	(1.0)	(0.6)	(0.7)	10.4	0.0	0.0	-	0.1	-	2.0
2021	(12.7)	(7.7)	(12.0)	(0.7)	(1.0)	(0.6)	(0.9)	11.5	0.0	0.0	-	0.1	-	2.0
2022	(12.1)	(7.3)	(11.2)	(0.7)	(1.1)	(0.6)	(0.9)	12.7	0.0	0.0	-	0.1	-	1.2
2023	(11.5)	(7.0)	(10.7)	(0.7)	(1.1)	(0.6)	(0.9)	11.6	(1.1)	0.0	-	0.0	-	1.9
2024	(11.0)	(6.7)	(10.3)	(0.7)	(1.1)	(0.6)	(1.0)	14.2	0.0	0.0	-	0.1	-	1.4
2025	(10.6)	(6.5)	(9.8)	(0.7)	(1.2)	(0.7)	(1.0)	14.8	0.0	0.0	1.3	0.1	-	2.3
2026	(8.7)	(5.3)	(8.1)	(0.7)	(1.2)	(0.7)	(1.0)	16.9	0.0	0.0	2.1	0.1	-	1.7
2027	(8.4)	(5.1)	(7.8)	(0.7)	(1.2)	(0.7)	(1.0)	15.5	0.0	(0.0)	2.5	0.0	0.3	3.2
2028	(8.1)	(5.0)	(7.6)	(0.7)	(1.3)	(0.7)	(1.1)	16.6	0.0	0.0	3.8	0.2	0.2	2.0
2029	(7.9)	(4.8)	(7.3)	(0.7)	(1.3)	(0.7)	(1.1)	17.5	0.0	0.0	4.2	0.1	-	1.4
2030	(7.6)	(4.6)	(7.1)	(0.7)	(1.3)	(0.8)	(1.1)	19.9	0.0	0.0	4.7	0.1	-	1.6
2031	(7.3)	(4.5)	(6.8)	(0.7)	(1.4)	(0.8)	(1.1)	20.0	0.0	0.0	5.2	0.1	-	1.5
2032	(7.0)	(4.3)	(6.6)	(0.7)	(1.4)	(0.8)	(1.2)	21.2	0.0	0.0	5.5	0.1	-	1.6
2033	(6.7)	(4.1)	(6.3)	(0.8)	(1.5)	(0.9)	(1.2)	22.9	0.0	0.0	6.0	0.0	-	1.7
2034	(6.5)	(4.0)	(6.1)	(0.8)	(1.5)	(0.8)	(1.2)	22.9	0.0	0.0	6.6	0.1	-	1.6
2035	(6.2)	(3.8)	(5.8)	(0.8)	(1.5)	(0.9)	(1.2)	23.4	0.0	0.0	7.2	0.0	0.7	2.5
2036	(5.9)	(3.6)	(5.6)	(0.8)	(1.5)	(0.9)	(1.3)	20.8	(0.0)	0.0	7.1	0.0	1.2	2.3
2037	(5.6)	(3.5)	(5.3)	(0.8)	(1.6)	(0.9)	(1.3)	22.9	-	0.0	7.8	0.0	0.5	2.3
2038	(5.9)	(3.6)	(5.4)	(0.8)	(1.6)	(0.9)	(1.3)	24.8	-	0.0	8.4	0.0	-	1.6
2039	(5.5)	(3.4)	(5.2)	(0.8)	(1.6)	(0.9)	(1.4)	26.3	-	0.0	8.9	0.0	-	1.8
2040	(5.3)	(3.2)	(5.0)	(0.8)	(1.7)	(1.0)	(1.4)	32.7	0.0	0.0	11.4	0.0	0.8	3.3
2041	(4.9)	(3.0)	(4.7)	(0.8)	(1.7)	(1.0)	(1.4)	28.2	(0.0)	0.0	10.1	0.0	0.5	2.5
2042	(4.7)	(2.9)	(4.5)	(0.9)	(1.8)	(1.0)	(1.5)	28.4	-	0.0	10.5	0.0	0.8	2.1
2043	(4.4)	(2.7)	(4.2)	(0.9)	(1.8)	(1.0)	(1.5)	23.6	0.0	0.0	9.0	0.0	1.4	0.7
2044	(4.1)	(2.5)	(4.0)	(0.9)	(1.9)	(1.1)	(1.5)	33.0	-	0.0	13.0	0.0	1.4	1.7
2045	(3.8)	(2.4)	(3.7)	(0.9)	(1.9)	(1.1)	(1.6)	33.7	-	0.0	13.4	0.0	1.5	0.8
2046	(3.5)	(2.2)	(3.5)	(0.9)	(1.9)	(1.1)	(1.6)	31.5	-	0.0	12.9	0.0	1.5	3.1
2047	(3.3)	(2.0)	(3.2)	(0.9)	(2.0)	(1.1)	(1.7)	31.4	-	0.0	13.2	0.0	1.5	2.7
2048	(3.0)	(1.9)	(3.0)	(0.9)	(2.0)	(1.2)	(1.7)	31.8	-	0.0	13.5	0.0	1.6	(4.7)
2049	(5.1)	(3.3)	(2.9)	(0.9)	(2.1)	(1.2)	(1.7)	31.7	-	0.0	13.5	0.0	1.6	2.9

20190072.EI Staff Hearing Exhibits 00050



2050	(0.2)	(0.1)	(2.3)	-	-	-	(0.4)	1.9	-	(0.0)	0.8	(0.0)	1.7	0.1
Nominal \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBary	Land Lease Rental Payments	Incremental FOM Trenton	Incremental FOM Lake Placid	Incremental FOM DeBary	Fuel Costs Savings	Emissions SO2 Savings	Emissions Nox Savings	Emissions CO2 Savings	Other Environmental Savings	Avoided FOM	Avoided Variable O&M

Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings
-	-	0.3
-	-	(21.7)
-	-	(22.0)
-	-	(19.8)
-	-	(19.0)
-	-	(15.6)
-	-	(11.9)
-	-	(4.8)
28.2	-	24.7
9.1	-	7.5
(1.3)	-	(1.9)
(1.3)	-	1.7
(1.2)	-	3.0
(1.2)	-	5.2
(1.2)	-	7.9
(1.2)	-	9.2
33.7	-	47.4
45.5	-	57.3
8.7	-	23.2
(4.3)	-	10.9
(4.2)	-	13.8
33.9	-	63.6
8.4	-	32.1
33.7	-	58.4
47.6	-	65.8
46.9	-	80.0
46.2	-	80.2
45.5	-	79.7
44.9	-	79.5
44.2	-	72.6
43.6	-	76.1

Mid Fuel with Carbon Case

PV \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBary	Land Lease Rental Payments	Incremental FOM Trenton	Incremental FOM Lake Placid	Incremental FOM DeBary	Fuel Costs Savings	Emissions SO2 Savings	Emissions Nox Savings	Emissions CO2 Savings
2019	-	-	-	-	-	-	-	0.4	(0.0)	0.0	-
2020	(12.8)	(7.8)	(8.7)	(0.6)	(0.9)	(0.5)	(0.6)	9.7	0.0	0.0	-
2021	(11.1)	(6.7)	(10.5)	(0.6)	(0.9)	(0.5)	(0.8)	10.0	0.0	0.0	-
2022	(9.8)	(6.0)	(9.1)	(0.5)	(0.9)	(0.5)	(0.7)	10.3	0.0	0.0	-
2023	(8.7)	(5.3)	(8.1)	(0.5)	(0.8)	(0.5)	(0.7)	8.8	0.0	0.0	-
2024	(7.8)	(4.7)	(7.3)	(0.5)	(0.8)	(0.4)	(0.7)	10.1	0.0	0.0	-
2025	(7.0)	(4.3)	(6.5)	(0.5)	(0.8)	(0.4)	(0.6)	9.8	0.0	0.0	0.8
2026	(5.4)	(3.3)	(5.0)	(0.4)	(0.7)	(0.4)	(0.6)	10.4	0.0	0.0	1.3
2027	(4.8)	(2.9)	(4.5)	(0.4)	(0.7)	(0.4)	(0.6)	8.9	0.0	(0.0)	1.4
2028	(4.4)	(2.7)	(4.1)	(0.4)	(0.7)	(0.4)	(0.6)	8.9	0.0	0.0	2.1
2029	(3.9)	(2.4)	(3.7)	(0.4)	(0.7)	(0.4)	(0.5)	8.8	0.0	0.0	2.1
2030	(3.5)	(2.2)	(3.3)	(0.3)	(0.6)	(0.4)	(0.5)	9.3	0.0	0.0	2.2
2031	(3.2)	(1.9)	(3.0)	(0.3)	(0.6)	(0.3)	(0.5)	8.7	0.0	0.0	2.3
2032	(2.9)	(1.7)	(2.7)	(0.3)	(0.6)	(0.3)	(0.5)	8.6	0.0	0.0	2.2
2033	(2.6)	(1.6)	(2.4)	(0.3)	(0.6)	(0.3)	(0.5)	8.7	0.0	0.0	2.3
2034	(2.3)	(1.4)	(2.2)	(0.3)	(0.5)	(0.3)	(0.4)	8.1	0.0	0.0	2.4
2035	(2.1)	(1.3)	(1.9)	(0.3)	(0.5)	(0.3)	(0.4)	7.8	0.0	0.0	2.4
2036	(1.8)	(1.1)	(1.7)	(0.2)	(0.5)	(0.3)	(0.4)	6.4	(0.0)	0.0	2.2
2037	(1.6)	(1.0)	(1.5)	(0.2)	(0.5)	(0.3)	(0.4)	6.6	-	0.0	2.3
2038	(1.6)	(1.0)	(1.5)	(0.2)	(0.4)	(0.2)	(0.4)	6.7	-	0.0	2.2
2039	(1.4)	(0.8)	(1.3)	(0.2)	(0.4)	(0.2)	(0.3)	6.6	-	0.0	2.2
2040	(1.2)	(0.8)	(1.2)	(0.2)	(0.4)	(0.2)	(0.3)	7.7	0.0	0.0	2.7
2041	(1.1)	(0.7)	(1.0)	(0.2)	(0.4)	(0.2)	(0.3)	6.2	(0.0)	0.0	2.2
2042	(1.0)	(0.6)	(0.9)	(0.2)	(0.4)	(0.2)	(0.3)	5.8	-	0.0	2.2
2043	(0.8)	(0.5)	(0.8)	(0.2)	(0.3)	(0.2)	(0.3)	4.5	0.0	0.0	1.7
2044	(0.7)	(0.4)	(0.7)	(0.2)	(0.3)	(0.2)	(0.3)	5.9	-	0.0	2.3
2045	(0.6)	(0.4)	(0.6)	(0.1)	(0.3)	(0.2)	(0.3)	5.6	-	0.0	2.2
2046	(0.5)	(0.3)	(0.5)	(0.1)	(0.3)	(0.2)	(0.3)	4.9	-	0.0	2.0
2047	(0.5)	(0.3)	(0.5)	(0.1)	(0.3)	(0.2)	(0.2)	4.5	-	0.0	1.9
2048	(0.4)	(0.3)	(0.4)	(0.1)	(0.3)	(0.2)	(0.2)	4.3	-	0.0	1.8
2049	(0.6)	(0.4)	(0.4)	(0.1)	(0.3)	(0.2)	(0.2)	4.0	-	0.0	1.7

43.1	-	44.5
Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings

2050	(0.0)	(0.0)	(0.3)	-	-	-	(0.1)	0.2	-	(0.0)	0.1
PV \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBary	Land Lease Rental Payments	Incremental FOM Trenton	Incremental FOM Lake Placid	Incremental FOM DeBary	Fuel Costs Savings	Emissions SO2 Savings	Emissions Nox Savings	Emissions CO2 Savings

Other Environmental Savings	Avoided FOM	Avoided Variable O&M	Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings
(0.0)	-	(0.1)	-	-	0.3
0.1	-	1.8	-	-	(20.3)
0.1	-	1.7	-	-	(19.2)
0.1	-	1.0	-	-	(16.1)
0.0	-	1.4	-	-	(14.4)
0.1	-	1.0	-	-	(11.0)
0.1	-	1.5	-	-	(7.9)
0.1	-	1.0	-	-	(3.0)
0.0	0.2	1.9	16.2	-	14.2
0.1	0.1	1.1	4.9	-	4.0
0.1	-	0.7	(0.7)	-	(0.9)
0.0	-	0.7	(0.6)	-	0.8
0.0	-	0.6	(0.5)	-	1.3
0.0	-	0.7	(0.5)	-	2.1
0.0	-	0.6	(0.4)	-	3.0
0.0	-	0.6	(0.4)	-	3.3
0.0	0.2	0.8	11.2	-	15.7
0.0	0.4	0.7	14.1	-	17.7
0.0	0.1	0.7	2.5	-	6.7
0.0	-	0.4	(1.2)	-	2.9
0.0	-	0.4	(1.1)	-	3.5
0.0	0.2	0.8	7.9	-	14.9
0.0	0.1	0.5	1.8	-	7.0
0.0	0.2	0.4	6.9	-	11.9
0.0	0.3	0.1	9.1	-	12.5
0.0	0.3	0.3	8.3	-	14.2
0.0	0.2	0.1	7.7	-	13.3
0.0	0.2	0.5	7.1	-	12.4
0.0	0.2	0.4	6.5	-	11.5
0.0	0.2	(0.6)	6.0	-	9.8
0.0	0.2	0.4	5.5	-	9.6

Mid Fuel with Carbon Case

CPVRR \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBarry	Land Lease Rental Payments	Incremental FOM Trenton	Incremental FOM Lake Placid	Incremental FOM DeBarry	Fuel Costs Savings
2019	-	-	-	-	-	-	-	0.4
2020	(12.8)	(7.8)	(8.7)	(0.6)	(0.9)	(0.5)	(0.6)	10.1
2021	(23.9)	(14.5)	(19.2)	(1.2)	(1.8)	(1.0)	(1.4)	20.2
2022	(33.7)	(20.4)	(28.3)	(1.7)	(2.7)	(1.5)	(2.1)	30.5
2023	(42.4)	(25.8)	(36.4)	(2.2)	(3.5)	(2.0)	(2.8)	39.2
2024	(50.2)	(30.5)	(43.7)	(2.7)	(4.3)	(2.4)	(3.5)	49.3
2025	(57.2)	(34.8)	(50.1)	(3.2)	(5.1)	(2.9)	(4.2)	59.1
2026	(62.6)	(38.0)	(55.1)	(3.6)	(5.8)	(3.3)	(4.8)	69.5
2027	(67.4)	(41.0)	(59.6)	(4.0)	(6.5)	(3.7)	(5.4)	78.5
2028	(71.8)	(43.6)	(63.7)	(4.4)	(7.2)	(4.1)	(5.9)	87.4
2029	(75.7)	(46.0)	(67.3)	(4.8)	(7.9)	(4.5)	(6.5)	96.1
2030	(79.3)	(48.2)	(70.6)	(5.1)	(8.5)	(4.8)	(7.0)	105.4
2031	(82.5)	(50.1)	(73.6)	(5.4)	(9.1)	(5.2)	(7.5)	114.2
2032	(85.3)	(51.9)	(76.3)	(5.8)	(9.7)	(5.5)	(8.0)	122.8
2033	(87.9)	(53.5)	(78.7)	(6.0)	(10.2)	(5.8)	(8.4)	131.5
2034	(90.2)	(54.9)	(80.9)	(6.3)	(10.8)	(6.1)	(8.9)	139.7
2035	(92.2)	(56.1)	(82.8)	(6.6)	(11.2)	(6.4)	(9.3)	147.4
2036	(94.1)	(57.2)	(84.5)	(6.8)	(11.7)	(6.7)	(9.7)	153.8
2037	(95.7)	(58.3)	(86.1)	(7.0)	(12.2)	(6.9)	(10.0)	160.5
2038	(97.3)	(59.2)	(87.5)	(7.3)	(12.6)	(7.2)	(10.4)	167.1
2039	(98.7)	(60.1)	(88.8)	(7.5)	(13.0)	(7.4)	(10.7)	173.7
2040	(99.9)	(60.8)	(90.0)	(7.7)	(13.4)	(7.6)	(11.1)	181.4
2041	(101.0)	(61.5)	(91.0)	(7.8)	(13.8)	(7.9)	(11.4)	187.6
2042	(101.9)	(62.0)	(92.0)	(8.0)	(14.2)	(8.1)	(11.7)	193.4
2043	(102.8)	(62.6)	(92.8)	(8.2)	(14.5)	(8.3)	(12.0)	197.9
2044	(103.5)	(63.0)	(93.5)	(8.3)	(14.8)	(8.5)	(12.2)	203.7
2045	(104.1)	(63.4)	(94.1)	(8.5)	(15.1)	(8.6)	(12.5)	209.3
2046	(104.7)	(63.7)	(94.6)	(8.6)	(15.4)	(8.8)	(12.8)	214.2
2047	(105.2)	(64.0)	(95.1)	(8.8)	(15.7)	(9.0)	(13.0)	218.8
2048	(105.6)	(64.3)	(95.5)	(8.9)	(16.0)	(9.1)	(13.2)	223.1
2049	(106.2)	(64.7)	(95.9)	(9.0)	(16.3)	(9.3)	(13.4)	227.1

(0.0)	0.2	0.0	5.1	-	5.2
<b>Other Environmental Savings</b>	<b>Avoided FOM</b>	<b>Avoided Variable O&amp;M</b>	<b>Avoided Replacement Costs</b>	<b>Avoided Capacity Purchases</b>	<b>Total Savings</b>

<b>2050</b>	(106.3)	(64.7)	(96.1)	(9.0)	(16.3)	(9.3)	(13.5)	227.3
<b>CPVRR \$M</b>	<b>Equipment and Installation Trenton</b>	<b>Equipment and Installation Lake Placid</b>	<b>Equipment and Installation DeBary</b>	<b>Land Lease Rental Payments</b>	<b>Incremental FOM Trenton</b>	<b>Incremental FOM Lake Placid</b>	<b>Incremental FOM DeBary</b>	<b>Fuel Costs Savings</b>

Emissions SO2 Savings	Emissions Nox Savings	Emissions CO2 Savings	Other Environmental Savings	Avoided FOM	Avoided Variable O&M	Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings
(0.0)	0.0	-	(0.0)	-	(0.1)	-	-	0.3
0.0	0.0	-	0.1	-	1.7	-	-	(19.9)
0.0	0.0	-	0.2	-	3.5	-	-	(39.1)
0.0	0.0	-	0.3	-	4.4	-	-	(55.3)
0.0	0.1	-	0.3	-	5.9	-	-	(69.7)
0.0	0.1	-	0.4	-	6.8	-	-	(80.7)
0.0	0.1	0.8	0.4	-	8.4	-	-	(88.6)
0.0	0.1	2.1	0.5	-	9.4	-	-	(91.6)
0.0	0.1	3.5	0.5	0.2	11.3	16.2	-	(77.4)
0.0	0.1	5.6	0.6	0.3	12.3	21.1	-	(73.4)
0.0	0.1	7.7	0.7	0.3	13.0	20.5	-	(74.3)
0.0	0.1	9.9	0.7	0.3	13.8	19.9	-	(73.5)
0.0	0.1	12.2	0.8	0.3	14.4	19.4	-	(72.2)
0.0	0.1	14.4	0.8	0.3	15.1	18.9	-	(70.0)
0.0	0.1	16.7	0.8	0.3	15.7	18.4	-	(67.0)
0.0	0.1	19.1	0.8	0.3	16.3	18.0	-	(63.8)
0.0	0.1	21.5	0.8	0.5	17.1	29.2	-	(48.1)
0.0	0.1	23.7	0.8	0.8	17.8	43.2	-	(30.4)
0.0	0.1	26.0	0.8	1.0	18.5	45.7	-	(23.7)
0.0	0.1	28.2	0.8	1.0	18.9	44.6	-	(20.7)
0.0	0.1	30.4	0.8	1.0	19.3	43.5	-	(17.3)
0.0	0.1	33.1	0.8	1.2	20.1	51.4	-	(2.3)
0.0	0.1	35.3	0.8	1.3	20.6	53.3	-	4.7
0.0	0.1	37.5	0.8	1.5	21.1	60.1	-	16.6
0.0	0.1	39.2	0.8	1.7	21.2	69.2	-	29.2
0.0	0.2	41.5	0.8	2.0	21.5	77.6	-	43.4
0.0	0.2	43.7	0.8	2.2	21.6	85.2	-	56.7
0.0	0.2	45.7	0.8	2.4	22.1	92.3	-	69.1
0.0	0.2	47.6	0.8	2.7	22.5	98.8	-	80.6
0.0	0.2	49.4	0.8	2.9	21.9	104.7	-	90.3
0.0	0.2	51.1	0.8	3.1	22.2	110.2	-	99.9

0.0	0.2	51.2	0.8	3.3	22.2	115.3	-	105.2
Emissions SO2 Savings	Emissions Nox Savings	Emissions CO2 Savings	Other Environmental Savings	Avoided FOM	Avoided Variable O&M	Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings



17. **Cost-Effectiveness.** For the Combined Projects please provide the annual and cumulative values over the period 2019-2051 (in nominal and net present value) for each of the following categories: equipment and installation, incremental fixed O&M, fuel savings, emission savings separated by type, avoided replacement costs, avoided capacity purchases, avoided fixed O&M, avoided variable O&M, land lease rental payments and transmission upgrades. Please provide the response in electronic (Excel) format.

- a. Please explain in detail the assumptions used to determine the value of each of the components evaluated in this analysis.
- b. Explain whether DEF's emissions savings include CO2 emissions. If so, provide a sensitivity analysis without those costs and provide the revised annual and cumulative values for each category in electronic format.
- c. Please provide a sensitivity of the fuel savings based upon a low fuel price forecast and a high fuel price forecast, with revised annual and cumulative values for each category in electronic form.

**Categories**

Equipment and installation	This category is the equipment and installation of the deployment of the Trenton, Lake Placid, and DeBary Solar Units (includes capital cost, land cost, transmission interconnection cost, property
Incremental fixed O&M	This category is the fixed operation and maintenance (O&M) costs of Trenton, Lake Placid, and DeBary Solar Units.
Fuel savings	This category shows system fuel savings resulting from the deployment of the the Trenton, Lake Placid, and DeBary Solar Units. These fuel savings are based and derived from DEF's fuel price fore
Emission savings separated by type	This category shows system emissions savings (CO2, SO2, and Nox costs) resulting from the deployment of the the Trenton, Lake Placid, and DeBary Solar Units.
Other Environmental Savings	This category is the reduction in the reagents costs of DEF's conventional units from reduced operation caused by the deployment of the Trenton, Lake Placid, and DeBary Solar Units.
Avoided fixed O&M	This category is the reduction in the fixed O&M costs of DEF's conventional units from reduced operation caused by the deployment of the Trenton, Lake Placid, and DeBary Solar Units.
Avoided variable O&M	This category is the reduction in the variable O&M costs of DEF's conventional units from reduced operation caused by the deployment of the Trenton, Lake Placid, and DeBary Solar Units.
Avoided replacement costs	This category is the reduction in the capital costs (generation and transmission) and gas reservation charges of future DEF capacity avoided or deferred by the deployment of the Trenton, Lake Pl
Avoided capacity purchases	This category is the avoided capacity payments that reflect reductions in short term (one year) power purchases avoided due to the deployment of of the Trenton, Lake Placid, and DeBary Solar L
Land Lease Rental Payments	This category is the lease payments for renting the land for the Trenton and Lake Placid Units.

All these categories are calculated as the difference between the neither projects case and the both projects case (Trenton, Lake Placid, and DeBary) included.

taxes, and insurance).

cast assumptions.

acid, and DeBary Solar Units.  
Units.

17 **Cost-Effectiveness.** For the Combined Projects please provide the annual and cumulative values over the period 2019-2051 (in nominal and net present value) for each of the following categories: equipment and installation, incremental fixed O&M, fuel savings, emission savings separated by type, avoided replacement costs, avoided capacity purchases, avoided fixed O&M, avoided variable O&M, land lease rental payments and transmission upgrades. Please provide the response in electronic (Excel) format.

- a. Please explain in detail the assumptions used to determine the value of each of the components evaluated in this analysis.
- b. Explain whether DEF's emissions savings include CO2 emissions. If so, provide a sensitivity analysis without those costs and provide the revised annual and cumulative values for each category in electronic format.  
Yes, DEF's emissions saving include CO2 emissions.
- c. Please provide a sensitivity of the fuel savings based upon a low fuel price forecast and a high fuel price forecast, with revised annual and cumulative values for each category in electronic form.

**Mid Fuel no Carbon Case**

Nominal \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBary	Land Lease Rental Payments	Incremental FOM Trenton	Incremental FOM Lake Placid	Incremental FOM DeBary	Fuel Costs Savings	Emissions SO2 Savings	Emissions Nox Savings	Emissions CO2 Savings	Other Environmental Savings	Avoided FOM	Avoided Variable O&M
2019	-	-	-	-	-	-	-	0.4	(0.0)	0.0	-	(0.0)	-	(0.1)
2020	(13.7)	(8.3)	(9.3)	(0.7)	(1.0)	(0.6)	(0.7)	10.4	0.0	0.0	-	0.1	-	2.0
2021	(12.7)	(7.7)	(12.0)	(0.7)	(1.0)	(0.6)	(0.9)	11.5	0.0	0.0	-	0.1	-	2.0
2022	(12.1)	(7.3)	(11.2)	(0.7)	(1.1)	(0.6)	(0.9)	12.7	0.0	0.0	-	0.1	-	1.2
2023	(11.5)	(7.0)	(10.7)	(0.7)	(1.1)	(0.6)	(0.9)	11.6	0.0	0.0	-	0.0	-	1.9
2024	(11.0)	(6.7)	(10.3)	(0.7)	(1.1)	(0.6)	(1.0)	14.2	0.0	0.0	-	0.1	-	1.4
2025	(10.6)	(6.5)	(9.8)	(0.7)	(1.2)	(0.7)	(1.0)	14.9	0.0	0.0	-	0.1	-	2.3
2026	(8.7)	(5.3)	(8.1)	(0.7)	(1.2)	(0.7)	(1.0)	16.7	0.0	0.0	-	0.1	-	1.1
2027	(8.4)	(5.1)	(7.8)	(0.7)	(1.2)	(0.7)	(1.0)	14.7	0.0	(0.0)	-	0.0	0.3	3.2
2028	(8.1)	(5.0)	(7.6)	(0.7)	(1.3)	(0.7)	(1.1)	16.0	0.0	0.0	-	0.1	0.2	1.7
2029	(7.9)	(4.8)	(7.3)	(0.7)	(1.3)	(0.7)	(1.1)	18.5	0.0	0.0	-	0.0	-	1.6
2030	(7.6)	(4.6)	(7.1)	(0.7)	(1.3)	(0.8)	(1.1)	20.5	0.0	0.0	-	0.0	-	1.6
2031	(7.3)	(4.5)	(6.8)	(0.7)	(1.4)	(0.8)	(1.1)	20.0	0.0	0.0	-	0.0	-	1.7
2032	(7.0)	(4.3)	(6.6)	(0.7)	(1.4)	(0.8)	(1.2)	21.3	0.0	0.0	-	0.0	-	1.6
2033	(6.7)	(4.1)	(6.3)	(0.8)	(1.5)	(0.9)	(1.2)	21.9	0.0	0.0	-	0.0	-	1.6
2034	(6.5)	(4.0)	(6.1)	(0.8)	(1.5)	(0.8)	(1.2)	22.6	0.0	0.0	-	0.0	-	1.6
2035	(6.2)	(3.8)	(5.8)	(0.8)	(1.5)	(0.9)	(1.2)	23.1	0.0	0.0	-	0.0	0.7	2.5
2036	(5.9)	(3.6)	(5.6)	(0.8)	(1.5)	(0.9)	(1.3)	21.0	(0.0)	0.0	-	0.0	1.2	2.4
2037	(5.6)	(3.5)	(5.3)	(0.8)	(1.6)	(0.9)	(1.3)	22.6	-	0.0	-	0.0	0.5	2.1
2038	(5.9)	(3.6)	(5.4)	(0.8)	(1.6)	(0.9)	(1.3)	24.9	-	0.0	-	0.0	-	1.6
2039	(5.5)	(3.4)	(5.2)	(0.8)	(1.6)	(0.9)	(1.4)	26.3	-	0.0	-	0.0	-	1.8
2040	(5.3)	(3.2)	(5.0)	(0.8)	(1.7)	(1.0)	(1.4)	32.7	0.0	0.0	-	0.0	0.8	3.5
2041	(4.9)	(3.0)	(4.7)	(0.8)	(1.7)	(1.0)	(1.4)	28.0	(0.0)	0.0	-	0.0	0.5	2.5
2042	(4.7)	(2.9)	(4.5)	(0.9)	(1.8)	(1.0)	(1.5)	28.1	-	0.0	-	0.0	0.8	2.3
2043	(4.4)	(2.7)	(4.2)	(0.9)	(1.8)	(1.0)	(1.5)	23.5	0.0	0.0	-	0.0	1.4	1.1
2044	(4.1)	(2.5)	(4.0)	(0.9)	(1.9)	(1.1)	(1.5)	33.1	0.0	0.0	-	0.0	1.4	1.2
2045	(3.8)	(2.4)	(3.7)	(0.9)	(1.9)	(1.1)	(1.6)	33.8	-	0.0	-	0.0	1.5	0.5
2046	(3.5)	(2.2)	(3.5)	(0.9)	(1.9)	(1.1)	(1.6)	31.1	-	0.0	-	0.0	1.5	3.5
2047	(3.3)	(2.0)	(3.2)	(0.9)	(2.0)	(1.1)	(1.7)	31.3	-	0.0	-	0.0	1.5	2.7
2048	(3.0)	(1.9)	(3.0)	(0.9)	(2.0)	(1.2)	(1.7)	31.6	-	0.0	-	0.0	1.6	(5.0)
2049	(5.1)	(3.3)	(2.9)	(0.9)	(2.1)	(1.2)	(1.7)	31.8	(0.0)	0.0	-	0.0	1.6	2.9

2050	(0.2)	(0.1)	(2.3)	-	-	-	(0.4)	2.2	-	0.0	-	(0.0)	1.7	0.2
Nominal \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBary	Land Lease Rental Payments	Incremental FOM Trenton	Incremental FOM Lake Placid	Incremental FOM DeBary	Fuel Costs Savings	Emissions SO2 Savings	Emissions Nox Savings	Emissions CO2 Savings	Other Environmental Savings	Avoided FOM	Avoided Variable O&M

Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings
-	-	0.3
-	-	(21.7)
-	-	(22.0)
-	-	(19.8)
-	-	(19.0)
-	-	(15.6)
-	-	(13.1)
-	-	(7.7)
28.2	-	21.3
9.1	-	2.7
(1.3)	-	(5.0)
(1.3)	-	(2.4)
(1.2)	-	(2.1)
(1.2)	-	(0.3)
(1.2)	-	0.9
(1.2)	-	2.2
33.7	-	39.8
45.5	-	50.4
8.7	-	14.9
(4.3)	-	2.7
(4.2)	-	4.9
33.9	-	52.4
8.4	-	21.8
33.7	-	47.8
47.6	-	57.2
46.9	-	66.7
46.2	-	66.6
45.5	-	66.8
44.9	-	66.2
44.2	-	58.6
43.6	-	62.7

Mid Fuel no Carbon Case

PV \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBary	Land Lease Rental Payments	Incremental FOM Trenton	Incremental FOM Lake Placid	Incremental FOM DeBary	Fuel Costs Savings	Emissions SO2 Savings	Emissions Nox Savings	Emissions CO2 Savings
2019	-	-	-	-	-	-	-	0.4	(0.0)	0.0	-
2020	(12.8)	(7.8)	(8.7)	(0.6)	(0.9)	(0.5)	(0.6)	9.7	0.0	0.0	-
2021	(11.1)	(6.7)	(10.5)	(0.6)	(0.9)	(0.5)	(0.8)	10.0	0.0	0.0	-
2022	(9.8)	(6.0)	(9.1)	(0.5)	(0.9)	(0.5)	(0.7)	10.3	0.0	0.0	-
2023	(8.7)	(5.3)	(8.1)	(0.5)	(0.8)	(0.5)	(0.7)	8.8	0.0	0.0	-
2024	(7.8)	(4.7)	(7.3)	(0.5)	(0.8)	(0.4)	(0.7)	10.1	0.0	0.0	-
2025	(7.0)	(4.3)	(6.5)	(0.5)	(0.8)	(0.4)	(0.6)	9.8	0.0	0.0	-
2026	(5.4)	(3.3)	(5.0)	(0.4)	(0.7)	(0.4)	(0.6)	10.3	0.0	0.0	-
2027	(4.8)	(2.9)	(4.5)	(0.4)	(0.7)	(0.4)	(0.6)	8.4	0.0	(0.0)	-
2028	(4.4)	(2.7)	(4.1)	(0.4)	(0.7)	(0.4)	(0.6)	8.6	0.0	0.0	-
2029	(3.9)	(2.4)	(3.7)	(0.4)	(0.7)	(0.4)	(0.5)	9.3	0.0	0.0	-
2030	(3.5)	(2.2)	(3.3)	(0.3)	(0.6)	(0.4)	(0.5)	9.6	0.0	0.0	-
2031	(3.2)	(1.9)	(3.0)	(0.3)	(0.6)	(0.3)	(0.5)	8.7	0.0	0.0	-
2032	(2.9)	(1.7)	(2.7)	(0.3)	(0.6)	(0.3)	(0.5)	8.7	0.0	0.0	-
2033	(2.6)	(1.6)	(2.4)	(0.3)	(0.6)	(0.3)	(0.5)	8.3	0.0	0.0	-
2034	(2.3)	(1.4)	(2.2)	(0.3)	(0.5)	(0.3)	(0.4)	8.0	0.0	0.0	-
2035	(2.1)	(1.3)	(1.9)	(0.3)	(0.5)	(0.3)	(0.4)	7.7	0.0	0.0	-
2036	(1.8)	(1.1)	(1.7)	(0.2)	(0.5)	(0.3)	(0.4)	6.5	(0.0)	0.0	-
2037	(1.6)	(1.0)	(1.5)	(0.2)	(0.5)	(0.3)	(0.4)	6.5	-	0.0	-
2038	(1.6)	(1.0)	(1.5)	(0.2)	(0.4)	(0.2)	(0.4)	6.7	-	0.0	-
2039	(1.4)	(0.8)	(1.3)	(0.2)	(0.4)	(0.2)	(0.3)	6.6	-	0.0	-
2040	(1.2)	(0.8)	(1.2)	(0.2)	(0.4)	(0.2)	(0.3)	7.7	0.0	0.0	-
2041	(1.1)	(0.7)	(1.0)	(0.2)	(0.4)	(0.2)	(0.3)	6.1	(0.0)	0.0	-
2042	(1.0)	(0.6)	(0.9)	(0.2)	(0.4)	(0.2)	(0.3)	5.7	-	0.0	-
2043	(0.8)	(0.5)	(0.8)	(0.2)	(0.3)	(0.2)	(0.3)	4.5	0.0	0.0	-
2044	(0.7)	(0.4)	(0.7)	(0.2)	(0.3)	(0.2)	(0.3)	5.9	0.0	0.0	-
2045	(0.6)	(0.4)	(0.6)	(0.1)	(0.3)	(0.2)	(0.3)	5.6	-	0.0	-
2046	(0.5)	(0.3)	(0.5)	(0.1)	(0.3)	(0.2)	(0.3)	4.8	-	0.0	-
2047	(0.5)	(0.3)	(0.5)	(0.1)	(0.3)	(0.2)	(0.2)	4.5	-	0.0	-
2048	(0.4)	(0.3)	(0.4)	(0.1)	(0.3)	(0.2)	(0.2)	4.3	-	0.0	-
2049	(0.6)	(0.4)	(0.4)	(0.1)	(0.3)	(0.2)	(0.2)	4.0	(0.0)	0.0	-

43.1	-	44.0
<b>Avoided Replacement Costs</b>	<b>Avoided Capacity Purchases</b>	<b>Total Savings</b>

<b>2050</b>	(0.0)	(0.0)	(0.3)	-	-	-	(0.1)	0.3	-	0.0	-
<b>PV \$M</b>	<b>Equipment and Installation Trenton</b>	<b>Equipment and Installation Lake Placid</b>	<b>Equipment and Installation DeBary</b>	<b>Land Lease Rental Payments</b>	<b>Incremental FOM Trenton</b>	<b>Incremental FOM Lake Placid</b>	<b>Incremental FOM DeBary</b>	<b>Fuel Costs Savings</b>	<b>Emissions SO2 Savings</b>	<b>Emissions Nox Savings</b>	<b>Emissions CO2 Savings</b>

Other Environmental Savings	Avoided FOM	Avoided Variable O&M	Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings
(0.0)	-	(0.1)	-	-	0.3
0.1	-	1.8	-	-	(20.3)
0.1	-	1.7	-	-	(19.2)
0.1	-	1.0	-	-	(16.1)
0.0	-	1.4	-	-	(14.4)
0.1	-	1.0	-	-	(11.0)
0.1	-	1.5	-	-	(8.7)
0.1	-	0.7	-	-	(4.7)
0.0	0.2	1.8	16.2	-	12.3
0.0	0.1	0.9	4.9	-	1.5
0.0	-	0.8	(0.7)	-	(2.5)
0.0	-	0.8	(0.6)	-	(1.1)
0.0	-	0.7	(0.5)	-	(0.9)
0.0	-	0.6	(0.5)	-	(0.1)
0.0	-	0.6	(0.4)	-	0.3
0.0	-	0.6	(0.4)	-	0.8
0.0	0.2	0.8	11.2	-	13.2
0.0	0.4	0.7	14.1	-	15.6
0.0	0.1	0.6	2.5	-	4.3
0.0	-	0.4	(1.2)	-	0.7
0.0	-	0.4	(1.1)	-	1.2
0.0	0.2	0.8	7.9	-	12.3
0.0	0.1	0.6	1.8	-	4.8
0.0	0.2	0.5	6.9	-	9.8
0.0	0.3	0.2	9.1	-	10.9
0.0	0.3	0.2	8.3	-	11.9
0.0	0.2	0.1	7.7	-	11.1
0.0	0.2	0.5	7.1	-	10.4
0.0	0.2	0.4	6.5	-	9.6
0.0	0.2	(0.7)	6.0	-	7.9
0.0	0.2	0.4	5.5	-	7.9

Mid Fuel no Carbon Case

CPVRR \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBary	Land Lease Rental Payments	Incremental FOM Trenton	Incremental FOM Lake Placid	Incremental FOM DeBary	Fuel Costs Savings
2019	-	-	-	-	-	-	-	0.4
2020	(12.8)	(7.8)	(8.7)	(0.6)	(0.9)	(0.5)	(0.6)	10.1
2021	(23.9)	(14.5)	(19.2)	(1.2)	(1.8)	(1.0)	(1.4)	20.2
2022	(33.7)	(20.4)	(28.3)	(1.7)	(2.7)	(1.5)	(2.1)	30.5
2023	(42.4)	(25.8)	(36.4)	(2.2)	(3.5)	(2.0)	(2.8)	39.2
2024	(50.2)	(30.5)	(43.7)	(2.7)	(4.3)	(2.4)	(3.5)	49.3
2025	(57.2)	(34.8)	(50.1)	(3.2)	(5.1)	(2.9)	(4.2)	59.1
2026	(62.6)	(38.0)	(55.1)	(3.6)	(5.8)	(3.3)	(4.8)	69.4
2027	(67.4)	(41.0)	(59.6)	(4.0)	(6.5)	(3.7)	(5.4)	77.9
2028	(71.8)	(43.6)	(63.7)	(4.4)	(7.2)	(4.1)	(5.9)	86.5
2029	(75.7)	(46.0)	(67.3)	(4.8)	(7.9)	(4.5)	(6.5)	95.8
2030	(79.3)	(48.2)	(70.6)	(5.1)	(8.5)	(4.8)	(7.0)	105.3
2031	(82.5)	(50.1)	(73.6)	(5.4)	(9.1)	(5.2)	(7.5)	114.1
2032	(85.3)	(51.9)	(76.3)	(5.8)	(9.7)	(5.5)	(8.0)	122.7
2033	(87.9)	(53.5)	(78.7)	(6.0)	(10.2)	(5.8)	(8.4)	131.1
2034	(90.2)	(54.9)	(80.9)	(6.3)	(10.8)	(6.1)	(8.9)	139.1
2035	(92.2)	(56.1)	(82.8)	(6.6)	(11.2)	(6.4)	(9.3)	146.8
2036	(94.1)	(57.2)	(84.5)	(6.8)	(11.7)	(6.7)	(9.7)	153.2
2037	(95.7)	(58.3)	(86.1)	(7.0)	(12.2)	(6.9)	(10.0)	159.8
2038	(97.3)	(59.2)	(87.5)	(7.3)	(12.6)	(7.2)	(10.4)	166.5
2039	(98.7)	(60.1)	(88.8)	(7.5)	(13.0)	(7.4)	(10.7)	173.1
2040	(99.9)	(60.8)	(90.0)	(7.7)	(13.4)	(7.6)	(11.1)	180.7
2041	(101.0)	(61.5)	(91.0)	(7.8)	(13.8)	(7.9)	(11.4)	186.9
2042	(101.9)	(62.0)	(92.0)	(8.0)	(14.2)	(8.1)	(11.7)	192.6
2043	(102.8)	(62.6)	(92.8)	(8.2)	(14.5)	(8.3)	(12.0)	197.1
2044	(103.5)	(63.0)	(93.5)	(8.3)	(14.8)	(8.5)	(12.2)	203.0
2045	(104.1)	(63.4)	(94.1)	(8.5)	(15.1)	(8.6)	(12.5)	208.6
2046	(104.7)	(63.7)	(94.6)	(8.6)	(15.4)	(8.8)	(12.8)	213.4
2047	(105.2)	(64.0)	(95.1)	(8.8)	(15.7)	(9.0)	(13.0)	217.9
2048	(105.6)	(64.3)	(95.5)	(8.9)	(16.0)	(9.1)	(13.2)	222.2
2049	(106.2)	(64.7)	(95.9)	(9.0)	(16.3)	(9.3)	(13.4)	226.2

(0.0)	0.2	0.0	5.1	-	5.2
<b>Other Environmental Savings</b>	<b>Avoided FOM</b>	<b>Avoided Variable O&amp;M</b>	<b>Avoided Replacement Costs</b>	<b>Avoided Capacity Purchases</b>	<b>Total Savings</b>

<b>2050</b>	<b>(106.3)</b>	<b>(64.7)</b>	<b>(96.1)</b>	<b>(9.0)</b>	<b>(16.3)</b>	<b>(9.3)</b>	<b>(13.5)</b>	<b>226.4</b>
<b>CPVRR \$M</b>	<b>Equipment and Installation Trenton</b>	<b>Equipment and Installation Lake Placid</b>	<b>Equipment and Installation DeBary</b>	<b>Land Lease Rental Payments</b>	<b>Incremental FOM Trenton</b>	<b>Incremental FOM Lake Placid</b>	<b>Incremental FOM DeBary</b>	<b>Fuel Costs Savings</b>



Emissions SO2 Savings	Emissions Nox Savings	Emissions CO2 Savings	Other Environmental Savings	Avoided FOM	Avoided Variable O&M	Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings
(0.0)	0.0	-	(0.0)	-	(0.1)	-	-	0.3
0.0	0.0	-	0.1	-	1.7	-	-	(19.9)
0.0	0.0	-	0.2	-	3.5	-	-	(39.1)
0.0	0.0	-	0.3	-	4.4	-	-	(55.3)
0.0	0.1	-	0.3	-	5.9	-	-	(69.7)
0.0	0.1	-	0.4	-	6.8	-	-	(80.7)
0.0	0.1	-	0.5	-	8.4	-	-	(89.4)
0.0	0.1	-	0.5	-	9.0	-	-	(94.1)
0.0	0.1	-	0.6	0.2	10.9	16.2	-	(81.9)
0.0	0.1	-	0.6	0.3	11.8	21.1	-	(80.4)
0.0	0.1	-	0.6	0.3	12.6	20.5	-	(82.9)
0.0	0.1	-	0.6	0.3	13.4	19.9	-	(84.0)
0.0	0.1	-	0.6	0.3	14.1	19.4	-	(84.9)
0.0	0.1	-	0.6	0.3	14.7	18.9	-	(85.0)
0.0	0.1	-	0.7	0.3	15.3	18.4	-	(84.7)
0.0	0.1	-	0.7	0.3	15.9	18.0	-	(83.9)
0.0	0.1	-	0.7	0.5	16.7	29.2	-	(70.8)
0.0	0.1	-	0.7	0.8	17.4	43.2	-	(55.2)
0.0	0.1	-	0.7	1.0	18.1	45.7	-	(50.9)
0.0	0.1	-	0.7	1.0	18.5	44.6	-	(50.1)
0.0	0.1	-	0.7	1.0	18.9	43.5	-	(48.9)
0.0	0.1	-	0.7	1.2	19.8	51.4	-	(36.6)
0.0	0.1	-	0.7	1.3	20.3	53.3	-	(31.8)
0.0	0.1	-	0.7	1.5	20.8	60.1	-	(22.1)
0.0	0.1	-	0.7	1.7	21.0	69.2	-	(11.2)
0.0	0.1	-	0.7	2.0	21.2	77.6	-	0.7
0.0	0.1	-	0.7	2.2	21.3	85.2	-	11.8
0.0	0.1	-	0.7	2.4	21.8	92.3	-	22.1
0.0	0.2	-	0.7	2.7	22.2	98.8	-	31.7
0.0	0.2	-	0.7	2.9	21.6	104.7	-	39.6
0.0	0.2	-	0.7	3.1	21.9	110.2	-	47.5

0.0	0.2	-	0.7	3.3	22.0	115.3	-	52.7
Emissions SO2 Savings	Emissions Nox Savings	Emissions CO2 Savings	Other Environmental Savings	Avoided FOM	Avoided Variable O&M	Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings

17 **Cost-Effectiveness.** For the Combined Projects please provide the annual and cumulative values over the period 2019-2051 (in nominal and net present value) for each of the following categories: equipment and installation, incremental fixed O&M, fuel savings, emission savings separated by type, avoided replacement costs, avoided capacity purchases, avoided fixed O&M, avoided variable O&M, land lease rental payments and transmission upgrades. Please provide the response in electronic (Excel) format.

- Please explain in detail the assumptions used to determine the value of each of the components evaluated in this analysis.
- Explain whether DEF's emissions savings include CO2 emissions. If so, provide a sensitivity analysis without those costs and provide the revised annual and cumulative values for each category in electronic format.
- Please provide a sensitivity of the fuel savings based upon a low fuel price forecast and a high fuel price forecast, with revised annual and cumulative values for each category in electronic form.

**High Fuel with Carbon Case**

Nominal \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBary	Land Lease Rental Payments	Incremental FOM Trenton	Incremental FOM Lake Placid	Incremental FOM DeBary	Fuel Costs Savings	Emissions SO2 Savings	Emissions NOx Savings	Emissions CO2 Savings	Other Environmental Savings	Avoided FOM	Avoided Variable O&M
2019	-	-	-	-	-	-	-	0.4	(0.0)	0.0	-	(0.0)	-	(0.1)
2020	(13.7)	(8.3)	(9.3)	(0.7)	(1.0)	(0.6)	(0.7)	10.4	0.0	0.0	-	0.1	-	2.0
2021	(12.7)	(7.7)	(12.0)	(0.7)	(1.0)	(0.6)	(0.9)	11.9	0.0	0.0	-	0.1	-	1.9
2022	(12.1)	(7.3)	(11.2)	(0.7)	(1.1)	(0.6)	(0.9)	15.1	0.0	0.0	-	0.0	-	2.0
2023	(11.5)	(7.0)	(10.7)	(0.7)	(1.1)	(0.6)	(0.9)	18.8	0.0	0.0	-	0.0	-	2.1
2024	(11.0)	(6.7)	(10.3)	(0.7)	(1.1)	(0.6)	(1.0)	24.1	0.0	0.0	-	0.0	-	1.2
2025	(10.6)	(6.5)	(9.8)	(0.7)	(1.2)	(0.7)	(1.0)	25.0	0.0	0.0	1.0	(0.0)	-	2.3
2026	(8.7)	(5.3)	(8.1)	(0.7)	(1.2)	(0.7)	(1.0)	28.0	(0.0)	0.0	1.6	(0.0)	-	1.2
2027	(8.4)	(5.1)	(7.8)	(0.7)	(1.2)	(0.7)	(1.0)	23.8	-	(0.0)	2.2	0.0	0.3	3.2
2028	(8.1)	(5.0)	(7.6)	(0.7)	(1.3)	(0.7)	(1.1)	23.1	0.0	0.0	2.8	0.0	0.2	1.8
2029	(7.9)	(4.8)	(7.3)	(0.7)	(1.3)	(0.7)	(1.1)	26.2	0.0	0.0	3.4	0.0	-	1.7
2030	(7.6)	(4.6)	(7.1)	(0.7)	(1.3)	(0.8)	(1.1)	28.6	0.0	0.0	4.0	0.0	-	1.6
2031	(7.3)	(4.5)	(6.8)	(0.7)	(1.4)	(0.8)	(1.1)	27.8	0.0	0.0	4.7	0.0	-	1.6
2032	(7.0)	(4.3)	(6.6)	(0.7)	(1.4)	(0.8)	(1.2)	29.6	0.0	0.0	5.2	0.0	-	1.5
2033	(6.7)	(4.1)	(6.3)	(0.8)	(1.5)	(0.9)	(1.2)	31.2	0.0	0.0	5.7	0.0	-	1.6
2034	(6.5)	(4.0)	(6.1)	(0.8)	(1.5)	(0.8)	(1.2)	32.7	0.0	0.0	6.4	0.0	-	1.6
2035	(6.2)	(3.8)	(5.8)	(0.8)	(1.5)	(0.9)	(1.2)	34.0	0.0	0.0	7.6	0.0	0.7	2.4
2036	(5.9)	(3.6)	(5.6)	(0.8)	(1.5)	(0.9)	(1.3)	31.8	(0.0)	0.0	7.2	0.0	1.2	2.3
2037	(5.6)	(3.5)	(5.3)	(0.8)	(1.6)	(0.9)	(1.3)	34.5	-	0.0	7.8	0.0	0.5	2.4
2038	(5.9)	(3.6)	(5.4)	(0.8)	(1.6)	(0.9)	(1.3)	36.8	-	0.0	8.3	0.0	-	1.6
2039	(5.5)	(3.4)	(5.2)	(0.8)	(1.6)	(0.9)	(1.4)	39.2	0.0	0.0	8.8	0.0	-	1.6
2040	(5.3)	(3.2)	(5.0)	(0.8)	(1.7)	(1.0)	(1.4)	49.2	0.0	0.0	11.4	0.0	0.8	3.2
2041	(4.9)	(3.0)	(4.7)	(0.8)	(1.7)	(1.0)	(1.4)	42.4	-	0.0	10.2	0.0	0.5	2.4
2042	(4.7)	(2.9)	(4.5)	(0.9)	(1.8)	(1.0)	(1.5)	42.8	-	0.0	10.5	0.0	0.8	1.8
2043	(4.4)	(2.7)	(4.2)	(0.9)	(1.8)	(1.0)	(1.5)	35.7	0.0	0.0	9.0	0.0	1.4	0.5
2044	(4.1)	(2.5)	(4.0)	(0.9)	(1.9)	(1.1)	(1.5)	49.6	-	0.0	13.0	0.0	1.4	1.5
2045	(3.8)	(2.4)	(3.7)	(0.9)	(1.9)	(1.1)	(1.6)	50.7	-	0.0	13.4	0.0	1.5	0.9
2046	(3.5)	(2.2)	(3.5)	(0.9)	(1.9)	(1.1)	(1.6)	47.4	-	0.0	12.9	0.0	1.5	3.0
2047	(3.3)	(2.0)	(3.2)	(0.9)	(2.0)	(1.1)	(1.7)	46.9	-	0.0	13.1	0.0	1.5	2.8
2048	(3.0)	(1.9)	(3.0)	(0.9)	(2.0)	(1.2)	(1.7)	47.7	0.0	0.0	13.4	0.0	1.6	(4.6)

20190072.EI Staff Hearing Exhibits 00068

<b>2049</b>	(5.1)	(3.3)	(2.9)	(0.9)	(2.1)	(1.2)	(1.7)	47.5	-	0.0	13.4	0.0	1.6	2.0
<b>2050</b>	(0.2)	(0.1)	(2.3)	-	-	-	(0.4)	3.0	-	(0.0)	0.9	(0.0)	1.7	0.4
<b>Nominal \$M</b>	<b>Equipment and Installation Trenton</b>	<b>Equipment and Installation Lake Placid</b>	<b>Equipment and Installation DeBary</b>	<b>Land Lease Rental Payments</b>	<b>Incremental FOM Trenton</b>	<b>Incremental FOM Lake Placid</b>	<b>Incremental FOM DeBary</b>	<b>Fuel Costs Savings</b>	<b>Emissions SO2 Savings</b>	<b>Emissions Nox Savings</b>	<b>Emissions CO2 Savings</b>	<b>Other Environmental Savings</b>	<b>Avoided FOM</b>	<b>Avoided Variable O&amp;M</b>

Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings
-	-	0.3
-	-	(21.7)
-	-	(21.7)
-	-	(16.7)
-	-	(11.6)
-	-	(6.0)
-	-	(2.2)
-	-	5.2
28.2	-	32.6
9.1	-	12.7
(1.3)	-	6.2
(1.3)	-	9.7
(1.2)	-	10.4
(1.2)	-	13.2
(1.2)	-	15.9
(1.2)	-	18.7
33.7	-	58.2
45.5	-	68.3
8.7	-	34.9
(4.3)	-	22.9
(4.2)	-	26.5
33.9	-	80.0
8.4	-	46.3
33.7	-	72.5
47.6	-	77.7
46.9	-	96.5
46.2	-	97.3
45.5	-	95.5
44.9	-	95.0
44.2	-	88.7

High Fuel with Carbon Case

PV \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBary	Land Lease Rental Payments	Incremental FOM Trenton	Incremental FOM Lake Placid	Incremental FOM DeBary	Fuel Costs Savings	Emissions SO2 Savings	Emissions Nox Savings	Emissions CO2 Savings	Other Environmental Savings
2019	-	-	-	-	-	-	-	0.4	(0.0)	0.0	-	(0.0)
2020	(12.8)	(7.8)	(8.7)	(0.6)	(0.9)	(0.5)	(0.6)	9.7	0.0	0.0	-	0.1
2021	(11.1)	(6.7)	(10.5)	(0.6)	(0.9)	(0.5)	(0.8)	10.4	0.0	0.0	-	0.1
2022	(9.8)	(6.0)	(9.1)	(0.5)	(0.9)	(0.5)	(0.7)	12.2	0.0	0.0	-	0.0
2023	(8.7)	(5.3)	(8.1)	(0.5)	(0.8)	(0.5)	(0.7)	14.2	0.0	0.0	-	0.0
2024	(7.8)	(4.7)	(7.3)	(0.5)	(0.8)	(0.4)	(0.7)	17.1	0.0	0.0	-	0.0
2025	(7.0)	(4.3)	(6.5)	(0.5)	(0.8)	(0.4)	(0.6)	16.5	0.0	0.0	0.7	(0.0)
2026	(5.4)	(3.3)	(5.0)	(0.4)	(0.7)	(0.4)	(0.6)	17.3	(0.0)	0.0	1.0	(0.0)
2027	(4.8)	(2.9)	(4.5)	(0.4)	(0.7)	(0.4)	(0.6)	13.7	-	(0.0)	1.3	0.0
2028	(4.4)	(2.7)	(4.1)	(0.4)	(0.7)	(0.4)	(0.6)	12.4	0.0	0.0	1.5	0.0
2029	(3.9)	(2.4)	(3.7)	(0.4)	(0.7)	(0.4)	(0.5)	13.1	0.0	0.0	1.7	0.0
2030	(3.5)	(2.2)	(3.3)	(0.3)	(0.6)	(0.4)	(0.5)	13.4	0.0	0.0	1.9	0.0
2031	(3.2)	(1.9)	(3.0)	(0.3)	(0.6)	(0.3)	(0.5)	12.2	0.0	0.0	2.0	0.0
2032	(2.9)	(1.7)	(2.7)	(0.3)	(0.6)	(0.3)	(0.5)	12.1	0.0	0.0	2.1	0.0
2033	(2.6)	(1.6)	(2.4)	(0.3)	(0.6)	(0.3)	(0.5)	11.9	0.0	0.0	2.2	0.0
2034	(2.3)	(1.4)	(2.2)	(0.3)	(0.5)	(0.3)	(0.4)	11.6	0.0	0.0	2.3	0.0
2035	(2.1)	(1.3)	(1.9)	(0.3)	(0.5)	(0.3)	(0.4)	11.3	0.0	0.0	2.5	0.0
2036	(1.8)	(1.1)	(1.7)	(0.2)	(0.5)	(0.3)	(0.4)	9.8	(0.0)	0.0	2.2	0.0
2037	(1.6)	(1.0)	(1.5)	(0.2)	(0.5)	(0.3)	(0.4)	10.0	-	0.0	2.3	0.0
2038	(1.6)	(1.0)	(1.5)	(0.2)	(0.4)	(0.2)	(0.4)	9.9	-	0.0	2.2	0.0
2039	(1.4)	(0.8)	(1.3)	(0.2)	(0.4)	(0.2)	(0.3)	9.8	0.0	0.0	2.2	0.0
2040	(1.2)	(0.8)	(1.2)	(0.2)	(0.4)	(0.2)	(0.3)	11.5	0.0	0.0	2.7	0.0
2041	(1.1)	(0.7)	(1.0)	(0.2)	(0.4)	(0.2)	(0.3)	9.3	-	0.0	2.2	0.0
2042	(1.0)	(0.6)	(0.9)	(0.2)	(0.4)	(0.2)	(0.3)	8.7	-	0.0	2.1	0.0
2043	(0.8)	(0.5)	(0.8)	(0.2)	(0.3)	(0.2)	(0.3)	6.8	0.0	0.0	1.7	0.0
2044	(0.7)	(0.4)	(0.7)	(0.2)	(0.3)	(0.2)	(0.3)	8.8	-	0.0	2.3	0.0
2045	(0.6)	(0.4)	(0.6)	(0.1)	(0.3)	(0.2)	(0.3)	8.4	-	0.0	2.2	0.0
2046	(0.5)	(0.3)	(0.5)	(0.1)	(0.3)	(0.2)	(0.3)	7.3	-	0.0	2.0	0.0
2047	(0.5)	(0.3)	(0.5)	(0.1)	(0.3)	(0.2)	(0.2)	6.8	-	0.0	1.9	0.0
2048	(0.4)	(0.3)	(0.4)	(0.1)	(0.3)	(0.2)	(0.2)	6.4	0.0	0.0	1.8	0.0

43.6	-	90.9
43.1	-	45.9
<b>Avoided Replacement Costs</b>	<b>Avoided Capacity Purchases</b>	<b>Total Savings</b>

<b>2049</b>	(0.6)	(0.4)	(0.4)	(0.1)	(0.3)	(0.2)	(0.2)	6.0	-	0.0	1.7	0.0
<b>2050</b>	(0.0)	(0.0)	(0.3)	-	-	-	(0.1)	0.4	-	(0.0)	0.1	(0.0)
<b>PV \$M</b>	<b>Equipment and Installation Trenton</b>	<b>Equipment and Installation Lake Placid</b>	<b>Equipment and Installation DeBary</b>	<b>Land Lease Rental Payments</b>	<b>Incremental FOM Trenton</b>	<b>Incremental FOM Lake Placid</b>	<b>Incremental FOM DeBary</b>	<b>Fuel Costs Savings</b>	<b>Emissions SO2 Savings</b>	<b>Emissions Nox Savings</b>	<b>Emissions CO2 Savings</b>	<b>Other Environmental Savings</b>

Avoided FOM	Avoided Variable O&M	Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings
-	(0.1)	-	-	0.3
-	1.9	-	-	(20.3)
-	1.7	-	-	(18.9)
-	1.6	-	-	(13.6)
-	1.6	-	-	(8.8)
-	0.8	-	-	(4.2)
-	1.5	-	-	(1.4)
-	0.8	-	-	3.2
0.2	1.8	16.2	-	18.8
0.1	1.0	4.9	-	6.8
-	0.8	(0.7)	-	3.1
-	0.8	(0.6)	-	4.5
-	0.7	(0.5)	-	4.5
-	0.6	(0.5)	-	5.4
-	0.6	(0.4)	-	6.0
-	0.6	(0.4)	-	6.6
0.2	0.8	11.2	-	19.3
0.4	0.7	14.1	-	21.1
0.1	0.7	2.5	-	10.1
-	0.4	(1.2)	-	6.2
-	0.4	(1.1)	-	6.7
0.2	0.8	7.9	-	18.8
0.1	0.5	1.8	-	10.1
0.2	0.4	6.9	-	14.8
0.3	0.1	9.1	-	14.8
0.3	0.3	8.3	-	17.2
0.2	0.1	7.7	-	16.1
0.2	0.5	7.1	-	14.8
0.2	0.4	6.5	-	13.7
0.2	(0.6)	6.0	-	12.0

High Fuel with Carbon Case

CPVRR \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBary	Land Lease Rental Payments	Incremental FOM Hamilton	Incremental FOM Columbia	Incremental FOM DeBary	Fuel Costs Savings	Emissions SO2 Savings	Emissions Nox Savings
2019	-	-	-	-	-	-	-	0.4	(0.0)	0.0
2020	(12.8)	(7.8)	(8.7)	(0.6)	(0.9)	(0.5)	(0.6)	10.1	0.0	0.0
2021	(23.9)	(14.5)	(19.2)	(1.2)	(1.8)	(1.0)	(1.4)	20.5	0.0	0.0
2022	(33.7)	(20.4)	(28.3)	(1.7)	(2.7)	(1.5)	(2.1)	32.7	0.0	0.0
2023	(42.4)	(25.8)	(36.4)	(2.2)	(3.5)	(2.0)	(2.8)	47.0	0.0	0.1
2024	(50.2)	(30.5)	(43.7)	(2.7)	(4.3)	(2.4)	(3.5)	64.0	0.0	0.1
2025	(57.2)	(34.8)	(50.1)	(3.2)	(5.1)	(2.9)	(4.2)	80.5	0.0	0.1
2026	(62.6)	(38.0)	(55.1)	(3.6)	(5.8)	(3.3)	(4.8)	97.8	0.0	0.1
2027	(67.4)	(41.0)	(59.6)	(4.0)	(6.5)	(3.7)	(5.4)	111.5	0.0	0.1
2028	(71.8)	(43.6)	(63.7)	(4.4)	(7.2)	(4.1)	(5.9)	123.9	0.0	0.1
2029	(75.7)	(46.0)	(67.3)	(4.8)	(7.9)	(4.5)	(6.5)	137.1	0.0	0.1
2030	(79.3)	(48.2)	(70.6)	(5.1)	(8.5)	(4.8)	(7.0)	150.4	0.0	0.1
2031	(82.5)	(50.1)	(73.6)	(5.4)	(9.1)	(5.2)	(7.5)	162.6	0.0	0.1
2032	(85.3)	(51.9)	(76.3)	(5.8)	(9.7)	(5.5)	(8.0)	174.7	0.0	0.1
2033	(87.9)	(53.5)	(78.7)	(6.0)	(10.2)	(5.8)	(8.4)	186.5	0.0	0.1
2034	(90.2)	(54.9)	(80.9)	(6.3)	(10.8)	(6.1)	(8.9)	198.1	0.0	0.1
2035	(92.2)	(56.1)	(82.8)	(6.6)	(11.2)	(6.4)	(9.3)	209.4	0.0	0.1
2036	(94.1)	(57.2)	(84.5)	(6.8)	(11.7)	(6.7)	(9.7)	219.2	0.0	0.1
2037	(95.7)	(58.3)	(86.1)	(7.0)	(12.2)	(6.9)	(10.0)	229.1	0.0	0.1
2038	(97.3)	(59.2)	(87.5)	(7.3)	(12.6)	(7.2)	(10.4)	239.1	0.0	0.1
2039	(98.7)	(60.1)	(88.8)	(7.5)	(13.0)	(7.4)	(10.7)	248.9	0.0	0.1
2040	(99.9)	(60.8)	(90.0)	(7.7)	(13.4)	(7.6)	(11.1)	260.4	0.0	0.1
2041	(101.0)	(61.5)	(91.0)	(7.8)	(13.8)	(7.9)	(11.4)	269.7	0.0	0.1
2042	(101.9)	(62.0)	(92.0)	(8.0)	(14.2)	(8.1)	(11.7)	278.5	0.0	0.1
2043	(102.8)	(62.6)	(92.8)	(8.2)	(14.5)	(8.3)	(12.0)	285.3	0.0	0.1
2044	(103.5)	(63.0)	(93.5)	(8.3)	(14.8)	(8.5)	(12.2)	294.1	0.0	0.1
2045	(104.1)	(63.4)	(94.1)	(8.5)	(15.1)	(8.6)	(12.5)	302.5	0.0	0.1
2046	(104.7)	(63.7)	(94.6)	(8.6)	(15.4)	(8.8)	(12.8)	309.9	0.0	0.1
2047	(105.2)	(64.0)	(95.1)	(8.8)	(15.7)	(9.0)	(13.0)	316.6	0.0	0.1
2048	(105.6)	(64.3)	(95.5)	(8.9)	(16.0)	(9.1)	(13.2)	323.1	0.0	0.1

	0.2	0.3	5.5	-	11.5
	0.2	0.0	5.1	-	5.4
<b>Avoided FOM</b>	<b>Avoided Variable O&amp;M</b>	<b>Avoided Replacement Costs</b>	<b>Avoided Capacity Purchases</b>		<b>Total Savings</b>

<b>2049</b>	(106.2)	(64.7)	(95.9)	(9.0)	(16.3)	(9.3)	(13.4)	329.1	0.0	0.1
<b>2050</b>	(106.3)	(64.7)	(96.1)	(9.0)	(16.3)	(9.3)	(13.5)	329.4	0.0	0.1
<b>CPVRR \$M</b>	<b>Equipment and Installation Trenton</b>	<b>Equipment and Installation Lake Placid</b>	<b>Equipment and Installation DeBary</b>	<b>Land Lease Rental Payments</b>	<b>Incremental FOM Trenton</b>	<b>Incremental FOM Lake Placid</b>	<b>Incremental FOM DeBary</b>	<b>Fuel Costs Savings</b>	<b>Emissions SO2 Savings</b>	<b>Emissions Nox Savings</b>



Emissions CO2 Savings	Other Environmental Savings	Avoided FOM	Avoided Variable O&M	Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings
-	(0.0)	-	(0.1)	-	-	0.3
-	0.1	-	1.8	-	-	(19.9)
-	0.1	-	3.5	-	-	(38.9)
-	0.2	-	5.1	-	-	(52.5)
-	0.2	-	6.7	-	-	(61.3)
-	0.2	-	7.5	-	-	(65.5)
0.7	0.2	-	9.0	-	-	(67.0)
1.6	0.1	-	9.8	-	-	(63.8)
2.9	0.2	0.2	11.6	16.2	-	(45.0)
4.4	0.2	0.3	12.6	21.1	-	(38.2)
6.1	0.2	0.3	13.4	20.5	-	(35.1)
8.0	0.2	0.3	14.2	19.9	-	(30.5)
10.0	0.2	0.3	14.9	19.4	-	(26.0)
12.2	0.2	0.3	15.5	18.9	-	(20.6)
14.3	0.2	0.3	16.1	18.4	-	(14.6)
16.6	0.3	0.3	16.7	18.0	-	(8.0)
19.1	0.3	0.5	17.5	29.2	-	11.3
21.3	0.3	0.8	18.2	43.2	-	32.4
23.6	0.3	1.0	18.9	45.7	-	42.5
25.8	0.3	1.0	19.3	44.6	-	48.7
28.1	0.3	1.0	19.7	43.5	-	55.3
30.7	0.3	1.2	20.5	51.4	-	74.1
32.9	0.3	1.3	21.0	53.3	-	84.2
35.1	0.3	1.5	21.4	60.1	-	99.0
36.8	0.3	1.7	21.4	69.2	-	113.9
39.1	0.3	2.0	21.7	77.6	-	131.0
41.3	0.3	2.2	21.9	85.2	-	147.2
43.3	0.3	2.4	22.3	92.3	-	162.0
45.2	0.3	2.7	22.7	98.8	-	175.7
47.1	0.3	2.9	22.1	104.7	-	187.7

48.7	0.3	3.1	22.4	110.2	-	199.2
48.8	0.3	3.3	22.4	115.3	-	204.5
<b>Emissions CO2 Savings</b>	<b>Other Environmental Savings</b>	<b>Avoided FOM</b>	<b>Avoided Variable O&amp;M</b>	<b>Avoided Replacement Costs</b>	<b>Avoided Capacity Purchases</b>	<b>Total Savings</b>

17. **Cost-Effectiveness.** For the Combined Projects please provide the annual and cumulative values over the period 2019-2051 (in nominal and net present value) for each of the following categories: equipment and installation, incremental fixed O&M, fuel savings, emission savings separated by type, avoided replacement costs, avoided capacity purchases, avoided fixed O&M, avoided variable O&M, land lease rental payments and transmission upgrades. Please provide the response in electronic (Excel) format.

a. Please explain in detail the assumptions used to determine the value of each of the components evaluated in this analysis.

b. Explain whether DEF's emissions savings include CO2 emissions. If so, provide a sensitivity analysis without those costs and provide the revised annual and cumulative values for each category in electronic format.

c. Please provide a sensitivity of the fuel savings based upon a low fuel price forecast and a high fuel price forecast, with revised annual and cumulative values for each category in electronic form.

**Low Fuel with Carbon Case**

Nominal \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBary	Land Lease Rental Payments	Incremental FOM Trenton	Incremental FOM Lake Placid	Incremental FOM DeBary	Fuel Costs Savings	Emissions SO2 Savings	Emissions NOx Savings	Emissions CO2 Savings	Other Environmental Savings	Avoided FOM	Avoided Variable O&M
2019	-	-	-	-	-	-	-	0.4	(0.0)	0.0	-	(0.0)	-	(0.1)
2020	(13.7)	(8.3)	(9.3)	(0.7)	(1.0)	(0.6)	(0.7)	10.4	0.0	0.0	-	0.1	-	2.0
2021	(12.7)	(7.7)	(12.0)	(0.7)	(1.0)	(0.6)	(0.9)	11.5	0.0	0.0	-	0.1	-	2.0
2022	(12.1)	(7.3)	(11.2)	(0.7)	(1.1)	(0.6)	(0.9)	12.7	0.0	0.0	-	0.1	-	1.2
2023	(11.5)	(7.0)	(10.7)	(0.7)	(1.1)	(0.6)	(0.9)	11.6	0.0	0.0	-	0.1	-	1.9
2024	(11.0)	(6.7)	(10.3)	(0.7)	(1.1)	(0.6)	(1.0)	14.3	0.0	0.0	-	0.1	-	1.4
2025	(10.6)	(6.5)	(9.8)	(0.7)	(1.2)	(0.7)	(1.0)	13.9	0.0	0.0	1.3	0.1	-	2.1
2026	(8.7)	(5.3)	(8.1)	(0.7)	(1.2)	(0.7)	(1.0)	15.3	0.0	0.0	2.1	0.1	-	1.6
2027	(8.4)	(5.1)	(7.8)	(0.7)	(1.2)	(0.7)	(1.0)	12.8	(0.0)	(0.0)	2.2	(0.0)	0.3	3.3
2028	(8.1)	(5.0)	(7.6)	(0.7)	(1.3)	(0.7)	(1.1)	14.4	0.0	0.0	3.7	0.1	0.2	2.1
2029	(7.9)	(4.8)	(7.3)	(0.7)	(1.3)	(0.7)	(1.1)	14.9	(0.0)	0.0	3.4	0.0	-	1.7
2030	(7.6)	(4.6)	(7.1)	(0.7)	(1.3)	(0.8)	(1.1)	16.8	0.0	0.0	4.3	0.0	-	1.6
2031	(7.3)	(4.5)	(6.8)	(0.7)	(1.4)	(0.8)	(1.1)	16.8	0.0	0.0	4.8	0.0	-	1.7
2032	(7.0)	(4.3)	(6.6)	(0.7)	(1.4)	(0.8)	(1.2)	17.0	(0.0)	0.0	5.1	0.0	-	1.5
2033	(6.7)	(4.1)	(6.3)	(0.8)	(1.5)	(0.9)	(1.2)	17.5	-	0.0	5.7	0.0	-	1.5
2034	(6.5)	(4.0)	(6.1)	(0.8)	(1.5)	(0.8)	(1.2)	17.9	-	0.0	6.3	0.0	-	1.5
2035	(6.2)	(3.8)	(5.8)	(0.8)	(1.5)	(0.9)	(1.2)	17.7	0.0	0.0	7.5	0.0	0.7	2.5
2036	(5.9)	(3.6)	(5.6)	(0.8)	(1.5)	(0.9)	(1.3)	14.9	(0.0)	0.0	7.1	0.0	1.2	2.3
2037	(5.6)	(3.5)	(5.3)	(0.8)	(1.6)	(0.9)	(1.3)	16.5	-	0.0	7.7	0.0	0.5	2.1
2038	(5.9)	(3.6)	(5.4)	(0.8)	(1.6)	(0.9)	(1.3)	17.8	-	0.0	8.4	0.0	-	1.7
2039	(5.5)	(3.4)	(5.2)	(0.8)	(1.6)	(0.9)	(1.4)	19.0	-	0.0	8.9	0.0	-	1.8
2040	(5.3)	(3.2)	(5.0)	(0.8)	(1.7)	(1.0)	(1.4)	23.1	-	0.0	11.4	0.0	0.8	3.4
2041	(4.9)	(3.0)	(4.7)	(0.8)	(1.7)	(1.0)	(1.4)	20.1	(0.0)	0.0	10.1	0.0	0.5	2.5
2042	(4.7)	(2.9)	(4.5)	(0.9)	(1.8)	(1.0)	(1.5)	19.9	-	0.0	10.5	0.0	0.8	2.3
2043	(4.4)	(2.7)	(4.2)	(0.9)	(1.8)	(1.0)	(1.5)	16.6	0.0	0.0	9.0	0.0	1.4	0.9
2044	(4.1)	(2.5)	(4.0)	(0.9)	(1.9)	(1.1)	(1.5)	23.4	-	0.0	12.9	0.0	1.4	1.6
2045	(3.8)	(2.4)	(3.7)	(0.9)	(1.9)	(1.1)	(1.6)	24.3	-	0.0	13.6	0.0	1.5	1.0
2046	(3.5)	(2.2)	(3.5)	(0.9)	(1.9)	(1.1)	(1.6)	22.4	(0.9)	0.0	12.9	0.0	1.5	3.1
2047	(3.3)	(2.0)	(3.2)	(0.9)	(2.0)	(1.1)	(1.7)	22.4	-	0.0	13.2	0.0	1.5	2.7
2048	(3.0)	(1.9)	(3.0)	(0.9)	(2.0)	(1.2)	(1.7)	22.7	-	0.0	13.5	0.0	1.6	(4.7)

<b>2049</b>	(5.1)	(3.3)	(2.9)	(0.9)	(2.1)	(1.2)	(1.7)	22.5	-	0.0	13.4	0.0	1.6	3.0
<b>2050</b>	(0.2)	(0.1)	(2.3)	-	-	-	(0.4)	1.4	-	(0.0)	0.8	(0.0)	1.7	0.1
<b>Nominal \$M</b>	<b>Equipment and Installation Trenton</b>	<b>Equipment and Installation Lake Placid</b>	<b>Equipment and Installation DeBary</b>	<b>Land Lease Rental Payments</b>	<b>Incremental FOM Trenton</b>	<b>Incremental FOM Lake Placid</b>	<b>Incremental FOM DeBary</b>	<b>Fuel Costs Savings</b>	<b>Emissions SO2 Savings</b>	<b>Emissions Nox Savings</b>	<b>Emissions CO2 Savings</b>	<b>Other Environmental Savings</b>	<b>Avoided FOM</b>	<b>Avoided Variable O&amp;M</b>

Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings
-	-	0.3
-	-	(21.7)
-	-	(22.0)
-	-	(19.8)
-	-	(19.0)
-	-	(15.6)
-	-	(13.0)
-	-	(6.5)
28.2	-	21.7
9.1	-	5.3
(1.3)	-	(5.1)
(1.3)	-	(1.7)
(1.2)	-	(0.6)
(1.2)	-	0.4
(1.2)	-	2.0
(1.2)	-	3.7
33.7	-	41.8
45.5	-	51.4
8.7	-	16.5
(4.3)	-	4.1
(4.2)	-	6.6
33.9	-	54.2
8.4	-	23.9
33.7	-	50.1
47.6	-	59.0
46.9	-	70.2
46.2	-	71.2
45.5	-	70.6
44.9	-	70.4
44.2	-	63.6

Low Fuel with Carbon Case

PV \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBary	Land Lease Rental Payments	Incremental FOM Trenton	Incremental FOM Lake Placid	Incremental FOM DeBary	Fuel Costs Savings	Emissions SO2 Savings	Emissions Nox Savings	Emissions CO2 Savings	Other Environmental Savings
2019	-	-	-	-	-	-	-	0.4	(0.0)	0.0	-	(0.0)
2020	(12.8)	(7.8)	(8.7)	(0.6)	(0.9)	(0.5)	(0.6)	9.7	0.0	0.0	-	0.1
2021	(11.1)	(6.7)	(10.5)	(0.6)	(0.9)	(0.5)	(0.8)	10.0	0.0	0.0	-	0.1
2022	(9.8)	(6.0)	(9.1)	(0.5)	(0.9)	(0.5)	(0.7)	10.3	0.0	0.0	-	0.1
2023	(8.7)	(5.3)	(8.1)	(0.5)	(0.8)	(0.5)	(0.7)	8.8	0.0	0.0	-	0.0
2024	(7.8)	(4.7)	(7.3)	(0.5)	(0.8)	(0.4)	(0.7)	10.1	0.0	0.0	-	0.1
2025	(7.0)	(4.3)	(6.5)	(0.5)	(0.8)	(0.4)	(0.6)	9.2	0.0	0.0	0.9	0.1
2026	(5.4)	(3.3)	(5.0)	(0.4)	(0.7)	(0.4)	(0.6)	9.4	0.0	0.0	1.3	0.1
2027	(4.8)	(2.9)	(4.5)	(0.4)	(0.7)	(0.4)	(0.6)	7.4	(0.0)	(0.0)	1.2	(0.0)
2028	(4.4)	(2.7)	(4.1)	(0.4)	(0.7)	(0.4)	(0.6)	7.7	0.0	0.0	2.0	0.1
2029	(3.9)	(2.4)	(3.7)	(0.4)	(0.7)	(0.4)	(0.5)	7.5	(0.0)	0.0	1.7	0.0
2030	(3.5)	(2.2)	(3.3)	(0.3)	(0.6)	(0.4)	(0.5)	7.8	0.0	0.0	2.0	0.0
2031	(3.2)	(1.9)	(3.0)	(0.3)	(0.6)	(0.3)	(0.5)	7.3	0.0	0.0	2.1	0.0
2032	(2.9)	(1.7)	(2.7)	(0.3)	(0.6)	(0.3)	(0.5)	6.9	(0.0)	0.0	2.1	0.0
2033	(2.6)	(1.6)	(2.4)	(0.3)	(0.6)	(0.3)	(0.5)	6.6	-	0.0	2.2	0.0
2034	(2.3)	(1.4)	(2.2)	(0.3)	(0.5)	(0.3)	(0.4)	6.4	-	0.0	2.2	0.0
2035	(2.1)	(1.3)	(1.9)	(0.3)	(0.5)	(0.3)	(0.4)	5.9	0.0	0.0	2.5	0.0
2036	(1.8)	(1.1)	(1.7)	(0.2)	(0.5)	(0.3)	(0.4)	4.6	(0.0)	0.0	2.2	0.0
2037	(1.6)	(1.0)	(1.5)	(0.2)	(0.5)	(0.3)	(0.4)	4.8	-	0.0	2.2	0.0
2038	(1.6)	(1.0)	(1.5)	(0.2)	(0.4)	(0.2)	(0.4)	4.8	-	0.0	2.3	0.0
2039	(1.4)	(0.8)	(1.3)	(0.2)	(0.4)	(0.2)	(0.3)	4.8	-	0.0	2.2	0.0
2040	(1.2)	(0.8)	(1.2)	(0.2)	(0.4)	(0.2)	(0.3)	5.4	-	0.0	2.7	0.0
2041	(1.1)	(0.7)	(1.0)	(0.2)	(0.4)	(0.2)	(0.3)	4.4	(0.0)	0.0	2.2	0.0
2042	(1.0)	(0.6)	(0.9)	(0.2)	(0.4)	(0.2)	(0.3)	4.1	-	0.0	2.2	0.0
2043	(0.8)	(0.5)	(0.8)	(0.2)	(0.3)	(0.2)	(0.3)	3.2	0.0	0.0	1.7	0.0
2044	(0.7)	(0.4)	(0.7)	(0.2)	(0.3)	(0.2)	(0.3)	4.2	-	0.0	2.3	0.0
2045	(0.6)	(0.4)	(0.6)	(0.1)	(0.3)	(0.2)	(0.3)	4.0	-	0.0	2.3	0.0
2046	(0.5)	(0.3)	(0.5)	(0.1)	(0.3)	(0.2)	(0.3)	3.5	-	0.0	2.0	0.0
2047	(0.5)	(0.3)	(0.5)	(0.1)	(0.3)	(0.2)	(0.2)	3.2	-	0.0	1.9	0.0
2048	(0.4)	(0.3)	(0.4)	(0.1)	(0.3)	(0.2)	(0.2)	3.1	-	0.0	1.8	0.0

43.6	-	66.9
43.1	-	43.9
<b>Avoided Replacement Costs</b>	<b>Avoided Capacity Purchases</b>	<b>Total Savings</b>

<b>2049</b>	(0.6)	(0.4)	(0.4)	(0.1)	(0.3)	(0.2)	(0.2)	2.8	-	0.0	1.7	0.0
<b>2050</b>	(0.0)	(0.0)	(0.3)	-	-	-	(0.1)	0.2	-	(0.0)	0.1	(0.0)
<b>PV \$M</b>	<b>Equipment and Installation Trenton</b>	<b>Equipment and Installation Lake Placid</b>	<b>Equipment and Installation DeBary</b>	<b>Land Lease Rental Payments</b>	<b>Incremental FOM Trenton</b>	<b>Incremental FOM Lake Placid</b>	<b>Incremental FOM DeBary</b>	<b>Fuel Costs Savings</b>	<b>Emissions SO2 Savings</b>	<b>Emissions Nox Savings</b>	<b>Emissions CO2 Savings</b>	<b>Other Environmental Savings</b>

Avoided FOM	Avoided Variable O&M	Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings
-	(0.1)	-	-	0.3
-	1.8	-	-	(20.3)
-	1.7	-	-	(19.2)
-	1.0	-	-	(16.1)
-	1.4	-	-	(14.5)
-	1.0	-	-	(11.0)
-	1.4	-	-	(8.6)
-	1.0	-	-	(4.0)
0.2	1.9	16.2	-	12.5
0.1	1.1	4.9	-	2.8
-	0.9	(0.7)	-	(2.6)
-	0.8	(0.6)	-	(0.8)
-	0.7	(0.5)	-	(0.2)
-	0.6	(0.5)	-	0.2
-	0.6	(0.4)	-	0.8
-	0.5	(0.4)	-	1.3
0.2	0.8	11.2	-	13.9
0.4	0.7	14.1	-	15.9
0.1	0.6	2.5	-	4.8
-	0.5	(1.2)	-	1.1
-	0.5	(1.1)	-	1.7
0.2	0.8	7.9	-	12.7
0.1	0.5	1.8	-	5.2
0.2	0.5	6.9	-	10.2
0.3	0.2	9.1	-	11.3
0.3	0.3	8.3	-	12.5
0.2	0.2	7.7	-	11.8
0.2	0.5	7.1	-	10.9
0.2	0.4	6.5	-	10.2
0.2	(0.6)	6.0	-	8.6

Low Fuel with Carbon Case

CPVRR \$M	Equipment and Installation Trenton	Equipment and Installation Lake Placid	Equipment and Installation DeBary	Land Lease Rental Payments	Incremental FOM Trenton	Incremental FOM Lake Placid	Incremental FOM DeBary	Fuel Costs Savings	Emissions SO2 Savings	Emissions Nox Savings
2019	-	-	-	-	-	-	-	0.4	(0.0)	0.0
2020	(12.8)	(7.8)	(8.7)	(0.6)	(0.9)	(0.5)	(0.6)	10.1	0.0	0.0
2021	(23.9)	(14.5)	(19.2)	(1.2)	(1.8)	(1.0)	(1.4)	20.2	0.0	0.0
2022	(33.7)	(20.4)	(28.3)	(1.7)	(2.7)	(1.5)	(2.1)	30.5	0.0	0.0
2023	(42.4)	(25.8)	(36.4)	(2.2)	(3.5)	(2.0)	(2.8)	39.2	0.0	0.1
2024	(50.2)	(30.5)	(43.7)	(2.7)	(4.3)	(2.4)	(3.5)	49.3	0.0	0.1
2025	(57.2)	(34.8)	(50.1)	(3.2)	(5.1)	(2.9)	(4.2)	58.5	0.0	0.1
2026	(62.6)	(38.0)	(55.1)	(3.6)	(5.8)	(3.3)	(4.8)	67.9	0.0	0.1
2027	(67.4)	(41.0)	(59.6)	(4.0)	(6.5)	(3.7)	(5.4)	75.3	0.0	0.1
2028	(71.8)	(43.6)	(63.7)	(4.4)	(7.2)	(4.1)	(5.9)	83.0	0.0	0.1
2029	(75.7)	(46.0)	(67.3)	(4.8)	(7.9)	(4.5)	(6.5)	90.5	0.0	0.1
2030	(79.3)	(48.2)	(70.6)	(5.1)	(8.5)	(4.8)	(7.0)	98.4	0.0	0.1
2031	(82.5)	(50.1)	(73.6)	(5.4)	(9.1)	(5.2)	(7.5)	105.7	0.0	0.1
2032	(85.3)	(51.9)	(76.3)	(5.8)	(9.7)	(5.5)	(8.0)	112.6	0.0	0.1
2033	(87.9)	(53.5)	(78.7)	(6.0)	(10.2)	(5.8)	(8.4)	119.3	0.0	0.1
2034	(90.2)	(54.9)	(80.9)	(6.3)	(10.8)	(6.1)	(8.9)	125.6	0.0	0.1
2035	(92.2)	(56.1)	(82.8)	(6.6)	(11.2)	(6.4)	(9.3)	131.5	0.0	0.1
2036	(94.1)	(57.2)	(84.5)	(6.8)	(11.7)	(6.7)	(9.7)	136.1	0.0	0.1
2037	(95.7)	(58.3)	(86.1)	(7.0)	(12.2)	(6.9)	(10.0)	140.9	0.0	0.1
2038	(97.3)	(59.2)	(87.5)	(7.3)	(12.6)	(7.2)	(10.4)	145.7	0.0	0.1
2039	(98.7)	(60.1)	(88.8)	(7.5)	(13.0)	(7.4)	(10.7)	150.4	0.0	0.1
2040	(99.9)	(60.8)	(90.0)	(7.7)	(13.4)	(7.6)	(11.1)	155.9	0.0	0.2
2041	(101.0)	(61.5)	(91.0)	(7.8)	(13.8)	(7.9)	(11.4)	160.3	0.0	0.2
2042	(101.9)	(62.0)	(92.0)	(8.0)	(14.2)	(8.1)	(11.7)	164.3	0.0	0.2
2043	(102.8)	(62.6)	(92.8)	(8.2)	(14.5)	(8.3)	(12.0)	167.5	0.0	0.2
2044	(103.5)	(63.0)	(93.5)	(8.3)	(14.8)	(8.5)	(12.2)	171.7	0.0	0.2
2045	(104.1)	(63.4)	(94.1)	(8.5)	(15.1)	(8.6)	(12.5)	175.7	0.0	0.2
2046	(104.7)	(63.7)	(94.6)	(8.6)	(15.4)	(8.8)	(12.8)	179.2	0.0	0.2
2047	(105.2)	(64.0)	(95.1)	(8.8)	(15.7)	(9.0)	(13.0)	182.4	0.0	0.2
2048	(105.6)	(64.3)	(95.5)	(8.9)	(16.0)	(9.1)	(13.2)	185.4	0.0	0.2

0.2	0.4	5.5	-	8.4
0.2	0.0	5.1	-	5.2
<b>Avoided FOM</b>	<b>Avoided Variable O&amp;M</b>	<b>Avoided Replacement Costs</b>	<b>Avoided Capacity Purchases</b>	<b>Total Savings</b>

<b>2049</b>	(106.2)	(64.7)	(95.9)	(9.0)	(16.3)	(9.3)	(13.4)	188.3	0.0	0.2
<b>2050</b>	(106.3)	(64.7)	(96.1)	(9.0)	(16.3)	(9.3)	(13.5)	188.5	0.0	0.2
<b>CPVRR \$M</b>	<b>Equipment and Installation Trenton</b>	<b>Equipment and Installation Lake Placid</b>	<b>Equipment and Installation DeBary</b>	<b>Land Lease Rental Payments</b>	<b>Incremental FOM Trenton</b>	<b>Incremental FOM Lake Placid</b>	<b>Incremental FOM DeBary</b>	<b>Fuel Costs Savings</b>	<b>Emissions SO2 Savings</b>	<b>Emissions Nox Savings</b>



Emissions CO2 Savings	Other Environmental Savings	Avoided FOM	Avoided Variable O&M	Avoided Replacement Costs	Avoided Capacity Purchases	Total Savings
-	(0.0)	-	(0.1)	-	-	0.3
-	0.1	-	1.7	-	-	(19.9)
-	0.2	-	3.5	-	-	(39.1)
-	0.3	-	4.4	-	-	(55.3)
-	0.3	-	5.9	-	-	(69.7)
-	0.4	-	6.8	-	-	(80.7)
0.9	0.5	-	8.2	-	-	(89.3)
2.2	0.5	-	9.2	-	-	(93.3)
3.4	0.5	0.2	11.1	16.2	-	(80.8)
5.4	0.6	0.3	12.3	21.1	-	(77.9)
7.1	0.6	0.3	13.1	20.5	-	(80.5)
9.1	0.6	0.3	13.9	19.9	-	(81.3)
11.2	0.6	0.3	14.6	19.4	-	(81.5)
13.3	0.6	0.3	15.2	18.9	-	(81.4)
15.5	0.6	0.3	15.8	18.4	-	(80.6)
17.7	0.6	0.3	16.3	18.0	-	(79.3)
20.2	0.6	0.5	17.2	29.2	-	(65.4)
22.4	0.6	0.8	17.9	43.2	-	(49.5)
24.6	0.6	1.0	18.5	45.7	-	(44.8)
26.9	0.7	1.0	18.9	44.6	-	(43.7)
29.1	0.7	1.0	19.4	43.5	-	(42.0)
31.8	0.7	1.2	20.2	51.4	-	(29.3)
34.0	0.7	1.3	20.7	53.3	-	(24.1)
36.1	0.7	1.5	21.2	60.1	-	(13.8)
37.8	0.7	1.7	21.4	69.2	-	(2.6)
40.1	0.7	2.0	21.6	77.6	-	9.9
42.4	0.7	2.2	21.8	85.2	-	21.7
44.4	0.7	2.4	22.3	92.3	-	32.7
46.3	0.7	2.7	22.7	98.8	-	42.9
48.1	0.7	2.9	22.0	104.7	-	51.5

49.8	0.7	3.1	22.4	110.2	-	59.9
49.9	0.7	3.3	22.4	115.3	-	65.0
<b>Emissions CO2 Savings</b>	<b>Other Environmental Savings</b>	<b>Avoided FOM</b>	<b>Avoided Variable O&amp;M</b>	<b>Avoided Replacement Costs</b>	<b>Avoided Capacity Purchases</b>	<b>Total Savings</b>

**DUKE ENERGY FLORIDA**

SCHEDULE 7.1  
FORECAST OF CAPACITY, DEMAND AND SCHEDULED MAINTENANCE  
AT TIME OF SUMMER PEAK

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(10)	(11)
	TOTAL INSTALLED CAPACITY	FIRM <sup>a</sup> CAPACITY IMPORT	FIRM CAPACITY EXPORT	QF <sup>b</sup>	TOTAL CAPACITY AVAILABLE	SYSTEM FIRM SUMMER PEAK DEMAND	RESERVE MARGIN BEFORE MAINTENANCE	SCHEDULED MAINTENANCE	RESERVE MARGIN AFTER MAINTENANCE
YEAR	MW	MW	MW	MW	MW	MW	MW	MW	MW
2019	9,794	1,878	0	78	11,750	9,019	2,731	0	2,731
2020	9,853	1,878	0	78	11,809	8,953	2,856	0	2,856
2021	9,853	1,454	0	78	11,385	9,026	2,359	0	2,359
2022	9,852	1,454	0	78	11,384	9,082	2,302	0	2,302
2023	9,852	1,454	0	78	11,384	8,836	2,548	0	2,548
2024	10,188	859	0	78	11,125	8,907	2,218	0	2,218
2025	10,188	744	0	78	11,009	8,766	2,244	0	2,244
2026	10,016	640	0	78	10,734	8,839	1,895	0	1,895
2027	10,777	0	0	78	10,855	8,920	1,934	0	1,934
2028	10,776	0	0	78	10,854	9,027	1,827	0	1,827
2029	11,014	0	0	78	11,091	9,129	1,962	0	1,962
2030	11,013	0	0	78	11,091	9,212	1,879	0	1,879
2031	11,013	0	0	78	11,091	9,255	1,836	0	1,836
2032	11,231	0	0	78	11,309	9,361	1,947	0	1,947
2033	11,230	0	0	78	11,308	9,449	1,859	0	1,859
2034	11,373	0	0	78	11,451	9,558	1,893	0	1,893
2035	11,628	0	0	78	11,706	9,669	2,037	0	2,037
2036	11,316	0	0	78	11,394	9,391	2,003	0	2,003
2037	11,315	0	0	78	11,393	9,497	1,897	0	1,897
2038	11,438	0	0	78	11,516	9,606	1,910	0	1,910
2039	11,656	0	0	78	11,734	9,717	2,017	0	2,017
2040	11,874	0	0	78	11,952	9,836	2,116	0	2,116
2041	11,874	0	0	78	11,951	9,950	2,002	0	2,002
2042	12,092	0	0	78	12,169	10,071	2,099	0	2,099
2043	12,310	0	0	78	12,387	10,200	2,188	0	2,188

Notes:

- a. FIRM Capacity Import includes Cogeneration, Utility and Independent Power Producers, and Short Term Purchase Contracts.
- b. QF includes Firm Renewables

DUKE ENERGY FLORIDA

SCHEDULE 7.1  
FORECAST OF CAPACITY, DEMAND AND SCHEDULED MAINTENANCE  
AT TIME OF SUMMER PEAK

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(10)	(11)
YEAR	TOTAL INSTALLED CAPACITY MW	FIRM <sup>a</sup> CAPACITY IMPORT MW	FIRM CAPACITY EXPORT MW	QF <sup>b</sup> MW	TOTAL CAPACITY AVAILABLE MW	SYSTEM FIRM SUMMER PEAK DEMAND MW	RESERVE MARGIN BEFORE MAINTENANCE MW	SCHEDULED MAINTENANCE MW	RESERVE MARGIN AFTER MAINTENANCE MW
2019	9,794	1,878	0	78	11,750	9,019	2,731	0	2,731
2020	9,955	1,878	0	78	11,911	8,953	2,958	0	2,958
2021	9,954	1,454	0	78	11,486	9,026	2,460	0	2,460
2022	9,953	1,454	0	78	11,485	9,082	2,403	0	2,403
2023	9,952	1,454	0	78	11,484	8,836	2,648	0	2,648
2024	10,288	859	0	78	11,225	8,907	2,318	0	2,318
2025	10,287	744	0	78	11,109	8,766	2,343	0	2,343
2026	10,115	640	0	78	10,833	8,839	1,993	0	1,993
2027	10,657	0	0	78	10,734	8,920	1,814	0	1,814
2028	10,874	0	0	78	10,952	9,027	1,924	0	1,924
2029	11,111	0	0	78	11,188	9,129	2,059	0	2,059
2030	11,110	0	0	78	11,188	9,212	1,975	0	1,975
2031	11,109	0	0	78	11,187	9,255	1,931	0	1,931
2032	11,326	0	0	78	11,404	9,361	2,043	0	2,043
2033	11,325	0	0	78	11,403	9,449	1,954	0	1,954
2034	11,468	0	0	78	11,545	9,558	1,987	0	1,987
2035	11,504	0	0	78	11,582	9,669	1,912	0	1,912
2036	11,191	0	0	78	11,269	9,391	1,878	0	1,878
2037	11,408	0	0	78	11,486	9,497	1,990	0	1,990
2038	11,530	0	0	78	11,608	9,606	2,002	0	2,002
2039	11,748	0	0	78	11,826	9,717	2,108	0	2,108
2040	11,747	0	0	78	11,825	9,836	1,988	0	1,988
2041	11,964	0	0	78	12,042	9,950	2,092	0	2,092
2042	11,963	0	0	78	12,041	10,071	1,971	0	1,971
2043	12,181	0	0	78	12,259	10,200	2,059	0	2,059

Notes:

a. FIRM Capacity Import includes Cogeneration, Utility and Independent Power Producers, and Short Term Purchase Contracts

b. QF includes Firm Renewables

**19. Resource Planning.**

Please provide a table with DEF's resource plans, including new units, unit retirements, and firm PPAs for the period 2019-2051, for the following scenarios:

**a. Neither Project.**

Year	2019 TYSP - Without the proposed Solar Projects	Firm Summer Rating MWs
2019	Bartow CC Steam Optimizaion (Nov '19) St Petersburg Pier Solar 0.35MW (Dec '19)	65 0
2020	Columbia Solar 74.9MW (Mar '20) Avon Park 1-2 (May '20) Higgins 1-4 Retirement (May '20)	43 (48) 0
2021	Southern UPS Contract Expires - Franklin (May '21)	(424)
2022		
2023	Orlando Expires (Dec '23)	(115)
2024	Shady Hills (Apr '24) Osprey Transmission Upgrade (May '24) * Mulberry (Aug '24)	(480) 337 (115)
2025	Orange Expires (Dec '25) Bayboro 1-4 (Nov '25)	(104) (171)
2026		
2027	Debary 2-6 (May '27) Bartow 1 and 3 (May '27) Vandolah Expires (May '27) 5 CTs (June '27)	(249) (82) (640) 1092
2028		
2029	Anclote 1-2 (May '29) CC2X1 J (Jun' 29)	(1003) 1241
2030		
2031		
2032	CT (Jun '32)	218
2033		
2034	Bartow 2 and 4 (May '34) Intercession City 1-6 (May '34) Suwannee River 1-3 (May '34) 3 CTs (Jun '34)	(86) (277) (149) 655
2035	Crystal River North (May '35) CC2X1 J (Jun' 35) 2 CTs (Jun '35)	(1422) 1241 437
2036	Debary 7-10 (May '36)	(312)
2037		
2038	Intercession City 7-10 (May '38) 2 CTs (Jun '38)	(314) 437
2039	CT (Jun '39)	218
2040	CT (Jun '40)	218
2041		
2042	CT (Jun '42)	218
2043	CT (Jun '43)	218

Total CTs MWs	3713
Total CCs MWs	2481
CT Capacity	218.4
CC Capacity	1240.6
Number of CTs	17.00
Number of CCs	2.00

20190072-DEF-001057

**19. Resource Planning.**

Please provide a table with DEF's resource plans, including new units, unit retirements, and firm PPAs for the period 2019-2051, for the following scenarios:

**b. The Combined Projects.**

Year	2019 TYSP - with Trenton, Lake Placid, and DeBary	Firm Summer Rating MWs
2019	Trenton 74.9MW (Dec '19)	43
	Lake Placid 45MW (Dec '19)	26
	Bartow CC Steam Optimizaion (Nov '19)	65
	St Petersburg Pier 0.35MW (Dec '19)	0
2020	Avon Park 1-2 (May '20)	(48)
	Higgins 1-4 Retirement (May '20)	0
	Columbia 74.9MW (Mar '20)	43
	Debary 74.5MW (Mar '20)	34
2021	Southern UPS Contract Expires - Franklin (May '21)	(424)
2022		
2023	Orlando Expires (Dec '23)	(115)
	Shady Hills (Apr '24)	(480)
2024	Osprey Transmission Upgrade (May '24) *	337
	Mulberry (Aug '24)	(115)
2025	Orange Expires (Dec '25)	(104)
	Bayboro 1-4 (Nov '25)	(171)
2026		
2027	Debary 2-6 (May '27)	(249)
	Bartow 1 and 3 (May '27)	(82)
	Vandolah Expires (May '27)	(640)
	4 CTs (June '27)	874
2028	CT (Jun '28)	218
2029	Anclote 1-2 (May '29)	(1003)
	CC2X1 J (Jun' 29)	1241
2030		
2031		
2032	CT (Jun '32)	218
2033		
2034	Bartow 2 and 4 (May '34)	(86)
	Intercession City 1-6 (May '34)	(277)
	Suwannee River 1-3 (May '34)	(149)
	3 CTs (Jun '34)	655
2035	Crystal River North (May '35)	(1422)
	CC2X1 J (Jun' 35)	1241
	CT (Jun '35)	218
2036	Debary 7-10 (May '36)	(312)
2037	CT (Jun '37)	218
2038	Intercession City 7-10 (May '38)	(314)
	2 CTs (Jun '38)	437
2039	CT (Jun '39)	218
2040		
2041	CT (Jun '41)	218
2042		
2043	CT (Jun '43)	218

Total CTs MWs	3494
Total CCs MWs	2481
CT Capacity	218.4
CC Capacity	1240.6
Number of CTs	16.00
Number of CCs	2.00

21. **Resource Planning.**

21

Please provide the expected annual outputs, projected nameplate, firm summer capacity and capacity factors of the solar facilities listed below for the period 2019-2051. Provide the response in tabular electronic form in Excel.

- a. The Trenton Project.
- b. The Lake Placid Project.
- c. The DeBary Project.

	Trenton	Lake Placid	DeBary
Nameplate	74.9	45.0	74.5
Firm Summer Capacity	42.7	25.7	33.5

Year	Output (Gwh)		
	Trenton	Lake Placid	DeBary
2019	10.7	7.1	-
2020	188.1	113.1	136.7
2021	186.6	112.4	159.2
2022	185.7	111.8	158.4
2023	184.7	111.2	157.6
2024	184.4	110.9	157.3
2025	182.9	110.1	156.0
2026	182.0	109.6	155.2
2027	181.1	109.0	154.4
2028	180.7	108.6	154.2
2029	179.3	108.0	152.9
2030	178.4	107.4	152.1
2031	177.5	106.9	151.4
2032	177.1	106.5	151.1
2033	175.7	105.8	149.9
2034	174.8	105.3	149.1
2035	173.9	104.7	148.4
2036	173.6	104.4	148.1
2037	172.2	103.7	146.9
2038	171.4	103.2	146.2
2039	170.5	102.7	145.4
2040	170.2	102.3	145.2
2041	168.8	101.6	144.0
2042	168.0	101.1	143.3
2043	167.1	100.6	142.5
2044	166.8	100.3	142.3
2045	165.5	99.6	141.1
2046	164.6	99.1	140.4
2047	163.8	98.6	139.7
2048	163.1	98.5	139.1
2049	153.0	91.6	138.3
2050	-	-	20.0



Capacity Factor			
Year	Trenton	Lake Placid	DeBary
2019	19.2%	21.1%	0.0%
2020	28.6%	28.6%	25.0%
2021	28.6%	28.7%	24.5%
2022	28.6%	28.7%	24.5%
2023	28.6%	28.7%	24.5%
2024	28.6%	28.6%	24.5%
2025	28.6%	28.7%	24.5%
2026	28.6%	28.7%	24.5%
2027	28.6%	28.7%	24.5%
2028	28.6%	28.6%	24.5%
2029	28.6%	28.7%	24.5%
2030	28.6%	28.7%	24.5%
2031	28.6%	28.7%	24.5%
2032	28.6%	28.6%	24.5%
2033	28.6%	28.7%	24.5%
2034	28.6%	28.7%	24.5%
2035	28.6%	28.7%	24.5%
2036	28.6%	28.6%	24.5%
2037	28.6%	28.7%	24.5%
2038	28.6%	28.7%	24.5%
2039	28.6%	28.7%	24.5%
2040	28.6%	28.6%	24.5%
2041	28.6%	28.7%	24.5%
2042	28.6%	28.7%	24.5%
2043	28.6%	28.7%	24.5%
2044	28.6%	28.6%	24.5%
2045	28.6%	28.7%	24.5%
2046	28.6%	28.7%	24.5%
2047	28.6%	28.7%	24.5%
2048	28.5%	28.7%	24.4%
2049	29.5%	29.4%	24.5%
2050	0.0%	0.0%	21.9%

DEF Response to Staff Interrogatory 2 Q#22  
Docket No. 20190072  
Estimated Monthly Residential Bill Impacts 2019-2051

Year	\$/1000 kWh *
2019	-\$0.01
2020	\$0.59
2021	\$0.59
2022	\$0.52
2023	\$0.50
2024	\$0.40
2025	\$0.30
2026	\$0.11
2027	-\$0.59
2028	-\$0.21
2029	\$0.02
2030	-\$0.07
2031	-\$0.11
2032	-\$0.16
2033	-\$0.23
2034	-\$0.26
2035	-\$1.09
2036	-\$1.31
2037	-\$0.58
2038	-\$0.30
2039	-\$0.36
2040	-\$1.42
2041	-\$0.77
2042	-\$1.27
2043	-\$1.42
2044	-\$1.73
2045	-\$1.72
2046	-\$1.69
2047	-\$1.67
2048	-\$1.52
2049	-\$1.57
2050 **	-\$0.87

\*Negative values represent Customer Bill Savings from the Combined SoBRA 2 Projects Scenario vs. No Projects Scenario  
\*\*2050 is the final year of service for SoBRA 2 (30 yr life projects)  
(only DeBary In-Service for partial year 2050)

35. **Need.**

Please refer to witness Borsch's Direct testimony, page 10, lines 12-13. Please state DEF's current fuel mix (before the combined solar generation projects are included), compared to what DEF's fuel mix will be when the combined solar generation projects are included.

<b>%</b>	<b>Current</b>	<b>With Trenton, Lake Placid, and DeBary</b>	<b>700MW Solar</b>
GAS	81.9%	81.6%	81.1%
COAL	12.2%	11.1%	8.9%
OIL	0.0%	0.1%	0.1%
REN	1.6%	1.6%	1.5%
COGEN	3.8%	3.7%	3.7%
SOLAR	0.5%	1.9%	4.7%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

36. **Resource Planning.** Please provide the reserve margin in percentage of net firm system peak for years 2019 to 2051 for the following scenarios

a. Neither Project.

2019	30%
2020	32%
2021	26%
2022	25%
2023	29%
2024	25%
2025	26%
2026	21%
2027	22%
2028	20%
2029	22%
2030	20%
2031	20%
2032	21%
2033	20%
2034	20%
2035	21%
2036	21%
2037	20%
2038	20%
2039	21%
2040	22%
2041	20%
2042	21%
2043	21%
2044	21%
2045	21%
2046	21%
2047	21%
2048	21%
2049	21%
2050	21%

b. The Combined Projects.

2019	30%
2020	33%
2021	27%
2022	27%
2023	30%
2024	26%
2025	27%
2026	23%
2027	20%
2028	21%
2029	23%
2030	21%
2031	21%
2032	22%
2033	21%
2034	21%
2035	20%
2036	20%
2037	21%
2038	21%
2039	22%
2040	20%
2041	21%
2042	20%
2043	20%
2044	20%
2045	20%
2046	20%
2047	20%
2048	20%
2049	20%
2050	20%

37. **Cost-Effectiveness.** For each of the scenarios listed below provide the avoided fossil fuels (avoided oil barrels, avoided natural gas MMcf, avoided coal short tons) for the years 2019 to 2051. Please explain how calculations were made for each fuel. Provide the response in tabular electronic format in Excel.

	Avoided Oil	Avoided Natural Gas	Avoided Coal
Year	Oil Barrels	MMcf	Short Tons
2019	0	188	(3,669)
2020	4,560	2,912	27,149
2021	10,297	2,826	43,382
2022	12,309	3,228	36,554
2023	7,372	3,539	10,374
2024	21,686	2,907	40,954
2025	18,956	3,068	24,867
2026	24,115	2,980	28,755
2027	(10,525)	3,370	11,088
2028	(4,745)	2,713	47,626
2029	6,937	2,523	40,225
2030	12,750	2,730	26,290
2031	4,395	2,766	24,483
2032	3,035	2,969	12,610
2033	6,160	3,087	7,552
2034	2,405	2,996	10,693
2035	603	3,388	550
2036	(8,433)	3,171	0
2037	(86)	3,129	0
2038	855	3,130	0
2039	1,420	3,104	0
2040	(2,391)	3,763	0
2041	1,566	3,144	0
2042	(5,358)	3,188	0
2043	(4,280)	2,594	0
2044	12	3,447	0
2045	0	3,417	0
2046	0	3,131	0
2047	0	3,059	0
2048	0	3,005	0
2049	0	2,925	0
2050	0	166	0

The years when the values are negative (instead of avoiding fossil fuels additional fossil fuels are consumed) are due to the resource plan differences.

The avoided fossil fuels are calculated as the difference between the fuel consumed for the neither project case minus the fuel consumed for the combined projects case where Trenton, Lake Placid, and DeBary solar projects are included.

The addition of Trenton, Lake Placid, and DeBary affects the resource plan:

- 2027 CT delayed to 2028
- 2035 CT delayed to 2037
- 2040 CT delayed to 2041
- 2042 CT delayed to 2043
- 2043 CT avoided

The new CTs are more efficient than existing peaking units. When new CTs are delayed or avoided between one plan and the other, some generation shifts between fuel sources causing short term increases in one fuel use even as the total fossil generation is reduced. Similarly, the introduction of the solar can cause shifts between the coal and gas units which results in minor increases in fuel use for specific (coal) units while the overall fuel use decreases.

16

DEF response to Staff 1<sup>st</sup> Production of  
Documents Nos. 1-2.

FLORIDA PUBLIC SERVICE COMMISSION  
DOCKET: 20190072-EI EXHIBIT: 16  
PARTY: STAFF HEARING EXHIBITS  
DESCRIPTION: Borsch (1,2)

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

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In re: Duke Energy Florida, LLC’s Petition  
for a Limited Proceeding to Approve Second  
Solar Base Rate Adjustment

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Docket No. 20190072-EI

Filed: June 13, 2019

**DUKE ENERGY FLORIDA, LLC’S RESPONSE TO STAFF’S  
FIRST REQUEST FOR PRODUCTION OF DOCUMENTS (NOS. 1-2)**

Duke Energy Florida, LLC (“DEF”), responds to the Staff of the Florida Public Service Commission’s (“Staff”) First Request for Production of Documents to DEF (Nos. 1-2) as follows:

**DOCUMENTS REQUESTED**

1. Referring to witness Borsch’s Direct Testimony, page 9, line 11, please provide DEF’s “CO<sub>2</sub> allowance price projections.”

**Response:**

\$/Ton	CO <sub>2</sub> allowance price projections
2019	\$ -
2020	\$ -
2021	\$ -
2022	\$ -
2023	\$ -
2024	\$ -
2025	\$ 5.00
2026	\$ 8.00
2027	\$ 11.00
2028	\$ 14.00
2029	\$ 17.00
2030	\$ 20.00
2031	\$ 23.00
2032	\$ 26.00
2033	\$ 29.00
2034	\$ 32.00
2035	\$ 35.00
2036	\$ 38.00
2037	\$ 41.00
2038	\$ 44.00
2039	\$ 47.00
2040	\$ 50.00
2041	\$ 53.00
2042	\$ 56.00
2043	\$ 59.00

2. Referring to witness Borsch's Exhibit BMHB-4, please provide the forecasts of "CO<sub>2</sub> Cost" (in electronic Excel format) used in deriving the Cost-Effectiveness (CPVRR) Analysis, if they are different from those provided in response to POD No. 1 above.

**Response:**

The forecast of CO<sub>2</sub> Costs used in deriving the Cost-Effectiveness (CPVRR) Analysis is the same as the one provided in response to POD No. 1 above.



17

DEF response to Staff 2<sup>nd</sup> Production of  
Documents Nos. 3 - 5.

**Response contained on Staff Hearing  
Exhibits CD for Nos. 3 – 5.**

**Confidential DN. 05004-2019**

FLORIDA PUBLIC SERVICE COMMISSION  
DOCKET: 20190072-EI EXHIBIT: 17  
PARTY: STAFF HEARING EXHIBITS  
DESCRIPTION: Borsch (3 -5)

18

DEF response to  
Staff 3<sup>rd</sup> Production of Documents and  
Supplemental Response  
No. 6.

**Confidential DN. 05111-2019**

FLORIDA PUBLIC SERVICE COMMISSION  
DOCKET: 20190072-EI EXHIBIT: 18  
PARTY: STAFF HEARING EXHIBITS  
DESCRIPTION: Stout (6)

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

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In re: Duke Energy Florida, LLC's Petition  
for a Limited Proceeding to Approve Second  
Solar Base Rate Adjustment

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Docket No. 20190072-EI

Filed: June 24, 2019

**DUKE ENERGY FLORIDA, LLC'S RESPONSE TO STAFF'S  
THIRD REQUEST FOR PRODUCTION OF DOCUMENTS (NO. 6)**

Duke Energy Florida, LLC ("DEF"), responds to the Staff of the Florida Public Service Commission's ("Staff") Third Request for Production of Documents to DEF (No. 6) as follows:

**DOCUMENTS REQUESTED**

- 6 Please provide copies of the land leases for the Trenton and Lake Placid Projects.

**Response:**

Please see the attached documents bearing bates numbers 20190072-DEF-001066 through 20190072-DEF-001174. The attachments are confidential; a redacted copy is attached hereto and unredacted copies have been filed with the Florida Public Service Commission ("Commission") along with DEF's Request Confidential Classification dated June 24, 2019.

REDACTED

SOLAR GROUND LEASE AGREEMENT

Site No.: 108116  
Land Unit No.: 1710417  
Project No.: 108116-461394

Summary of Solar Ground Lease Agreement Terms:

This Summary outlines the terms of the attached Solar Ground Lease Agreement ("Lease"). In the event of any discrepancy, the terms and conditions of the Lease shall prevail. All capitalized terms used in this Summary shall have the same meaning as set forth in the Lease.

Effective Date: May 1, 2019.  
Landlord: Cow Slough Inc., a Florida corporation  
Tenant: Duke Energy Florida, LLC

Summary Description of Land: Approximately 369.48 ~~420~~ acres of land located in Highlands County, Florida, more particularly described in Exhibit A attached hereto and incorporated herein by this reference.

Term of Lease: The term of the Lease shall commence on the Effective Date and shall end at 11:59 P.M. local time on the date that is thirty (30) years after the Commencement Date. In addition, Tenant may exercise the right to extend the Term for two (2) 5-year periods.

Commencement Date: The Commencement Date of the Term is the Commercial Operation Date (as defined in Section 2(a) of the Lease).

Number, Length of Optional Renewal Term(s): Two (2) consecutive Renewal Terms of five (5) years each.

Due Diligence Period: The Due Diligence Period shall be the Option Period (as defined in the Option Agreement), and shall have concluded as of the Lease Effective Date.

Construction Period: The Construction Period commences upon the Construction Commencement Date, which is also the Lease Effective Date, and expires upon the Commercial Operation Date (which is the same date as the Commencement Date of the Term).

Rent: Tenant shall pay Landlord the sum of [REDACTED] for the first year of the Construction Period, and thereafter until expiration of the Construction Period [REDACTED]. Commencing the Commercial Operation Date, Tenant shall pay Landlord annual rent in the sum of [REDACTED] prorated for fractional acres).

Rent Increase: Commencing on the 1st anniversary of the Commencement Date and on each subsequent anniversary of the Commercial Operation Date during the Term, the annual Rent shall increase by [REDACTED].

Addresses:

Landlord:	Tenant:
Cow Slough Inc John F. Smoak, III, President 1025 CR 17 N Lake Placid, FL 33852	Duke Energy / JLL, Inc. Lease Administration Attn: Nancy J. Holmes 550 South Tryon Street, Mail Code: DEC22A Charlotte, NC 28202
Copy to: Rider & Thompson, P.A. 13 N. Oak Ave Lake Placid, FL 33852	

Handwritten initials/signature in blue ink.

## SOLAR GROUND LEASE AGREEMENT

**THIS SOLAR GROUND LEASE AGREEMENT** (this "Lease") is made and entered into as of the 1st day of May, 2019 (the "Effective Date"), by and between **Cow Slough Inc.**, a Florida corporation (the "**Landlord**"), and **Duke Energy Florida, LLC**, a Florida Limited Liability Company (the "**Tenant**").

### RECITALS

A. The Landlord, as the "**Optionor**" and EDF Renewables Distributed Solutions, Inc., a Delaware corporation, as the "**Original Optionee**", previously entered into that certain Option Agreement to Lease Real Property, dated as of July 17, 2018, a memorandum of which was recorded in the Official Records of Highlands County, Florida on 9/10/18 as Document No. Book 2654, Page 1992 (collectively, the "**Option Agreement**"). in connection with the Land (as defined in **Section 1** below) located in Highlands County, Florida, and more particularly described on **Exhibit A** attached hereto and incorporated herein by reference.

B. As permitted by the Option Agreement, Original Optionee assigned all right, title and interest under the Option Agreement to Tenant, as the "**Optionee**" by that certain Assignment and Assumptions Agreement dated 1/24/19, recorded in the Official Records of Highlands County, Florida on \_\_\_\_\_ as Document No. \_\_\_\_\_.

C. In accordance with the terms of the Option Agreement, the Tenant exercised the option to lease the Land and Landlord and Tenant are entering into this Lease as of the Effective Date.

NOW THEREFORE, consideration of the mutual covenants and conditions contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the Landlord and the Tenant, the parties agree as follows:

### AGREEMENT

**1. Premises and Intended Use.** In consideration of the rents, terms, covenants, and agreements set forth in this Lease to be paid, kept, and performed, Landlord leases to Tenant and Tenant leases from Landlord ~~approximately 420 acres~~<sup>369.48</sup> of land, located in Highlands County, Florida, as more particularly described and/or depicted on **Exhibit A** attached hereto and incorporated herein by reference (the "**Land**"), and all improvements, fixtures, personal property and trade fixtures now or in the future located thereon (but excluding any property required to be removed by Landlord pursuant to **Section 6(b)** of this Lease), together with all other appurtenances, tenements, hereditaments, rights and easements pertaining to the Land and the improvements now or in the future located thereon (the Land, together with the above-described property, improvements and appurtenances are hereinafter collectively referred to as the "**Premises**"). to be occupied and used upon the terms and conditions herein set forth. Tenant's intended use of the Premises is for (X) the development, construction, installation, operation, testing, and maintenance of a solar photovoltaic power array and related improvements for the generation of electric power and related ancillary technologies, including but not limited to, energy storage, voltage regulation, and power quality regulation, and (Y) any investigation, inspection, testing of the Premises in connection with a solar photovoltaic power array and related improvements on the Premises (the uses described in (x) and (Y), collectively, the "**Intended Use**"), and including without limitation, (i) electrical and communication lines, transformers, power inverters, equipment, cables, switches and electrical substation(s); (ii) laydown areas, control buildings, and maintenance facilities; and (iii) roads, fences and

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gates, and other structures and facilities required for ingress and egress for pedestrians, motor vehicles and equipment and for security (collectively the "Solar Generating Facility").

2. Term of Lease, Commencement Date, and Renewal Terms.

(a) Term of Lease; Commencement Date; Commercial Operation Date.

(i) The term of this Lease (including any extensions or renewals, the "Term") shall commence on the Effective Date and shall end at 11:59 P.M. local time on the date that is thirty (30) years after the Commencement Date (the "Expiration Date"), unless extended or sooner terminated as herein provided. If the Expiration Date is other than the last day of a calendar month, the Term shall be extended automatically until 11:59 P.M. local time on the last day of the calendar month in which the Term otherwise would expire.

(ii) The "Commencement Date" shall be the Commercial Operation Date.

(iii) The "Commercial Operation Date" shall be the first day of the calendar month immediately following the date on which all of the following have occurred: (A) the Solar Generating Facility has been installed, constructed, tested, commissioned, and is fully capable of being operated for its Intended Use; (B) the Tenant has received all permits and approvals from governmental authorities having jurisdiction and the applicable electrical transmission provider for the Solar Generating Facility; and (C) the Solar Generating Facility begins delivering electricity to the electrical grid. Once the Commencement Date is ascertained, the parties agree to execute a memorandum or other writing confirming the Commencement Date.

(b) Renewal Terms. Tenant shall have the right to extend the initial Term granted herein for up to two (2) additional terms of five (5) years each (each a "Renewal Term" and collectively, the "Renewal Terms") by providing Landlord with written notice of Tenant's desire to extend the Term for the applicable Renewal Term prior to the Expiration Date (or prior to the expiration of the preceding Renewal Term, as applicable).

3. Due Diligence Period; Construction Period.

(a) Due Diligence Period. For purposes of this Lease, the Option Period as defined in the Option Agreement shall be considered as the "Due Diligence Period," and the Due Diligence Period shall have concluded prior to the Effective Date of this Lease. The conclusion of the Due Diligence Period as of the Effective Date shall not limit the Intended Use described in Section 1(Y).

(b) Construction Period. The "Construction Period" shall commence upon the Construction Commencement Date (as hereinafter defined) and expire upon the Commercial Operation Date (which is the same date as the Commencement Date of the Term of this Lease). The "Construction Commencement Date" shall be the Effective Date of this Lease.

(c) Landlord's Rights Prior to Construction Commencement Date. From and after the Construction Commencement Date through the last day of the Term, Landlord (and any other party claiming, by, through or under Landlord) shall not have any right to plant or harvest crops, or conduct forestry or timber practices on the Premises.

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4. Rent.

(a) Construction Period Rent. During the Construction Period, Tenant shall pay Landlord rent in accordance with this Section 4(a).

(i) For the first year of the Construction Period, Tenant shall pay Landlord the sum equal to [REDACTED] of Land located within the Premises (prorated for any fractional acres).

(ii) To the extent the Construction Period continues after the first anniversary of the Effective Date, from the first anniversary of the Effective Date through the last day of the Construction Period, Tenant shall pay Landlord the sum equal to [REDACTED] Land located within the Premises (prorated for any fractional acres).

(b) Commercial Operation Rent. From and after the Commercial Operation Date, Tenant shall pay Landlord rent in accordance with this Section 4(b).

(i) Commencing on the Commencement Date, Tenant shall pay Landlord annual rent during the Term in the sum of [REDACTED] located within the Premises (prorated for any fractional acres).

(ii) Commencing on the first (1st) annual anniversary of the Commencement Date, and on each anniversary of the Commencement Date thereafter (including any anniversary of the Commencement Date occurring during any Renewal Term), the annual rent payable hereunder shall increase over the annual rent payable for the prior year by [REDACTED].

(c) Rent Payments.

(i) Construction Period Rent. Rent payable for the Construction Period shall be payable monthly in advance in equal monthly installments for each year of the Construction Period, with the first monthly installment due 15 days after the Effective Date for the first month in the Construction Period, and each subsequent installment of Construction Period rent due on the first business day of each calendar month in the Construction Period thereafter. Calculation of rent shall be based on the acreage of the Land depicted in the ALTA survey prepared by or for Tenant (or such other survey of the Land reasonably acceptable to Landlord and Tenant).

(ii) Commercial Operation Rent. Rent due from and after the Commercial Operation Date shall be paid on a semiannual basis, with the first (1<sup>st</sup>) rent installment payable within thirty (30) days after the Commercial Operation Date, the second (2<sup>nd</sup>) rent installment being due on the first business day that is six (6) months after the Commercial Operation Date, and subsequent payments of rent being due on the first business day every six (6) months thereafter during the Term.

(iii) Calculation, Proration; Delinquency. Calculation of rent shall be based on the acreage of the Land depicted in the ALTA survey prepared by or for Tenant (or such other survey of the Land reasonably acceptable to Landlord and Tenant). The payment of rent for any fractional calendar month or half-year during the Term shall be prorated. If Tenant fails to pay any installment of rent to Landlord by the date that the same is due hereunder, and such failure continues for a period of (15) days after Landlord provides Tenant with written notice of such failure to pay, Tenant will pay a late fee to the Landlord in the amount of three percent (3.0%) of such unpaid delinquent rent amount.

5. **Utilities, Maintenance and Repairs.** Tenant shall pay for all utilities used at the Premises by Tenant. Tenant, at Tenant's cost, shall be responsible for the repair and maintenance of the Solar Generating Facility and Tenant's improvements on the Premises.

6. **Alterations.**

(a) Tenant may, at its expense, make any alterations, additions, improvements and changes to the Premises as it may deem necessary or desirable in the operation of its business or Solar Generating Facility, without the consent of Landlord, including without limitation any fencing, security devices and or signage desired by Tenant. Any alteration, addition, improvement or change conducted by Tenant shall be done in compliance with applicable laws and requirements of governmental agencies having jurisdiction. Landlord, at no cost to Landlord, agrees to sign any permit applications and to take all such other actions as are reasonably required to allow Tenant to accomplish any such alterations, additions, improvements and changes to the Premises. The Solar Generating Facility and any and all improvements constructed on the Premises by or for Tenant, and all machinery, fixtures, trade fixtures, equipment, and other personal property installed or placed in the Premises by or for Tenant, shall, regardless of the manner of attachment to the Premises or the improvements thereon, be and at all times remain the property of Tenant, and shall be removable by it at any time and from time to time during the Term and at the expiration or earlier termination of this Lease. In the event that Tenant removes any trees, crops or other vegetation from the Premises during the Term, Tenant may sell and/or dispose of the same, and any revenues derived by Tenant from the sale of the same shall belong to Tenant.

(b) On or prior to the Effective Date, or within fifteen (15) days after the Effective Date, in Landlord's discretion and at Landlord's sole cost and expense, Landlord shall have removed or shall have the right to enter upon and remove from the Land all or any portion of the above ground irrigation system, including pumps, motors, lines and tanks on the Land. From and after the sixteenth (16<sup>th</sup>) day after the Effective Date, Tenant shall have the right to use or to remove and dispose of any above ground irrigation system, including pumps, motors, lines and tanks then remaining on the Land.

7. **Use and Occupancy.** Tenant shall be entitled to use the Premises for the Intended Use. Tenant agrees that no unlawful use of the Premises will be made. Landlord shall deliver sole and exclusive possession of the Premises to the Tenant on the Construction Commencement Date.

8. **Lease Termination and Surrender of Land.**

(a) **Termination Rights.** Tenant shall have the right to terminate this Lease for any reason or no reason. If an Excused Event (defined below), Tenant may terminate this Lease effective immediately upon delivery to Landlord of written notice of termination. Tenant may terminate this Lease for any other reason: (i) effective one month after the delivery to Landlord of a written termination notice prior to the Commercial Operation Date; or (ii) effective three (3) months after the delivery to Landlord of a written termination notice after the Commercial Operation Date. In the event Tenant terminates this Lease after the Effective Date for any reason, other than as a result of an Excused Event, Tenant shall pay to Landlord a termination fee (a "Termination Fee") in accordance with **Exhibit B** attached hereto and incorporated herein by this reference. Rent shall be prorated as of the effective date of the termination of this Lease. Upon a termination of this Lease by Tenant permitted hereunder, this Lease shall terminate and become null and void, and Tenant shall have no further obligations hereunder, except as specifically provided in this Lease.

(b) **Surrender of Land.** Upon the expiration or earlier termination of this Lease, Tenant shall (i) return the Land to Landlord in substantially the same condition the same were in as of the Construction



Commencement Date, to the extent practicable and reasonable wear and tear excepted; and if applicable, (ii) decommission and remove Tenant's Solar Generating Facility and all improvements and equipment constructed or installed by Tenant on the Land. Notwithstanding the foregoing, in no event shall Tenant have any obligation to replace any crops or other vegetation damaged or removed by Tenant during the Term.

(c) An "Excused Event" means any of the following: (i) an event of default by Landlord, (ii) Landlord's willful misconduct, (iii) any event or casualty that renders the Premises substantially unusable for a Solar Generating Facility and for agricultural use as a citrus grove, (iv) a Total Taking (as defined **Section 12(a)**), or (v) a material interference with operations of the Solar Generating Facility resulting from the acts, omissions or negligence of Landlord (or Landlord's employees, agents, or contractors) or any mineral rights holder. For clarification, a material interference with operations of the Solar Generating Facility shall not mean Landlord's continued operation of a citrus grove on real property adjacent to the Land in compliance with industry standards and applicable laws.

9. **Insurance.** Tenant may, after the Solar Generating Facility and its improvements are completed, keep such improvements insured against loss or damage by fire, windstorm, earthquake and similar hazards. Each party hereto shall keep in force, at its sole cost and expense, comprehensive commercial general liability insurance, with a combined single limit of not less than one million dollars (\$1,000,000) per occurrence and two million dollars (\$2,000,000) aggregate, insuring such party, and the other party hereto as additional insured, against liability arising out of the use, occupancy or ownership of the Premises. Any provisions herein to the contrary notwithstanding, Landlord and Tenant mutually agree that, in respect to any loss which is covered by insurance then being carried by them respectively (or which would have been covered had such party maintained the insurance required hereunder), the one carrying such insurance and suffering said loss hereby releases the other of and from any and all claims with respect to such loss, and waives any rights of subrogation which might accrue to the carrier of such insurance. Notwithstanding the foregoing, Tenant may self-insure (either by use of deductibles or self-insured retention) the coverage required of Tenant hereunder and Tenant may satisfy its insurance obligations hereunder through a "blanket" policy or policies covering other properties or liabilities of Tenant.

10. **Taxes.** Commencing on the Effective Date, Tenant shall be solely responsible for any ad valorem and, if and when applicable, any non-ad-valorem property taxes that are assessed against either the Premises or Tenant's personal property for periods falling within the Term. Landlord and Tenant shall apportion taxes appropriately between the parties for any partial tax years falling within the Term. Tenant shall also be responsible for any deferred property taxes ("Deferred Taxes") due on the Premises as a result of Tenant's use of the Premises for the Intended Use to the extent required by applicable Florida laws. However, in the event that Tenant's use of the Premises for the Intended Use triggers the obligation to pay any Deferred Taxes, or any other taxes, assessments, penalties, fees or interest, on any other property owned by Landlord (other than the Premises), Landlord shall be solely responsible for paying the same. In the event that the Premises is a part of a larger tax parcel owned by Landlord, and Deferred Taxes become payable on the entire tax parcel as a result of Tenant's use of the Premises for the Intended Use, the Deferred Taxes shall be equitably apportioned as to Landlord and Tenant in a pro-rata manner such that Tenant is responsible only for such costs as they relate to the Premises and Landlord is responsible for the remainder. During the Term, Tenant, at its cost, shall have the right, at any time, to seek a reduction in the assessed valuation of the Premises or to contest any taxes that are assessed against the Premises (or any portion thereof) or are to be paid by Tenant. If Tenant seeks a reduction or contests any taxes, the failure on Tenant's part to pay the taxes shall not constitute a default as long as Tenant complies with the provisions of this **Section 10**.

11. **Fire or Other Casualty.** In the event that the Premises, Solar Generating Facility, the improvements thereon, or any portions thereof, are damaged by fire or other casualty during the Term

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(specifically excluding any event that renders the Premises substantially unusable for both a Solar Generating Facility and for agricultural use as a citrus grove), and if in Tenant's sole reasonable judgment, the damage is of such nature or extent that it is uneconomical to repair and restore the Premises, the Solar Generating Facility, or other improvements thereon, as the case may be, Tenant may terminate this Lease by written notice to Landlord. The proceeds of any casualty insurance policy maintained by Tenant shall be payable to Tenant. In the event of such termination, rent shall be prorated as of the effective date of termination. In the event Tenant terminates this Lease subject to the terms of this Section, Tenant shall pay Landlord a Termination Fee in accordance with Exhibit B.

**12. Condemnation.**

(a) If the whole of the Premises shall be taken under the exercise of the power of eminent domain or by agreement with any condemnor in lieu of such taking, or such portion thereof that, in Tenant's judgment, the remainder of the Premises is not suitable for Tenant's purposes (a "Total Taking"), then this Lease shall terminate as of the earlier of the date when title thereto vests in the condemnor or the date when possession thereof shall be delivered to the condemnor. The exercise of the power of eminent domain or condemnation agreement as to less than all of the Premises shall be a "Total Taking" if: (I) the area of the portion of the Premises subject to eminent domain, condemnation-by-agreement, or taking is equal to or greater than one-half (1/2) of the total area of the Premises; or (II) the System's transformers(s), interconnection equipment (point of interconnection, switchgear, recloser, meters), or central inverters, if any, are located within the area subject to eminent domain, condemnation-by-agreement, or taking.

(b) If a portion or portions of the Premises shall be taken under the exercise of the power of eminent domain or by agreement with any condemnor in lieu of such taking, and such taking does not constitute a Total Taking (a "Partial Taking"), then: (i) this Lease shall be modified so that the portion or portions so taken no longer are part of the "Premises" as of the date possession thereof shall be delivered to the condemnor, (ii) upon delivery to the condemnor of possession of the portion of the Premises so taken, the rent payable under this Lease shall be reduced pro-rata based on the acreage of the Premises so taken, and (iii) otherwise this Lease shall remain in full force and effect. If there is any Partial Taking, the Landlord and the Tenant shall both be entitled to participate in the condemnation proceeding to establish the condemnation award to the taking of each parties' interest in the Premises.

(c) If Landlord and Tenant are unable to obtain separate awards with respect to their respective interests in the Premises, then, the single award shall be fairly and equitably apportioned between Landlord and Tenant. The portion of the award to be received by Landlord shall be based upon the taking of or injury to the fee simple estate in the Land, but not the improvements thereon. The portion of the award to be received by Tenant shall be based upon the taking and reduction of Tenant's leasehold estate created by this Lease, the taking of any improvements constructed or placed by Tenant on the Land, loss or interruption of Tenant's business and the cost of any restoration or repair necessitated by such taking or condemnation. Notwithstanding the foregoing, however, in the event Tenant has exercised its right to terminate this Lease under this Section 12, then Tenant shall first receive all condemnation proceeds until Tenant has received an amount equal to the appraised value of the improvements made to the Land by Tenant prior to the taking. Tenant shall have the right to participate, at its own expense, in any such condemnation proceedings and to negotiate on behalf of itself and Landlord in such proceedings; provided, however, Tenant shall not enter into any binding agreement or settlement without the prior consent of Landlord, which consent shall not be unreasonably withheld, conditioned or delayed by Landlord. Landlord agrees to cooperate with Tenant and to execute such documentation as may be reasonably necessary to allow Tenant to participate in such condemnation proceedings.

(d) In the event Tenant terminates this Lease upon a Total Taking, Tenant shall have no obligation to pay any Termination Fee. However, if Tenant terminates this Lease upon a Partial Taking (or

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for any other reason, as described in Section 8). Tenant shall pay Landlord a Termination Fee in accordance with Exhibit B.

13. **Default.** If either party fails to comply with any term, covenant or condition of this Lease for a period of thirty (30) days after the defaulting party's receipt of written notice from the other party of such failure (provided, however, if such failure cannot reasonably be cured within such thirty (30) day period, the defaulting party shall not be in default hereunder if it commences to cure within such thirty (30) day period and prosecutes the cure to completion in good faith and with due diligence), then the defaulting party shall be deemed in default hereunder and the other party may, at its option, may pursue any and all remedies available to such party at law or in equity. If there a default by a party hereunder, the non-defaulting party will take commercially reasonable measures to mitigate its damages

14. **Binding Effect; Assignment and Subletting.** This Lease shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, legal representatives, successors and assigns. Tenant may assign this Lease, in whole or in part, or sublet the Premises, or any part thereof, without Landlord's prior consent, provided that any such assignee is an affiliate or a Florida public utility provider and shall agree in writing to be bound by all of the terms and conditions of this Lease. Landlord shall promptly notify Tenant in writing of the identity and address of any purchaser of Landlord's fee interest in the Premises and Landlord shall cause such purchaser to notify Tenant in writing of the address for payment of rent.

15. **Mutual Indemnification.** Except to the extent caused by Landlord, Tenant agrees to indemnify and hold Landlord harmless from any and all damages or claims which Landlord may be compelled to pay on account of injuries to person or damages to property on the Premises where the aforesaid injuries or damages are caused by Tenant (or Tenant's employees, agents, or contractors) or Tenant's breach of this Lease. Except to the extent caused by Tenant, Landlord agrees to indemnify and hold Tenant harmless from any and all damages or claims which Tenant may be compelled to pay on account of injuries to person or damages to property on the Premises where the aforesaid injuries or damages are caused by Landlord (or Landlord's employees, agents, or contractors) or Landlord's breach of this Lease.

16. **Quiet Enjoyment.** Landlord covenants and warrants that as long as Tenant is not in default under the terms and conditions of this Lease (beyond any applicable notice and cure periods), it will defend the right of possession to the Premises in Tenant against all parties whomsoever for the entire term hereof, and that Tenant shall have peaceable and quiet possession of the Premises during the Term without hindrance or molestation.

17. **Waiver.** The waiver by any party of any breach of any covenant or agreement herein contained shall not be deemed to be a waiver of any subsequent breach of the same or any other covenant or agreement herein contained.

18. **Possession After Termination.** If Tenant shall fail to vacate and surrender the possession of the Premises at the termination of this Lease, Landlord shall be entitled to recover from Tenant rent in an amount equal to one hundred twenty-five percent (125%) of the amount of rent payable hereunder for the period from the termination of this Lease until the date the Premises are vacated and surrendered.

19. **Notices.** All notices, elections, demands, requests, payments and other communications hereunder shall be in writing, signed by the party making the same and shall be sent by certified or registered United States mail, postage prepaid, or by national overnight courier service which provides tracking and acknowledgement of receipts, addressed to:

To Landlord: Cow Slough Inc.  
John F. Smoak, III, President



1025 CR 17 N  
Lake Placid, FL 33852

Copy to: Rider & Thompson, P.A.  
13 N. Oak Ave  
Lake Placid, FL 33852

To Tenant:

Duke Energy / JLL, Inc.  
Lease Administration  
Attn: Nancy J. Holmes, Manager  
550 South Tryon Street, Mail Code: DEC22A  
Charlotte, NC 28202

or at such other address as may hereafter be designated in writing by either party hereto. The time and date on which mail is postmarked shall be the time and date on which such communication is deemed to have been given.

**20. Memorandum of Lease.** Landlord and Tenant agree that this entire Lease shall not be recorded; provided however, promptly after the full execution of this Lease. Landlord and Tenant shall execute and record (at Tenant's expense) a memorandum of this Lease in the Office of the Register of Deeds in the County in which the Premises is located and which memorandum shall be in form sufficient to publish notice and protect the validity of this Lease and Tenant's rights hereunder. The lease memorandum shall specify the Commencement Date, the Expiration Date, the Renewal Terms granted herein, and such other provisions of this Lease as the parties mutually agree to incorporate therein.

**21. Governing Law.** This Lease shall be construed and enforced in accordance with the laws of the State of Florida.

**22. Invalidity of Particular Provisions.** If any term or provision of this Lease shall to any extent be ruled invalid or unenforceable by a court of competent jurisdiction, the remainder of this Lease shall not be affected thereby and each other term and provision of this Lease shall be valid and enforced to the fullest extent permitted by law.

**23. Subordination/Non-Disturbance Agreement.**

(a) Tenant's obligation to subordinate its interests or attorn to any mortgagees or beneficiaries of mortgages or deeds of trust, or any other holders of liens on the Premises or any portion thereof (each hereinafter a "Mortgagee") that may heretofore or hereafter be placed against the Premises by Landlord is conditioned upon the Mortgagee's written agreement not to disturb Tenant's possession, quiet enjoyment of the Premises, and rights under this Lease so long as Tenant is not in default under the terms of this Lease (beyond any applicable notice and cure periods). Landlord shall use commercially reasonable efforts to provide to Tenant, on or before the expiration date of the Due Diligence Period and Construction Commencement Date, a subordination, non-disturbance, and attornment agreement from any and all current Mortgagees that is reasonably acceptable to Tenant. With respect to any future Mortgagee of a mortgage or deed of trust, Landlord shall use commercially reasonable efforts to obtain from such future Mortgagee a subordination, non-disturbance, and attornment agreement that is reasonably acceptable to Tenant.

(b) In the event any proceedings are brought for foreclosure of any mortgage or deed of trust on the Premises, Tenant will attorn to the purchaser at a foreclosure sale on acquiring Landlord's interest in the Premises and the Lease, and any assignee thereof, and recognize such purchaser or assignee as Landlord under this Lease provided such purchaser or assignee agrees in writing not to disturb Tenant's possession or rights under this Lease or in the Premises, and to acknowledge all of Tenant's rights hereunder, so long as Tenant is not in default under the terms of this Lease (beyond any applicable notice

and cure periods). Tenant agrees to give any such Mortgagee of whom Tenant has been informed in writing, written notice of any default or failure to perform by Landlord under this Lease. Such Mortgagee shall have the same amount of time afforded to Landlord hereunder to cure any Landlord default; and Tenant shall accept such cure if timely and effectively made by such Mortgagee.

**24. Warranties and Representations.**

(a) Tenant hereby agrees with, and warrants and represents to Landlord as follows: (i) Tenant is a duly formed and validly existing entity, incorporated or organized under the laws of the State in which it was incorporated or organized; (ii) Tenant has the full legal right, power and authority to execute this Lease and all documents now or hereafter to be executed by it pursuant to this Lease; (iii) this Lease has been duly authorized by all requisite entity action on the part of the Tenant, and is the valid and legally binding obligation of Tenant, enforceable in accordance with its terms; (iv) this Lease will not contravene any provision of Tenant's organizational documents, any judgment, order, decree, writ or injunction issued against Tenant or any provision of any laws applicable to Tenant; and (v) the consummation of the transaction contemplated hereby will not result in a breach or constitute a default or event of default by Tenant under any agreement to which Tenant or any of its assets are subject or bound and will not result in a violation of any laws applicable to Tenant.

(b) Landlord hereby agrees with, and warrants and represents to Tenant as follows: (i) Landlord is the owner of the Premises with full right and authority to execute this Lease and to lease the Premises to Tenant in accordance with the terms hereof; (ii) to the best of Landlord's knowledge, the Premises are free from environmental contamination of any sort, and the Premises complies with any and all applicable laws, rules, and ordinances; (iii) Landlord has not received any notice of condemnation, zoning change or legal noncompliance relating to the Premises; (iv) Landlord will not institute or consent to any rezoning of the Premises during the Term; (v) Landlord shall not further encumber the title to the Premises after the Effective Date and during the Term; (vi) Landlord acknowledges that access to sunlight is essential to the value of the rights granted to Tenant under this Lease, and accordingly, Landlord shall not cause or permit any property owned or controlled by Landlord in the vicinity of the Premises, or any activities, uses or improvements thereon, to impair Tenant's use of the Premises or the Solar Generating Facility thereon (for example, and without limiting the generality of the foregoing, Landlord shall not cause or permit any cell towers, water towers, billboards, silos or any other structures to be placed or constructed thereon or permit the growth of any foliage that may obstruct the sunlight that otherwise would reach the Premises, or that may cast shade or shadows upon the Premises or any portion thereof); (vii) the Premises is free from any recorded or unrecorded use or occupancy restrictions or declarations of restrictive covenants; (viii) Landlord has not and, to the best of Landlord's knowledge, Landlord's tenants or predecessors in title have not used, manufactured, stored or released petroleum products or hazardous substances on, in or under the Premises; (ix) there are no service or maintenance contracts affecting the Premises for which Tenant may be obligated or liable for; (x) there are no delinquent or outstanding assessments, liens, taxes, or other impositions levied or assessed against the Premises; (xi) there is no pending or threatened lawsuit, claim, or legal proceeding against Landlord or the Premises that could affect the Tenant's rights under this Lease or the Landlord's ability to perform Landlord's obligations hereunder; (xii) except for this Lease, there are no leases, options to purchase, license agreements or other third party rights to use or possess the Premises (or any portion thereof), whether written or oral, recorded or unrecorded; (xiii) Landlord is not in the hands of a receiver nor is an application for such a receiver pending; (xiv) Landlord has made no assignment for the benefit of creditors, nor filed, or had filed against it, any petition in bankruptcy; and (xv) within five (5) days after the Effective Date, Landlord shall provide copies of the following documents with respect to the Premises in Landlord's possession: any notices of any statute or code violation; all "Phase I" and other environmental assessment reports; surveys of the Land; title insurance policy or title opinion; and any governmental permits or approvals.

(c) Tenant shall retain title to and be the legal and beneficial owner of the Solar Generating Facility at all times. Landlord shall provide timely notice of Tenant's title and sole ownership of the Solar Generating Facility to all persons that have, or may come to have, an interest in or lien upon the real property comprising the Premises. Tenant shall be the exclusive owner of the electricity generated by the Solar Generating Facility and the Environmental Attributes (as hereinafter defined) and Environmental Incentives (as hereinafter defined) thereof. "Environmental Attributes" means the characteristics of electric power generation at the Solar Generating Facility that have intrinsic value, separate and apart from the generated energy, arising from the perceived environmental benefits of the Solar Generating Facility or energy generated at the Solar Generating Facility, including but not limited to all environmental and other attributes that differentiate the Solar Generating Facility or energy generated at the Solar Generating Facility from energy generated by fossil-fuel based generation units, fuels or resources, characteristics of the Solar Generating Facility that may result in the avoidance of environmental impacts on air, soil or water, such as the absence of emission of any oxides of nitrogen, sulfur or carbon or of mercury, or other gas or chemical, soot, particulate matter or other substances attributable to the Solar Generating Facility or the compliance of the Solar Generating Facility or energy generated at the Solar Generating Facility with the law, rules and standards of the United Nations Framework Convention on Climate Change (the "UNFCCC") or the Kyoto Protocol to the UNFCCC or any successor laws, rules or standards or crediting "early action" with a view thereto, or laws or regulations involving or administered by the Environmental Protection Agency or successor administration or any state or federal entity having jurisdiction over a program involving transferability of rights arising from Environmental Attributes. Without limiting the foregoing, "Environmental Attributes" includes green tags, renewable energy credits, tradable renewable certificates, portfolio energy credits, the right to apply for (and entitlement to receive) incentives under any demand-side management or energy efficiency programs offered by a utility company, a third-party provider, or other incentive programs offered by the state and the right to claim federal income tax credits, if applicable. "Environmental Incentives" means all rights, credits (including tax credits), rebates, benefits, reductions, offsets, and allowances and entitlements of any kind, howsoever entitled or named (including carbon credits and allowances), whether arising under federal, state or local law, international treaty, trade association membership or the like, arising from the Environmental Attributes of the Solar Generating Facility or the energy generated at the Solar Generating Facility or otherwise from the development or installation of the Solar Generating Facility or the production, sale, purchase, consumption or use of the energy generated at the Solar Generating Facility.

(d) Tenant or its authorized agents, personnel, employees and consultants shall not bring or cause any hazardous waste to be brought on, released or left on the Land, except in such quantities as may be required in Tenant's normal operations on the Land pursuant to this Lease and only so long as such use is in compliance with applicable laws. Landlord represents and warrants to Tenant that no hazardous waste or substances exist on the Land that are not consistent with commercial citrus operations or in compliance with applicable laws.

**25. Brokerage Commission.** Neither Landlord nor Tenant knows of any real estate brokers or agents who are or may be entitled to any commission or finder's fee in connection with this Lease. Each party hereto agrees to indemnify and hold the other party harmless from and against any and all claims, demands, losses, liabilities, lawsuits, judgments, costs and expenses (including without limitation, fees for legal counsel and costs) with respect to any leasing commission or equivalent compensation alleged to be owing on account of such party's discussions, negotiations and/or dealings with any real estate broker or agent.

**26. Reserved.**

**27. Access.** Tenant, and Tenant's employees, agents, contractors, guests, subtenants and designees shall have access to the Premises at all times after the Effective Date and during the Term. On and after



the Construction Commencement Date, neither Landlord nor any agent of Landlord shall, without a Tenant representative, enter upon any portion of the Premises.

**28. Confidentiality.** Landlord acknowledges that Landlord may become privy to confidential information of Tenant, in addition to information regarding the terms of this Lease. Landlord therefore agrees to take all steps to ensure that any information with regard to Tenant, Tenant's Intended Use of the Premises (and improvements thereon) and/or this Lease, shall remain confidential and shall not be disclosed or revealed to outside sources by Landlord or by its employees, officers, agents, counsel, accountants or representatives, except as otherwise required by law or court order. The terms of this Section 28 shall survive the expiration or any sooner termination of this Lease.

**29. Estoppel.** Within fifteen (15) business days after written request therefor by Tenant, Landlord shall deliver a certificate to Tenant, Tenant's lender (if applicable) and/or any proposed assignee of Tenant, in a commercially reasonable form, setting forth the terms of this Lease, the absence of default hereunder, and such other reasonable terms as may be requested by Tenant or by such lender or assignee. If the Landlord fails to respond within such fifteen (15) business day period, then, in addition to such failure constituting an event of default, all matters set forth in the estoppel certificate shall be deemed to be true, accurate and complete.

**30. Leasehold Mortgages.** Tenant and every successor and assign of Tenant is hereby given the right by Landlord, without Landlord's consent, to mortgage its interest in this Lease and assign its interest in this Lease as collateral security for such mortgage. If Tenant and/or Tenant's successors and assigns shall mortgage all or part of its interest in this Lease and if Tenant or the holder of such mortgage shall send to Landlord a true copy thereof together with written notice specifying the name and address of the mortgagee and the pertinent recording data with respect to such mortgage, Landlord agrees that so long as the leasehold mortgage remains unsatisfied of record or until written notice of satisfaction is given by the holder to Landlord, the following provisions shall apply:

(a) Landlord shall, upon serving Tenant with any notice of default, simultaneously serve a copy of such notice upon the holder of the leasehold mortgage. The leasehold mortgagee shall have the same period, after service of such notice upon it, to remedy or cause to be remedied the defaults complained of, and Landlord shall accept such leasehold mortgagee's acts if they had been performed by Tenant.

(b) Landlord agrees that in the event of termination of this Lease by reason of any default by Tenant, that Landlord will enter into a new lease for the Premises with the leasehold mortgagee or its nominee for the remainder of the Term effective as of the date of such termination, at the rent and other charges, and upon the terms, provisions, covenants and agreement contained in this Lease, provided:

(i) the mortgagee or its nominee shall pay to Landlord, at the time of execution and delivery of the new lease, any and all sums which would then be due pursuant to this Lease but for such termination; and

(ii) the mortgagee or its nominee shall perform and observe all covenants in this Lease to be performed by Tenant and shall further remedy any other conditions which Tenant was obligated to perform under the terms of this Lease.

(c) Landlord shall, upon request, execute, acknowledge and deliver to each leasehold mortgagee an agreement prepared at the sole cost and expense of Tenant, in form satisfactory to the leasehold mortgagee and to Landlord, between Landlord, Tenant and the leasehold mortgagee confirming the provisions of this Section 30.

The term "mortgage," as used in this Section 30, shall include mortgages, deeds of trust and/or whatever security instruments are used in the State in which the Premises are located from time to time, as well as financing statements, security agreements and other documentation required pursuant to the Uniform Commercial Code.

**31. Right of First Refusal.** If Landlord, at any time during the Term (the "Right of First Refusal Period"), shall receive any offer from a third party to purchase the Premises, and such offer is acceptable to Landlord, Landlord agrees to notify Tenant in writing of such offer (the "Refusal Notice"). Tenant shall have thirty (30) days from and after receipt of the Refusal Notice to decide whether or not to purchase the Premises at the same purchase price and subject to the same material terms and conditions contained in the third party offer. Tenant shall deliver written notice to Landlord within thirty (30) after Tenant's receipt of the Refusal Notice if Tenant elects to purchase the Premises pursuant to the right of first refusal granted herein (the "Right of First Refusal"). If Tenant notifies Landlord of its intent not to purchase the Premises pursuant to the Right of First Refusal or Tenant shall give no notice to Landlord within the 30-day period after receipt of the Refusal Notice, then Tenant shall be deemed to have rejected such offer to purchase the Premises pursuant to the Right of First Refusal and Tenant's Right of First Refusal hereunder shall be terminated in all respects and of no further force and effect, and Landlord may accept such third party bona fide offer and proceed with the sale under the same terms presented to Tenant; provided however, if Landlord does not proceed with and consummate said sale within one hundred fifty (150) days after Tenant's receipt of the Refusal Notice, Tenant's Right of First Refusal shall be revived and continue until the expiration of the Right of First Refusal Period.

**32. Bankruptcy.** In the event (i) the Premises or any rights therein shall be levied on by execution or other process of law by a creditor of either party, (ii) if either party shall be adjudged bankrupt or insolvent, (iii) if any party has a petition in bankruptcy filed against it, and such petition is not dismissed within ninety (90) days after the filing thereof, (iv) if any receiver shall be appointed for the business and property of either party, or (v) if any assignment shall be made of either party's property for the benefit of creditors, thereby diminishing any right or privilege granted by this Lease to the other party, then the other party may terminate this Lease forthwith and otherwise exercise any other remedy it may have at law or equity or under this Lease.

**33. Nature and Extent of Agreement/Amendments.** This Lease contains the complete agreement of the parties regarding the terms and conditions of the lease of the Premises, and there are no oral or written conditions, terms, understandings or other agreements pertaining thereto which have not been incorporated herein. This Lease creates only the relationship of landlord and tenant between the parties as to the Premises; and nothing in this Lease shall in any way be construed to impose upon either party any obligations or restrictions not expressly set forth in this Lease. No amendment or modification of this Lease shall be binding unless in writing and duly executed by both parties.

**34. Counterparts.** This Lease may be executed in any number of counterparts, each of which shall be deemed an original once executed and delivered.

[REMAINDER OF PAGE BLANK. SIGNATURE PAGES FOLLOW.]

GA / R



**IN WITNESS WHEREOF**, the parties hereto have duly executed this Lease by authority duly given, as of the day and year first above written. The signatures listed below do hereby confirm the substance and content of the original Solar Ground Lease Agreement executed on July 17, 2018, by Cow Slough Inc. and on March 6, 2019, by Duke Energy Florida, LLC, and are being re-executed the same to cure the lack of witnesses on the original Solar Ground Lease Agreement referenced above.

**LANDLORD:**

**COW SLOUGH INC.,**  
a Florida limited liability company

By: John F. Smoak, III

Name: John F. Smoak, III

Title: President

**Witnesses:**

William K. Thompson  
Name: William K. Thompson

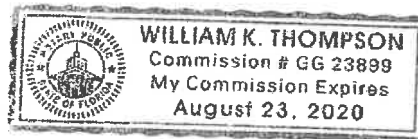
Sarah E. Moretto  
Name: Sarah E. Moretto

STATE OF FLORIDA  
COUNTY OF HEMLOCK

The foregoing instrument was acknowledged before me this 18<sup>th</sup> day April, 2019 by John F. Smoak, III, a President of **COW SLOUGH INC.**, a Florida corporation, on behalf of said company. He is personally known to me or has produced \_\_\_\_\_ as identification.

(Affix Seal)

William K. Thompson  
Print Name: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_



IN WITNESS WHEREOF, the parties hereto have duly executed this Lease by authority duly given, as of the day and year first above written. The signatures listed below do hereby confirm the substance and content of the original Solar Ground Lease Agreement executed on July 17, 2018, by Cow Slough, Inc. and on March 6, 2019, by Duke Energy Florida, LLC, and are being re-executed the same to cure the lack of witnesses on the original Solar Ground Lease Agreement referenced above.

TENANT:

DUKE ENERGY FLORIDA, LLC, a Florida limited liability company d/b/a Duke Energy

By: Karen Adams

Name: Karen Adams  
Title: Manager, Land Services – Florida Region

APPROVED  
By Chris King at 8:58 am, Apr 17, 2019

Witnesses:

[Signature]  
Name: Sam Evans

[Signature]  
Name: TOM HUDSON

STATE OF FLORIDA  
COUNTY OF SEMINOLE

The foregoing instrument was acknowledged before me this 17<sup>th</sup> day APRIL, 2019 by Karen Adams as Manager, Land Services – Florida Region of **DUKE ENERGY FLORIDA, LLC**, a Florida limited liability d/b/a Duke Energy, on behalf of said company. She is personally known to me or has produced \_\_\_\_\_ as identification.

(Affix Seal)

[Signature]  
Print Name: SAM L EVANS, JR  
My Commission Expires: \_\_\_\_\_



**Exhibit A**  
**(Description of the Land)**

Attached.

THIS IS NOT A SURVEY

LEGAL DESCRIPTION:

Lease Parcel 1

A part of the east 1/2 of Section 24, Township 36 South, Range 29 East, Highlands County, Florida. Being more particularly described as follows:  
 Commence at the southeast corner of Section 24, Township 36 South, Range 29 East, Highlands County, Florida; thence North 89°48'19" West, along the south line of said Section 24, a distance of 25.01 feet to the west right-of-way line of St. John Street, a 50 foot wide right-of-way, and the Point-of-Beginning; thence continue North 89°48'19" West, along the south line of said Section 24, a distance of 2141.69 feet to the east right-of-way line of U.S. Highway 27 as shown on FDOT R/W Map Section 09010-2501; thence North 51°51'43" West, along said right-of-way line, a distance of 109.51 feet; thence North 38°08'17" East, along said right-of-way line, a distance of 30.00 feet; thence North 51°51'43" West, along said right-of-way line, a distance of 527.02 feet; thence, leaving said right-of-way line, North 01°33'15" West, along the west line of the southeast 1/4 of said Section 24, a distance of 2252.56 feet to the center of said Section 24; thence South 89°51'02" East, along the north line of the southeast 1/4 of said Section 24, a distance of 420.20 feet; thence North 01°33'15" West a distance of 596.99 feet; thence South 89°51'40" East a distance of 925.50 feet; thence North 01°28'47" West a distance of 436.66 feet; thence South 89°52'17" East a distance of 1281.25 feet to the west right-of-way line of St. John Street, a 50 foot wide right-of-way; thence South 01°24'20" East, along said west right-of-way line, a distance of 1034.88 feet; thence South 01°16'56" East, along said west right-of-way line, a distance of 1334.72 feet; thence South 01°17'44" East a distance of 1334.16 feet to the Point-of-Beginning.

Containing 201.04 acres.

SURVEYOR'S NOTES:

- 1.) North and the bearings shown hereon are referenced to the West Zone of the Florida State Plane Coordinate System, NAD 83, 2011 adjustment. All measurements are in U.S. Survey Feet.
- 2.) The basis of all bearings shown hereon is referenced to the grid bearing of North 89°48'19" West along the south boundary of Section 24, Township 36 South, Range 29 East, Highlands County, Florida.



Digitally signed by  
 Gregory A Prather  
 Date: 2019.02.26  
 13:33:39 -05'00'

GREGORY A. PRATHER, P.S.M. - FL REGISTRATION No. 5135  
 PICKETT & ASSOCIATES, INC. - FL REGISTRATION No. LB 364

DATE

SHEET 1 OF 6

DESCRIPTION SKETCH  
 IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,  
 & SECTION 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
 HIGHLANDS COUNTY, FL  
 PREPARED FOR: ECT



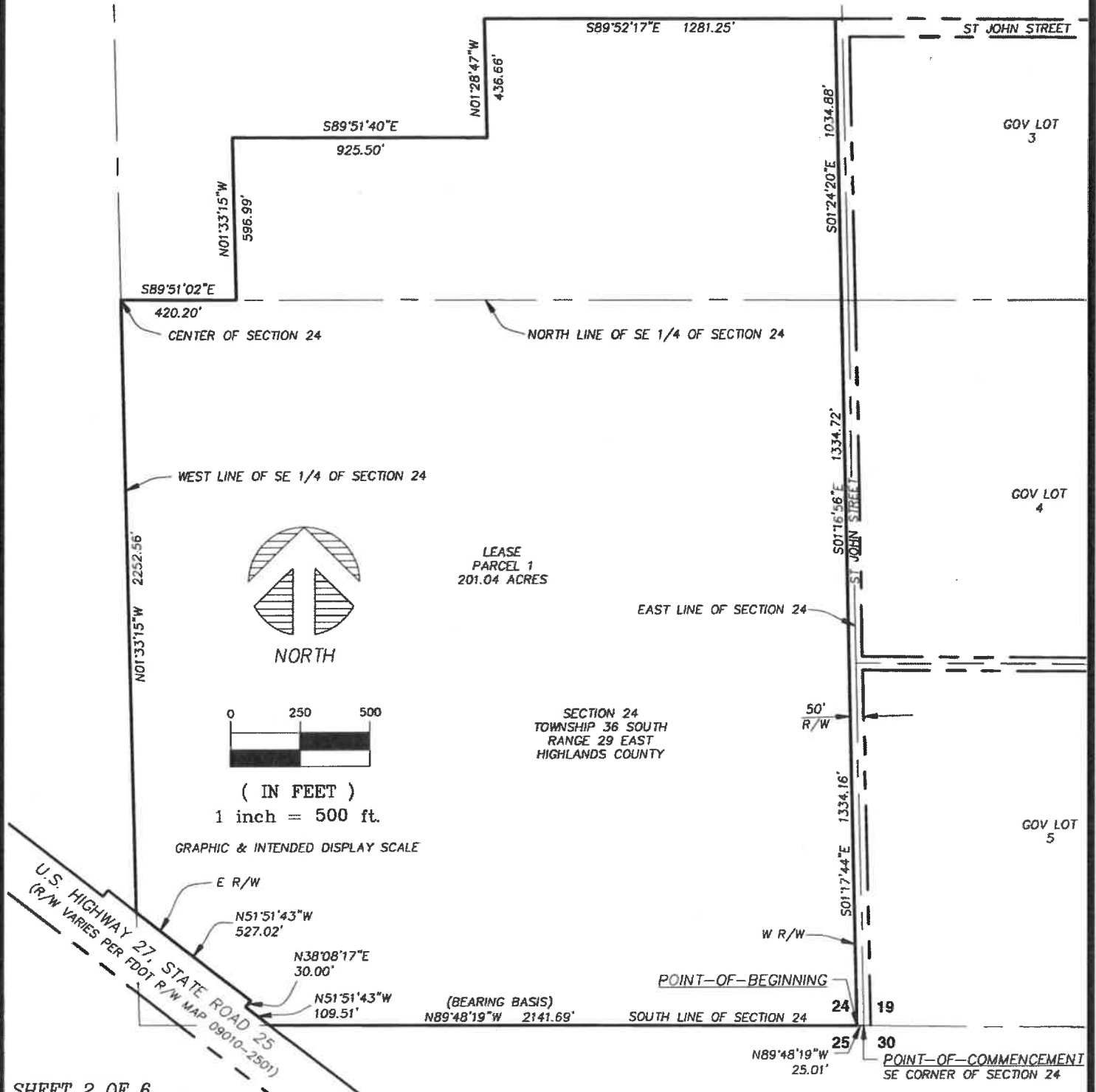
**PICKETT**  
 SURVEYING • ENGINEERING

PICKETT AND ASSOCIATES, INC.  
 475 SOUTH FIRST AVENUE BARTOW,  
 FLORIDA 33830  
 PHONE: (863)-533-9085  
 FAX: (863)-534-1484  
 LICENSED BUSINESS No. LB364

Project No.:	18775	No.		Date		Approved		REVISION	
Horiz. Scale:	N/A	O.R.	2/22/19	GAP				Original Release	
DWC. Name:	18775_Ease_01	1	2/26/19	GAP				Revised Legal description	
Drawn By:	ND								
Field Bk / Pg.:	N/A								
Drawing No.:	SD 5128								20190072-DE-001082

NOT VALID WITHOUT  
 THE SIGNATURE AND  
 THE ORIGINAL RAISED  
 SEAL OF A FLORIDA  
 LICENSED SURVEYOR  
 AND MAPPER.

THIS IS NOT A SURVEY



SHEET 2 OF 6

**DESCRIPTION SKETCH**  
 IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,  
 & SECTION 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
 HIGHLANDS COUNTY, FL  
 PREPARED FOR: ECT



**PICKETT**  
 SURVEYING • ENGINEERING

PICKETT AND ASSOCIATES, INC.  
 475 SOUTH FIRST AVENUE BARTOW,  
 FLORIDA 33850  
 PHONE (883)-533-9095  
 FAX (883)-534-1464  
 LICENSED BUSINESS NO. 1B384

Project No.:	18775	No.	Date	Approved	REVISION
Horiz. Scale:	1" = 500'	O.R.	2/22/19	GAP	Original Release
DWG. Name:	18775_Ease_01	1	2/26/19	GAP	Added clarifying text
Drawn By:	ND				
Field Bk / Pg.:	N/A				
Drawing No.:	SD 5128				

SEE SHEET 1 FOR  
 THE SIGNATURE AND  
 THE ORIGINAL RAISED  
 SEAL OF A FLORIDA  
 LICENSED SURVEYOR  
 AND MAPPER.

20190072-DE-001083

**LEGAL DESCRIPTION:**

*Lease Parcel 2*

A part of the west 1/2 of Section 19, Township 36 South, Range 30 East, Highlands County, Florida. Being more particularly described as follows:


Commence at the southwest corner of Section 19, Township 36 South, Range 30 East, Highlands County, Florida; thence South 89°24'36" East, along the south line of said Section 19, a distance of 25.01 feet to the east right-of-way line of St. John Street, a 50 foot wide right-of-way; thence North 01°17'44" West, along said east right-of-way line, a distance of 1309.81 feet to the south right-of-way line of Walker Road, a 50 foot wide right-of-way; thence North 01°17'21" West a distance of 50.02 feet to the north right-of-way line of said Walker Road and the Point-of-Beginning; thence North 01°16'56" West, along said east right-of-way line, a distance of 1310.56 feet; thence North 01°24'20" West, along said east right-of-way line, a distance of 967.26 feet to the south right-of-way line of St. John Street, a 66 foot wide right-of-way; thence South 89°32'30" East, along said south right-of-way, a distance of 1339.54 feet to the east right-of-way line of St. John Street, a 66 foot wide right-of-way; thence North 02°07'14" West, along said east right-of-way line, a distance of 1063.76 feet; thence South 89°37'52" East a distance of 1286.95 feet to the east line of the west 1/2 of said Section 19; thence South 02°06'34" East a distance of 1312.42 feet to the north right-of-way line of said Walker Road; thence North 88°10'02" West, along said north right-of-way line, a distance of 25.06 feet to the west right-of-way line of said Walker Road; thence South 02°06'34" East, along said west right-of-way line, a distance of 726.04 feet; thence South 02°07'59" East, along said west right-of-way line, a distance of 1311.21 feet to the north right-of-way line of said Walker Road; thence North 89°26'55" West, along said north right-of-way line, a distance of 2632.92 feet to the Point-of-Beginning.

Containing 168.44 acres.

**SURVEYOR'S NOTES:**

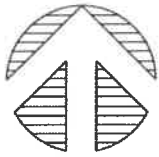
- 1.) North and the bearings shown hereon are referenced to the West Zone of the Florida State Plane Coordinate System, NAD 83, 2011 adjustment. All measurements are in U.S. Survey Feet.
- 2.) The basis of all bearings shown hereon is referenced to the grid bearing of South 89°24'36" East along the south boundary of Section 19, Township 36 South, Range 30 East, Highlands County, Florida.

SHEET 3 OF 6

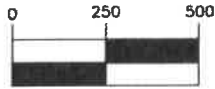
<p align="center"><b>DESCRIPTION SKETCH</b>                  IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,                  &amp; SECTION 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,                  HIGHLANDS COUNTY, FL                  PREPARED FOR: ECT</p>				 <p align="center"><b>PICKETT</b>                  SURVEYING • ENGINEERING</p>		<p><small>PICKETT AND ASSOCIATES, INC.                  475 SOUTH FIRST AVENUE BARTON,                  FLORIDA 32830                  PHONE: (850)-533-9095                  FAX: (850)-534-1464                  LICENSED BUSINESS No. LB284</small></p>	
Project No.:	18775	No.	Date	Approved	REVISION		
Horiz. Scale:	N/A	O.R.	2/22/19	GAP	Original Release		
DWG. Name:	18775_Ease_01	1	2/26/19	GAP	Revised Legal description		
Drawn By:	ND						
Field Bk / Pg.:	N/A						
Drawing No.:	SD 5128				20190072-DE-001084		

SEE SHEET 1 FOR THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

THIS IS NOT A SURVEY

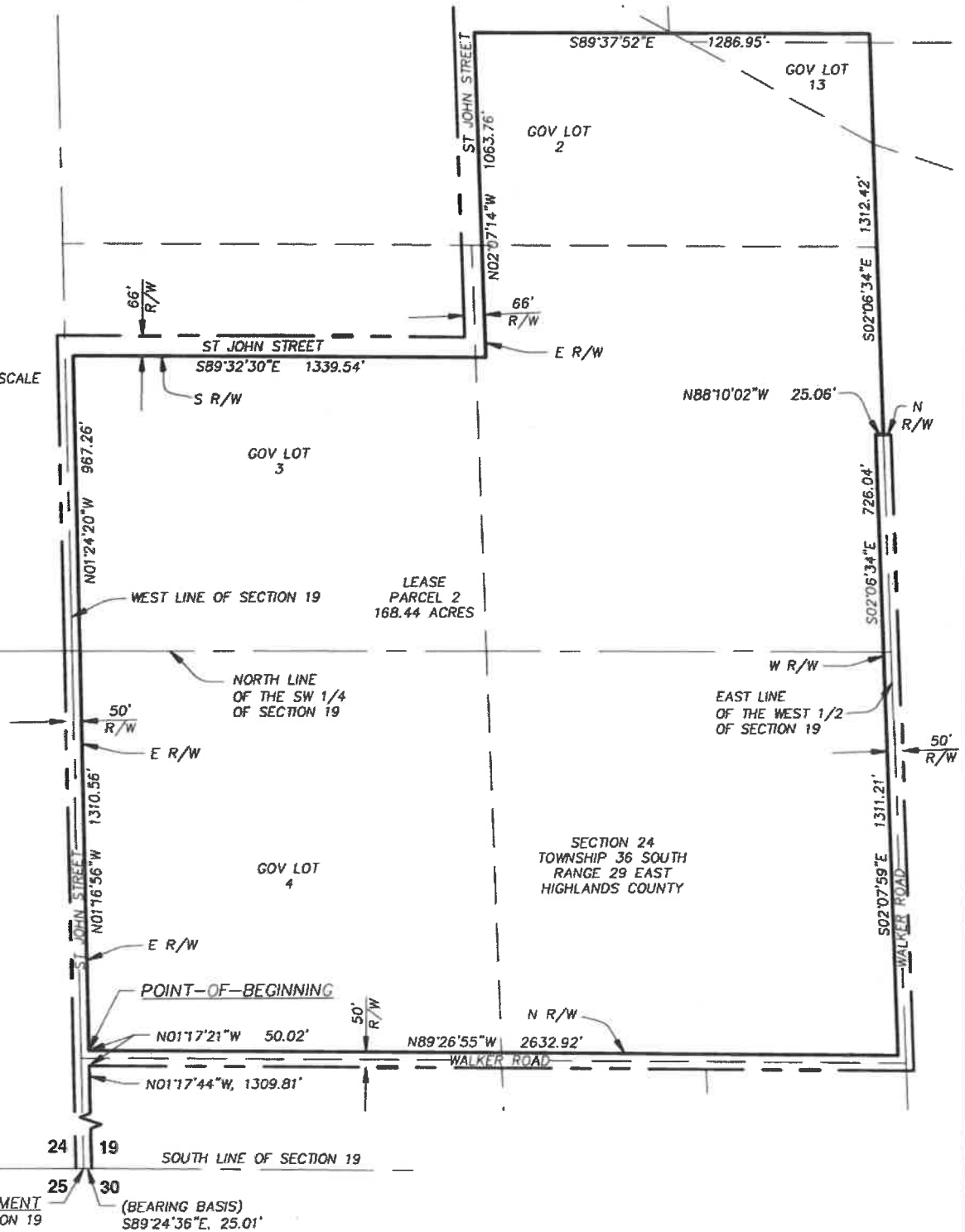


NORTH



( IN FEET )  
1 inch = 500 ft.

GRAPHIC & INTENDED DISPLAY SCALE



POINT-OF-COMMENCEMENT  
SW CORNER OF SECTION 19  
SHEET 4 OF 6  
(BEARING BASIS)  
S89°24'36"E, 25.01'

**DESCRIPTION SKETCH**

IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,  
& SECTION 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
HIGHLANDS COUNTY, FL

PREPARED FOR: ECT



**PICKETT**  
SURVEYING • ENGINEERING

PICKETT AND ASSOCIATES, INC.  
475 SOUTH FIRST AVENUE, BARTON,  
FLORIDA 33850  
PHONE: (883)-533-9085  
FAX: (883)-534-1484  
LICENSED BUSINESS NO. 18384

Project No.:	18775	No.		Date		Approved		REVISION	
Horiz. Scale:	1" = 500'	O.R.	2/22/19	GAP				Original Release	
DWG. Name:	18775_Ease_01	1	2/26/19	GAP				Added clarifying text	
Drawn By:	ND								
Field Bk / Pg.:	N/A								
Drawing No.:	SD 5128								

SEE SHEET 1 FOR  
THE SIGNATURE AND  
THE ORIGINAL RAISED  
SEAL OF A FLORIDA  
LICENSED SURVEYOR  
AND MAPPER.

20190072-DE-001085

REDACTED

**EXHIBIT B**

**Termination Fee**

Upon termination of the Lease, other than due to an Excused Event, Tenant shall pay Landlord a Termination Fee in accordance with this EXHIBIT B.

1. If the Lease is terminated, other than due to an Excused Event, at any time prior to the Commercial Operation Date, Tenant shall pay Landlord a one-time "Termination Fee" equal to the total acres included in the Premises rounded to the nearest 10<sup>th</sup> of an acre, multiplied by [REDACTED]
2. If this Lease is terminated, other than due to an Excused Event, at any time from the Commercial Operation Date through the fourteenth (14<sup>th</sup>) anniversary of the Commercial Operation Date, Tenant shall pay Landlord a one-time "Termination Fee" equal to the total acres included in the Premises rounded to the nearest 10<sup>th</sup> of an acre multiplied by the dollar amount in the table below that corresponds to the year in which the effective termination date of the Lease occurs.

Year after Commercial Operation Date	\$ per Acre Terminated
1	\$ [REDACTED]
2	\$ [REDACTED]
3	\$ [REDACTED]
4	\$ [REDACTED]
5	\$ [REDACTED]
6	\$ [REDACTED]
7	\$ [REDACTED]
8	\$ [REDACTED]
9	\$ [REDACTED]
10	\$ [REDACTED]
11	\$ [REDACTED]
12	\$ [REDACTED]
13	\$ [REDACTED]

3. If this Lease is terminated from or after the 14<sup>th</sup> anniversary of the Commercial Operation Date, Tenant shall have no obligation to pay Landlord any "Termination Fee."

GA [Signature]



## FIRST AMENDMENT TO SOLAR GROUND LEASE

This First Amendment to Solar Ground Lease (“**Amendment**”) is entered into as of May 20<sup>th</sup> 2019 (the “**Effective Date**”) by and between Cow Slough, Inc., a Florida corporation (“**Landlord**”), and Duke Energy Florida, LLC, a Florida limited liability company (“**Tenant**”). Landlord and Tenant may collectively be referred to as the “**Parties**”.

### RECITAL

- A. Pursuant to the Highlands County Board of Adjustment decision of October 9, 2018 granting a special exception to allow construction of a solar energy systems (the “**County Special Exception**”), the County Special Exception is contingent on the requirements contained in the Resolution of the Lake Placid Town Council Regarding Solar Farm Special Exception, Resolution 2018-70, dated September 10, 2018 (the “**Town Resolution**”).
- B. The Town Resolution requires the Landlord, as applicant and land owner for the County Special Exception, to convey to the Highlands County Board of County Commissioners portions of land along Frontage Road Right of Way and the Saint John Right Street of Way, more particularly described as follows:
  - i. **Frontage Road Right of Way.** That the applicant/land owner convey to the County a strip of land eighty (80) feet wide adjacent to United States Highway 27 for use as a frontage road, utility corridor, trails and paths, landscape buffer. (such land the “**Frontage Road ROW**”).
  - ii. **Saint John Right of Way.** That the applicant/land owner convey to the County an additional ten (10) feet of right of way for Saint John Street (such land the “**Saint John ROW**”).
- C. Pursuant to the Procedures for Dedication of Right of Way to the Highlands County Board of County Commissioners, dated July 25, 2006 (the “**ROW Dedication Procedures**”), all dedications of land to Highlands County Board of County Commissioners must be made by a Warranty Deed accompanied with a survey and title search.
- D. Landlord and Price Groves, LLC, co-applicant to the Special Exception and an adjoining landowner on which the permitted solar energy system is to be constructed, each desire to convey their respective portion of a five (5) foot wide strip of land on either side of the existing Saint John Street (the “**Landlord’s Portion of the Saint John ROW**”) and that combined such strips of land would comprise the Saint John ROW.
- E. The Parties are entering into this Amendment to amend the Solar Ground Lease between the Parties dated May 1, 2019 (the “**Lease**”) on the terms provided in this Amendment in order to permit the Landlord to convey by Warranty Deed to the Highlands County Board of County Commissioners the Landlord’s Portion of the Saint John ROW and the Frontage Road ROW (the “**Conveyance**”).

## AGREEMENT

In consideration of the covenants of the Landlord and Tenant herein set forth and other good and valuable consideration, the receipt and sufficiency of which hereby are agreed and acknowledged, the Parties agree as follows:

1. Defined Terms. Capitalized terms used but not defined in this Amendment have the meanings assigned to them in the Lease.
2. Removal of Frontage Road ROW and Landlord's Portion of the Saint John ROW from the Premises. The Frontage Road ROW and the Landlord's Portion of the Saint John ROW are removed from the Premises. A legal description of the Frontage Road ROW is described on Exhibit A, and a sketch of the Frontage Road ROW is included as Exhibit B, both attached hereto and incorporated herein by reference. A legal description of the Landlord's Portion of the Saint John ROW is described on Exhibit C, and sketches of the Landlord's Portion of the Saint John ROW is included as Exhibit D, both attached hereto and incorporated herein by reference.
3. Calculation of Rent. The removal from the Premises of the Frontage Road ROW and Landlord's Portion of the Saint John ROW shall have no impact on the calculation of acres of Land with in the Premises for purposes of calculating the Construction Period Rent and the Commercial Operation Rent (collectively the "Rents"). The Rents as calculated at the Effective Date of the Lease shall remain unchanged by this Amendment.
4. No Further Control of Frontage Road ROW and the Landlord's Portion of the Saint John ROW. Parties acknowledge that following the Conveyance, the Landlord shall have no further control of the Land within the Frontage Road ROW and the Landlord's Portion of the Saint John ROW.
5. No Other Changes. Except as provided in this Amendment, the Lease remains unchanged, and the Lease, as amended by this Amendment, remains in full force and effect.
6. Counterparts. This Amendment may be executed in counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, Landlord and Tenant have caused their duly authorized representatives to execute this Amendment as of the Effective Date set forth above.

**[Signature Page Follows]**

**LANDLORD:**  
**COW SLOUGH INC.,**  
a Florida corporation

Witnesses:

William K. Thompson  
Name: William K. Thompson  
Sarah E. D. Moore  
Name: Sarah E. Moore

By John F. Smoak, III  
Name: John F. Smoak, III  
Title: President

STATE OF FLORIDA  
COUNTY OF HEMMINGS

The foregoing instrument was acknowledged before me this 20<sup>th</sup> day MAY, 2019 by John F. Smoak, III, a President of COW SLOUGH INC., a Florida corporation, on behalf of said company. He is personally known to me or has produced \_\_\_\_\_ as identification.

(Affix Seal)

William K. Thompson  
Print Name: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_



Witnesses:

Renee Birdsong  
Name: Renee Birdsong  
T.R. Hudson  
Name: THOMAS R. HUDSON

**TENANT:**  
**DUKE ENERGY FLORIDA, LLC**, a Florida  
limited liability company d/b/a Duke Energy

By: Karen Adams  
Name: Karen Adams  
Title: Manager – Land Services – Florida Region

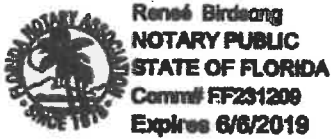
APPROVED  
By Chris King at 3:56 pm, May 19, 2019

STATE OF FLORIDA  
COUNTY OF SEMINOLE

The foregoing instrument was acknowledged before me this 14 day MAY, 2019 by Karen Adams, as Manager – Land Services – Florida Region of DUKE ENERGY FLORIDA, LLC, a Florida limited liability d/b/a Duke Energy, on behalf of said company. She is personally known to me or has produced \_\_\_\_\_ as identification.

(Affix Seal)

Renee Birdsong  
Print Name: Renee Birdsong  
My Commission Expires: 6/6/19



**EXHIBIT A**  
**(Legal Descriptions of Frontage Road ROW)**

**Parcel 1**

A portion of a parcel recorded in Official Records Book 1492, Page 1820, public records of Highlands County, lying in Section 24, Township 36 South, Range 29 East, Highlands County, Florida. Being more particularly described as follows:

Commence at the southeast corner of Section 24, Township 36 South, Range 29 East, Highlands County, Florida; thence North 89°48'19" West, along the south line of said Section 24, a distance of 2036.50 feet to the Point-of-Beginning; thence continue North 89° 48' 19" West, along said south section line, a distance of 130.11 feet to the east right-of-way line of U.S. Highway 27 as shown on FDOT R/W Map Section 09010-2501; thence along said east right-of-way line the following three (3) courses: (1) North 51° 51' 43" West, a distance of 109.50 feet; (2) North 38° 08' 17" East, a distance of 30.00 feet; (3) North 51° 51' 43" West, a distance of 527.00 feet to the west line of said parcel and west line of the southeast quarter of said Section 24; thence North 01° 33' 15" West, along said west line of the southeast quarter, a distance of 103.97 feet; thence South 51° 51' 43" East, a distance of 673.40 feet; thence South 38° 08' 17" West, a distance of 30.00 feet; thence South 51° 51' 43" East, a distance of 132.11 feet to the Point-of-Beginning.

Containing 1.38 acres, more or less.

**EXHIBIT B**  
**(Sketch of Frontage Road ROW)**

Attached.

*THIS IS NOT A SURVEY*

**LEGAL DESCRIPTION:**

A portion of a parcel recorded in Official Records Book 1492, Page 1820, public records of Highlands County, lying in Section 24, Township 36 South, Range 29 East, Highlands County, Florida. Being more particularly described as follows:

Commence at the southeast corner of Section 24, Township 36 South, Range 29 East, Highlands County, Florida; thence North 89°48'19" West, along the south line of said Section 24, a distance of 2036.50 feet to the Point-of-Beginning; thence continue North 89° 48' 19" West, along said south section line, a distance of 130.11 feet to the east right-of-way line of U.S. Highway 27 as shown on FDOT R/W Map Section 09010-2501; thence along said east right-of-way line the following three (3) courses: (1) North 51° 51' 43" West, a distance of 109.50 feet; (2) North 38° 08' 17" East, a distance of 30.00 feet; (3) North 51° 51' 43" West, a distance of 527.00 feet to the west line of said parcel and west line of the southeast quarter of said Section 24; thence North 01° 33' 15" West, along said west line of the southeast quarter, a distance of 103.97 feet; thence South 51° 51' 43" East, a distance of 673.40 feet; thence South 38° 08' 17" West, a distance of 30.00 feet; thence South 51° 51' 43" East, a distance of 132.11 feet to the Point-of-Beginning.

Containing 1.38 acres, more or less.


**SURVEYOR'S NOTES:**

- 1.) North and the bearings shown hereon are referenced to the East Zone of the Florida State Plane Coordinate System, NAD 83, 2011 adjustment. All measurements are in U.S. Survey Feet.
- 2.) The basis of all bearings shown hereon is referenced to the grid bearing of North 89°48'19" West along the south boundary of Section 24, Township 36 South, Range 29 East, Highlands County, Florida.

GREGORY A. PRATHER, P.S.M. - FL. REGISTRATION No. 5135  
 PICKETT & ASSOCIATES, INC. - FL. REGISTRATION No. LB 364

DATE

SHEET 1 OF 2

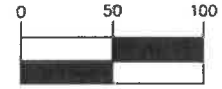
DESCRIPTION SKETCH IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST, HIGHLANDS COUNTY, FL PREPARED FOR: ECT					 <b>PICKETT</b> SURVEYING • ENGINEERING	
Project No.:	18775-2	No.	Date	Approved	REVISION	
Horiz. Scale:	N/A	O.R.	3/21/19	GAP	Original Release	
DWG. Name:	18775_ROW_01					
Drawn By:	JJC					
Field Bk / Pg.:	N/A					
Drawing No.:	SD 5138				20190072-DE-001093	

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

THIS IS NOT A SURVEY



NORTH



( IN FEET )

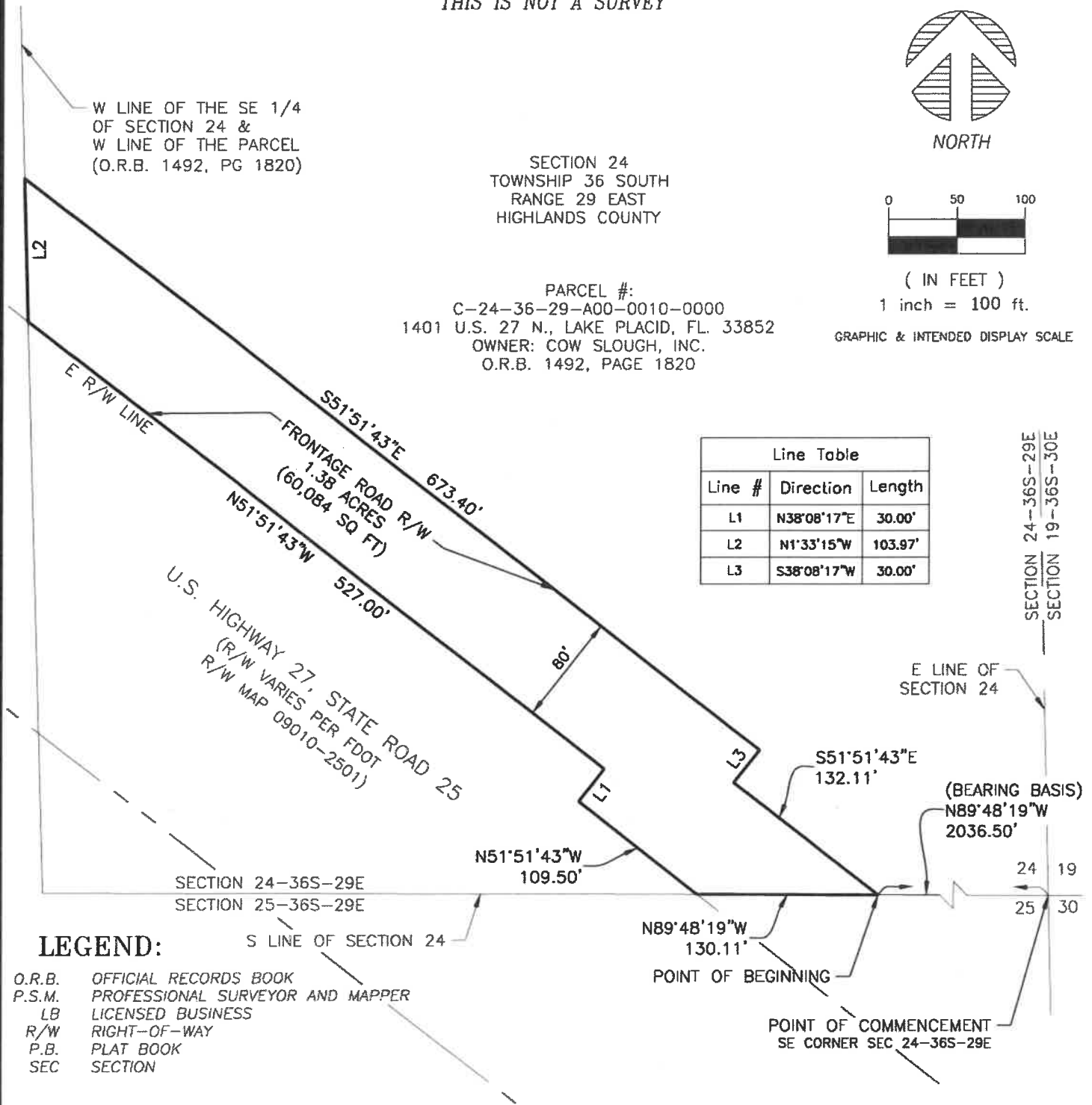
1 inch = 100 ft.

GRAPHIC & INTENDED DISPLAY SCALE

SECTION 24  
TOWNSHIP 36 SOUTH  
RANGE 29 EAST  
HIGHLANDS COUNTY

PARCEL #:  
C-24-36-29-A00-0010-0000  
1401 U.S. 27 N., LAKE PLACID, FL. 33852  
OWNER: COW SLOUGH, INC.  
O.R.B. 1492, PAGE 1820

Line Table		
Line #	Direction	Length
L1	N38°08'17"E	30.00'
L2	N1°33'15"W	103.97'
L3	S38°08'17"W	30.00'



**LEGEND:**

- O.R.B. OFFICIAL RECORDS BOOK
- P.S.M. PROFESSIONAL SURVEYOR AND MAPPER
- LB LICENSED BUSINESS
- R/W RIGHT-OF-WAY
- P.B. PLAT BOOK
- SEC SECTION

SHEET 2 OF 2

DESCRIPTION SKETCH  
IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,  
HIGHLANDS COUNTY, FL  
PREPARED FOR: ECT



**PICKETT**  
SURVEYING • ENGINEERING

Project No.:	18775-2	No.		Date	3/21/19	Approved	GAP	REVISION	Original Release
Horiz. Scale:	1" = 100'	O.R.							
DWG. Name:	18775_ROW_01								
Drawn By:	JJC								
Field Bk / Pg.:	N/A								
Drawing No.:	SD 5138								

SEE SHEET 1 FOR THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

20190072-DE-001094



**EXHIBIT C**  
**(Legal Descriptions of Landlord's Portion of the Saint John ROW)**

Two parcels consisting of 5 foot strips of land along both sides of Saint John Street:

**Parcel 2:**

A 5 foot strip of land, being a portion of a parcel recorded in Official Records Book 1492, Page 1820, Official Records Book 1917, Page 1980, and Official Records Book 2181, Page 873, all of the public records of Highlands County, Florida and lying in Section 24, Township 36 South, Range 29 East and Sections 18 and 19, Township 36 South, Range 30 East, Highlands County, Florida. Being more particularly described as follows:

Commence at the southeast corner of Section 24, Township 36 South, Range 29 East, Highlands County, Florida; thence North 89°48'19" West, along the south line of said Section 24, a distance of 25.01 feet to the west right-of-way line of St John Street, as recorded in Deed Book 140, Page 365, public records of Highlands County, Florida for the Point-of-Beginning; thence continue North 89° 48' 19" West, along said south section line, a distance of 5.00 feet; thence North 01° 17' 44" West a distance of 1333.98 feet; thence North 01° 16' 56" West a distance of 1334.66 feet; thence North 01° 24' 20" West a distance of 1039.99 feet; thence South 89° 32' 30" East a distance of 1322.56 feet; thence North 02° 07' 12" West a distance of 295.98 feet; thence North 02° 07' 09" West a distance of 1336.97 feet; thence North 01° 24' 54" West a distance of 590.04 feet to the Safe Upland Line of Lake Apthorpe; thence South 66° 51' 27" East, along said Safe Upland Line, a distance of 5.50 feet, more or less, to the west right-of-way line of St. John Street, as recorded in Official Records Book 15, Page 215, public records of Highlands County, Florida; thence South 01° 24' 54" East, along said west right-of-way line, a distance of 587.73 feet; thence South 02° 07' 09" East, along said west right-of-way line, a distance of 1336.94 feet to south line of Government Lot 2 of said Section 19, Township 36 South, Range 30 East; thence South 02° 07' 12" East, along said west right-of-way line, a distance of 301.21 feet, to the north right-of-way of said St John Street, as recorded in Official Records Book 15, Page 215, public records of Highlands County, Florida; thence North 89° 32' 30" West, along said north right-of-way line, a distance of 1322.62 feet to the west right-of-way line of said St John Street, as recorded in Deed Book 140, Page 365, public records of Highlands County, Florida; thence South 01° 24' 20" East, along said west right-of-way line, a distance of 1034.83 feet; thence South 01° 16' 56" East, along said west right-of-way line, a distance of 1334.66 feet; thence South 01° 17' 44" East, along said west right-of-way line, a distance of 1334.11 feet to the Point-of-Beginning.

Containing 0.83 acre, more or less.

**Parcel 3:**

A 5 foot strip of land being portion of a parcel recorded in Official Records Book 1492, Page 1820, public records of Highlands County, Florida, lying in Sections 18 and 19, Township 36 South, Range 30 East, Highlands County, Florida. Being more particularly described as follows:

Commence at the southwest corner of Section 19, Township 36 South, Range 30 East, Highlands County, Florida; thence South 89°24'36" East, along the south line of said Section 19, a distance of 25.01 feet to the east right-of-way line of St John Street, as recorded in Deed Book 140, Page 365, public records of Highlands County, Florida; thence North 01° 17' 44" West, along said east right-of-way line, a distance of 1309.76 feet to the south right-of-way line of Walker Road, as recorded in said Deed Book 140, Page 365; thence North 01° 17' 21" West, a distance of 50.02 feet to the north right-of-way line of said Walker Road and said east right-of-way of St John Street for the Point-of-Beginning; thence North 01° 16' 56" West, along said east right-of-way line of St John Street, a distance of 1310.50 feet; thence North 01° 24' 20" West, along said east right-of-way line of St John Street, a distance of 967.22 feet to the south right-of-way line of St John Street, as recorded in Official Records Book 15, Page 215, public records of Highlands County, Florida; thence South 89° 32' 30" East along said south right-of-way line, a distance of 1339.48 feet to the east right-of-way line of said St John Street; thence North 02° 07' 12" West, along said east right-of-way line, a distance of 370.25 feet; thence North 02°07'09" West, along said east right-of-way line, a distance of 1336.54 feet; thence North 01°24'54" West, along said east right-of-way, a distance of 582.50 feet, to the Safe Upland Line of Lake Apthorpe; thence North 83° 27' 03" East, along said Safe Upland Line, a distance of 5.02 feet, more or less; thence South 01°24'54" East a distance of 582.92 feet; thence South 02°07'09" East a distance of 1336.51 feet; thence South 02° 07' 12" East, a distance of 375.48 feet; thence North 89° 32' 30" West, a distance of 1339.55 feet; thence South 01° 24' 20" East, a distance of 962.06 feet; thence South 01° 16' 56" East, a distance of 1310.67 feet to the north right-of-way line of said Walker Road; thence North 89° 26' 55" West, along said north right-of-way line, a distance of 5.00 feet to the Point-of-Beginning.

Containing 0.54 acre, more or less.

**EXHIBIT D**  
**(Sketches of Landlord's Portion of the Saint John ROW)**

Attached.

**LEGAL DESCRIPTION:**

A 5 foot strip of land, being a portion of a parcel recorded in Official Records Book 1492, Page 1820, Official Records Book 1917, Page 1980, and Official Records Book 2181, Page 873, all of the public records of Highlands County, Florida and lying in Section 24, Township 36 South, Range 29 East and Sections 18 and 19, Township 36 South, Range 30 East, Highlands County, Florida. Being more particularly described as follows:

Commence at the southeast corner of Section 24, Township 36 South, Range 29 East, Highlands County, Florida; thence North 89° 48' 19" West, along the south line of said Section 24, a distance of 25.01 feet to the west right-of-way line of St John Street, as recorded in Deed Book 140, Page 365, public records of Highlands County, Florida for the Point-of-Beginning; thence continue North 89° 48' 19" West, along said south section line, a distance of 5.00 feet; thence North 01° 17' 44" West a distance of 1333.98 feet; thence North 01° 16' 56" West a distance of 1334.66 feet; thence North 01° 24' 20" West a distance of 1039.99 feet; thence South 89° 32' 30" East a distance of 1322.56 feet; thence North 02° 07' 12" West a distance of 295.98 feet; thence North 02° 07' 09" West a distance of 1336.97 feet; thence North 01° 24' 54" West a distance of 590.04 feet to the Safe Upland Line of Lake Apthorpe; thence South 66° 51' 27" East, along said Safe Upland Line, a distance of 5.50 feet, more or less, to the west right-of-way line of St. John Street, as recorded in Official Records Book 15, Page 215, public records of Highlands County, Florida; thence South 01° 24' 54" East, along said west right-of-way line, a distance of 587.73 feet; thence South 02° 07' 09" East, along said west right-of-way line, a distance of 1336.94 feet; thence South 02° 07' 12" East, along said west right-of-way line, a distance of 301.21 feet, to the north right-of-way of said St John Street, as recorded in Official Records Book 15, Page 215, public records of Highlands County, Florida; thence North 89° 32' 30" West, along said north right-of-way line, a distance of 1322.62 feet to the west right-of-way line of said St John Street, as recorded in Deed Book 140, Page 365, public records of Highlands County, Florida; thence South 01° 24' 20" East, along said west right-of-way line, a distance of 1034.83 feet; thence South 01° 16' 56" East, along said west right-of-way line, a distance of 1334.66 feet; thence South 01° 17' 44" East, along said west right-of-way line, a distance of 1334.11 feet to the Point-of-Beginning.

Containing 0.83 acre, more or less.

**SURVEYOR'S NOTES:**

- 1.) North and the bearings shown hereon are referenced to the East Zone of the Florida State Plane Coordinate System, NAD 83, 2011 adjustment. All measurements are in U.S. Survey Feet.
- 2.) The basis of all bearings shown hereon is referenced to the grid bearing of North 89°48'19" West along the south boundary of Section 24, Township 36 South, Range 29 East, Highlands County, Florida.

GREGORY A. PRATHER, P.S.M. - FL. REGISTRATION No. 5135  
 PICKETT & ASSOCIATES, INC. - FL. REGISTRATION No. LB 364

DATE

SHEET 1 OF 4

**DESCRIPTION SKETCH**  
 IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,  
 & SECTIONS 18 & 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
 HIGHLANDS COUNTY, FL  
 PREPARED FOR: ECT



**PICKETT**  
 SURVEYING • ENGINEERING

Project No.:	18775-2	No.		Date		Approved		REVISION	
Horiz. Scale:	N/A	O.R.	3/21/19	GAP				Original Release	
DWG. Name:	18775_ROW_02	1	4/03/19	GAP				Changed additional R/W to 5' wide	
Drawn By:	JJC	2	4/09/19	GAP				Add additional R/W	
Field Bk / Pg.:	N/A								
Drawing No.:	SD 5139								

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

20190072-DE-001098

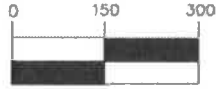
THIS IS NOT A SURVEY

MATCHLINE - SEE SHEET 3

MATCHLINE - SEE SHEET 3



NORTH



( IN FEET )

1 inch = 300 ft.

GRAPHIC & INTENDED DISPLAY SCALE

PARCEL #:  
C-24-36-29-A00-0010-0000  
1401 U.S. 27 N., LAKE PLACID, FL. 33852  
OWNER: COW SLOUGH, INC.  
O.R.B. 1492, PAGE 1820

GOV LOT 4  
PARCEL #:  
C-18-36-29-A00-0010-0000  
196 ST. JOHN STREET, LAKE PLACID, FL. 33852  
OWNER: COW SLOUGH, INC.  
O.R.B. 1492, PAGE 1820

WALKER ROAD - 50' WIDE R/W  
PER RESOLUTION (D.B. 140, PAGE 365)

1334.66'  
NO1°16'56"W  
1333.98'  
NO1°17'44"W  
5'

5' ADDITIONAL RIGHT OF WAY  
0.83 ACRE (36,266 SQ FT)

PARCEL #:  
C-19-36-30-A00-0110-0000  
10 WALKER ROAD,  
LAKE PLACID, FL. 33852  
OWNER: PRICE GROVES, LLC.  
O.R.B. 2298, PAGE 1987

SECTION 19  
TOWNSHIP 36 SOUTH  
RANGE 30 EAST  
HIGHLANDS COUNTY

SECTION 24  
TOWNSHIP 36 SOUTH  
RANGE 29 EAST  
HIGHLANDS COUNTY

ST JOHN STREET  
50' WIDE PUBLIC R/W  
PER RESOLUTION  
(D.B. 140, PAGE 365)

EXISTING W R/W LINE

E LINE OF SECTION 24

GOV LOT 5

PARCEL #:  
C-19-36-30-A00-0120-0000  
30 WALKER ROAD, LAKE PLACID, FL. 33852  
OWNER: PRICE GROVES, LLC.  
O.R.B. 2265, PAGE 678

(BEARING BASIS)  
N89°48'19"W  
25.01'

S LINE OF SECTION 24

POINT-OF-COMMENCEMENT  
SE CORNER SEC 24-36S-29E

S LINE OF SECTION 19

SECTION 24-36S-29E  
SECTION 25-36S-29E

24  
25

SECTION 19-36S-30E  
SECTION 30-36S-30E

N89°48'19"W 5.00'

POINT-OF-BEGINNING

PARCEL #:  
C-25-36-29-A00-0010-0000  
OWNER: HAYWARD H. DAVIS, TRUSTEE  
O.R.B. 2454, PAGE 1978

LEGEND:

- O.R.B. OFFICIAL RECORDS BOOK
- P.S.M. PROFESSIONAL SURVEYOR AND MAPPER
- LB LICENSED BUSINESS
- R/W RIGHT-OF-WAY
- SEC SECTION
- GOV GOVERNMENT

SHEET 2 OF 4

DESCRIPTION SKETCH  
IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,  
& SECTIONS 18 & 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
HIGHLANDS COUNTY, FL  
PREPARED FOR: ECT



**PICKETT**  
SURVEYING • ENGINEERING

Project No.:	18775-2	No.		Date		Approved		REVISION	
Horiz. Scale:	1" = 300'	O.R.	3/21/19	GAP				Original Release	
DWG. Name:	18775_ROW_02	1	4/03/19	GAP				Changed additional R/W to 5' wide	
Drawn By:	JJC	2	4/09/19	GAP				Add additional R/W	
Field Bk / Pg.:	N/A								
Drawing No.:	SD 5139								

SEE SHEET 1 FOR  
THE SIGNATURE AND  
THE ORIGINAL RAISED  
SEAL OF A FLORIDA  
LICENSED SURVEYOR  
AND MAPPER.

20190072-DE-001099

THIS IS NOT A SURVEY

GOV LOT 2

MATCHLINE - SEE SHEET 3  
50' ROADWAY  
RESOLUTION  
(D.B. 140, PAGE 365)  
ROAD NOT OPEN

MATCHLINE  
SEE SHEET 3

PARCEL #:  
C-13-36-29-A00-0020-0000  
369 ST. JOHN STREET,  
LAKE PLACID, FL. 33852  
OWNER: COW SLOUGH, INC.  
O.R.B. 2181, PAGE 873  
S89°32'30"E 1322.56'

N02°07'12"W  
295.98'

S02°07'12"E  
301.21'

SECTION 24  
36S-29E

SECTION 19  
36S-30E

N89°32'30"W 1322.62'

EXISTING N  
R/W LINE

EXISTING S R/W LINE

ST JOHN STREET  
66' WIDE PUBLIC R/W  
PER RESOLUTION  
(O.R.B. 15, PAGE 215)

SECTION 19  
TOWNSHIP 36 SOUTH  
RANGE 30 EAST  
HIGHLANDS COUNTY

PARCEL #:  
C-13-36-29-A00-0020-0000  
369 ST. JOHN STREET,  
LAKE PLACID, FL. 33852  
OWNER: COW SLOUGH, INC.  
O.R.B. 2181, PAGE 873

5'

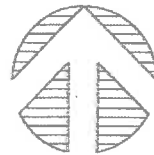
N01°24'20"W  
1039.99'

S01°24'20"E 1034.83'

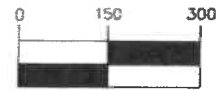
GOV LOT  
3

EXISTING W R/W LINE

PARCEL #:  
C-18-36-29-A00-0010-0000  
196 ST. JOHN STREET,  
LAKE PLACID, FL. 33852  
OWNER: COW SLOUGH, INC.  
O.R.B. 1492, PAGE 1820



NORTH



( IN FEET )

1 inch = 300 ft.

GRAPHIC & INTENDED DISPLAY SCALE

SECTION 24  
TOWNSHIP 36 SOUTH  
RANGE 29 EAST  
HIGHLANDS COUNTY

N LINE OF THE SE  
1/4 OF SECTION 24

PARCEL #:  
C-24-36-29-A00-0010-0000  
1401 U.S. 27 N.,  
LAKE PLACID, FL. 33852  
OWNER: COW SLOUGH, INC.  
O.R.B. 1492, PAGE 1820

1334.66'

E LINE OF SECTION 24

S01°16'56"E 1334.66'

GOV LOT  
4

5' ADDITIONAL RIGHT OF WAY  
0.83 ACRE (36,266 SQ FT)

LEGEND:

- O.R.B. OFFICIAL RECORDS BOOK
- P.S.M. PROFESSIONAL SURVEYOR AND MAPPER
- LB LICENSED BUSINESS
- R/W RIGHT-OF-WAY
- SEC SECTION
- GOV GOVERNMENT

MATCHLINE - SEE SHEET 2

MATCHLINE - SEE SHEET 2

SHEET 3 OF 4

DESCRIPTION SKETCH

IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,  
& SECTIONS 18 & 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
HIGHLANDS COUNTY, FL  
PREPARED FOR: ECT



**PICKETT**  
SURVEYING • ENGINEERING

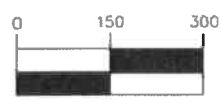
Project No.:	18775-2	No.		Date		Approved		REVISION	
Horiz. Scale:	1" = 300'	O.R.	3/21/19	GAP				Original Release	
DWG. Name:	18775_ROW_02	1	4/03/19	GAP				Changed additional R/W to 5' wide	
Drawn By:	JJC	2	4/09/19	GAP				Add additional R/W	
Field Bk / Pg.:	N/A								
Drawing No.:	SD 5139								

SEE SHEET 1 FOR  
THE SIGNATURE AND  
THE ORIGINAL RAISED  
SEAL OF A FLORIDA  
LICENSED SURVEYOR  
AND MAPPER.

20190072-DE-001100

THIS IS NOT A SURVEY

LAKE APTHORPE



( IN FEET )  
1 inch = 300 ft.

GRAPHIC & INTENDED DISPLAY SCALE

13 18

24 19

SECTION 24-36S-29E  
SECTION 19-36S-30E

PARCEL #:  
C-13-36-29-A00-0030-0000  
COW SLOUGH, INC.  
TRIGEN CITRUS, LLC.  
1917, PAGE 1980

SECTION 18  
TOWNSHIP 36 SOUTH  
RANGE 30 EAST  
HIGHLANDS COUNTY

SECTION 18-36S-30E  
SECTION 19-36S-30E

5' ADDITIONAL RIGHT OF WAY  
0.83 ACRE (36,266 SQ FT)

SECTION 19  
TOWNSHIP 36 SOUTH  
RANGE 30 EAST  
HIGHLANDS COUNTY

PARCEL #:  
C-13-36-29-A00-0020-0000  
369 ST. JOHN STREET,  
LAKE PLACID, FL. 33852  
OWNER: COW SLOUGH, INC.  
O.R.B. 2181, PAGE 873

PARCEL #:  
C-18-36-29-A00-0010-0000  
196 ST. JOHN STREET,  
LAKE PLACID, FL. 33852  
OWNER: COW SLOUGH, INC.  
O.R.B. 1492, PAGE 1820

SAFE UPLAND LINE  
LAKE APTHORPE

GOV LOT  
27

GOV LOT  
26

50' ROADWAY  
RESOLUTION  
(D.B. 140, PAGE 365)  
ROAD NOT OPEN

EXISTING W R/W LINE

GOV LOT  
11

ST JOHN STREET  
66' WIDE PUBLIC R/W  
PER RESOLUTION  
(O.R.B. 15, PAGE 215)

GOV LOT  
2

EXISTING E R/W LINE

590.04'  
N01°24'54"W

587.73'  
S01°24'54"E

1336.97'  
N02°07'09"W

1336.94'  
S02°07'09"E

5'

**LEGEND:**

- O.R.B. OFFICIAL RECORDS BOOK
- P.S.M. PROFESSIONAL SURVEYOR AND MAPPER
- LB LICENSED BUSINESS
- R/W RIGHT-OF-WAY
- SEC SECTION
- GOV GOVERNMENT

GOV LOT 2

MATCHLINE - SEE SHEET 3

MATCHLINE - SEE SHEET 3

SHEET 4 OF 4

**DESCRIPTION SKETCH**

IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,  
& SECTIONS 18 & 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
HIGHLANDS COUNTY, FL

PREPARED FOR: ECT



**PICKETT**  
SURVEYING • ENGINEERING

Project No.:	18775-2	No.		Date		Approved		REVISION	
Horiz. Scale:	1" = 300'	O.R.	3/21/19	GAP				Original Release	
DWG. Name:	18775_ROW_02	1	4/03/19	GAP				Changed additional R/W to 5' wide	
Drawn By:	JJC	2	4/09/19	GAP				Add additional R/W	
Field Bk / Pg.:	N/A								
Drawing No.:	SD 5139								

SEE SHEET 1 FOR  
THE SIGNATURE AND  
THE ORIGINAL RAISED  
SEAL OF A FLORIDA  
LICENSED SURVEYOR  
AND MAPPER.

20190072-DE-001101

**LEGAL DESCRIPTION:**

A 5 foot strip of land being portion of a parcel recorded in Official Records Book 1492, Page 1820, public records of Highlands County, Florida, lying in Sections 18 and 19, Township 36 South, Range 30 East, Highlands County, Florida. Being more particularly described as follows:

Commence at the southwest corner of Section 19, Township 36 South, Range 30 East, Highlands County, Florida; thence South 89° 24' 36" East, along the south line of said Section 19, a distance of 25.01 feet to the east right-of-way line of St John Street, as recorded in Deed Book 140, Page 365, public records of Highlands County, Florida; thence North 01° 17' 44" West, along said east right-of-way line, a distance of 1309.76 feet to the south right-of-way line of Walker Road, as recorded in said Deed Book 140, Page 365; thence North 01° 17' 21" West, a distance of 50.02 feet to the north right-of-way line of said Walker Road and said east right-of-way of St John Street for the Point-of-Beginning; thence North 01° 16' 56" West, along said east right-of-way line of St John Street, a distance of 1310.50 feet; thence North 01° 24' 20" West, along said east right-of-way line of St John Street, a distance of 967.22 feet to the south right-of-way line of St John Street, as recorded in Official Records Book 15, Page 215, public records of Highlands County, Florida; thence South 89° 32' 30" East along said south right-of-way line, a distance of 1339.48 feet to the east right-of-way line of said St John Street; thence North 02° 07' 12" West, along said east right-of-way line, a distance of 370.25 feet; thence North 02° 07' 09" West, along said east right-of-way line, a distance of 1336.54 feet; thence North 01° 24' 54" West, along said east right-of-way, a distance of 582.50 feet, to the Safe Upland Line of Lake Aphorpe; thence North 83° 27' 03" East, along said Safe Upland Line, a distance of 5.02 feet, more or less; thence South 01° 24' 54" East a distance of 582.92 feet; thence South 02° 07' 09" East a distance of 1336.51 feet; thence South 02° 07' 12" East, a distance of 375.48 feet; thence North 89° 32' 30" West, a distance of 1339.55 feet; thence South 01° 24' 20" East, a distance of 962.06 feet; thence South 01° 16' 56" East, a distance of 1310.67 feet to the north right-of-way line of said Walker Road; thence North 89° 26' 55" West, along said north right-of-way line, a distance of 5.00 feet to the Point-of-Beginning.

Containing 0.54 acre, more or less.

**SURVEYOR'S NOTES:**

- 1.) North and the bearings shown hereon are referenced to the East Zone of the Florida State Plane Coordinate System, NAD 83, 2011 adjustment. All measurements are in U.S. Survey Feet.
- 2.) The basis of all bearings shown hereon is referenced to the grid bearing of South 89° 24' 36" East along the south boundary of Section 19, Township 36 South, Range 30 East, Highlands County, Florida.

GREGORY A. PRATHER, P.S.M. - FL. REGISTRATION No. 5135  
 PICKETT & ASSOCIATES, INC. - FL. REGISTRATION No. LB 364

DATE

SHEET 1 OF 4

DESCRIPTION SKETCH  
 IN SECTIONS 18 & 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
 HIGHLANDS COUNTY, FL  
 PREPARED FOR: ECT



**PICKETT**  
 SURVEYING • ENGINEERING

Project No.:	18775-2	No.		Date		Approved		REVISION	
Horiz. Scale:	N/A	O.R.	3/21/19	GAP				Original Release	
DWG. Name:	18775_ROW_03		1	4/03/19	GAP			Changed additional R/W to 5' wide	
Drawn By:	JJC		2	4/09/19	GAP			Add additional R/W	
Field Bk / Pg.:	N/A								
Drawing No.:	SD 5140								

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

20190072-DE 001102



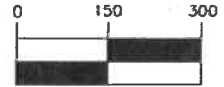
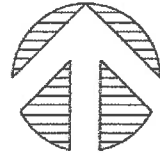
THIS IS NOT A SURVEY

MATCHLINE - SEE SHEET 3

MATCHLINE - SEE SHEET 3

PARCEL #:  
C-24-36-29-A00-0010-0000  
1401 U.S. 27 N.,  
LAKE PLACID, FL. 33852  
OWNER: COW SLOUGH, INC.  
O.R.B. 1492, PAGE 1820

PARCEL #:  
C-18-36-29-A00-0010-0000  
196 ST. JOHN STREET,  
LAKE PLACID, FL. 33852  
OWNER: COW SLOUGH, INC.  
O.R.B. 1492, PAGE 1820



( IN FEET )  
1 inch = 300 ft.

GRAPHIC & INTENDED DISPLAY SCALE

5' ADDITIONAL RIGHT OF WAY  
0.68 ACRE (29,534 SQ FT)

GOV LOT  
4

EXISTING  
E R/W LINE

N89°26'55"W  
5.00'

WALKER ROAD  
50' WIDE PUBLIC R/W  
PER RESOLUTION  
(D.B. 140, PAGE 365)

N01°17'21"W  
50.02'

N R/W LINE

S R/W LINE

POINT-OF-BEGINNING

SECTION 24  
TOWNSHIP 36 SOUTH  
RANGE 29 EAST  
HIGHLANDS COUNTY

PARCEL #:  
C-19-36-30-A00-0110-0000  
10 WALKER ROAD,  
LAKE PLACID, FL. 33852  
OWNER: PRICE GROVES, LLC.  
O.R.B. 2298, PAGE 1987

SECTION 19  
TOWNSHIP 36 SOUTH  
RANGE 30 EAST  
HIGHLANDS COUNTY

EXISTING W R/W LINE  
EXISTING E R/W LINE

N01°17'44"W  
1309.76'

W LINE OF THE SW  
1/4 OF SECTION 19

PARCEL #:  
C-19-36-30-A00-0120-0000  
30 WALKER ROAD, LAKE PLACID, FL. 33852  
OWNER: PRICE GROVES, LLC.  
O.R.B. 2265, PAGE 678

GOV LOT  
5

**LEGEND:**

- O.R.B. OFFICIAL RECORDS BOOK
- P.S.M. PROFESSIONAL SURVEYOR AND MAPPER
- LB LICENSED BUSINESS
- R/W RIGHT-OF-WAY
- SEC SECTION
- GOV GOVERNMENT

ST JOHN STREET  
50' WIDE PUBLIC R/W  
PER RESOLUTION  
(D.B. 140, PAGE 365)

POINT-OF-COMMENCEMENT  
SW CORNER SEC 19-36S-30E

(BEARING BASIS)  
S89°24'36"E  
25.01'

SECTION 24-36S-29E 24 19  
SHEET 2 OF 4 SECTION 25-36S-29E 25 30

SECTION 19-36S-30E SECTION 30-36S-30E  
S LINE OF SECTION 19

DESCRIPTION SKETCH  
IN SECTIONS 18 & 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
HIGHLANDS COUNTY, FL  
PREPARED FOR: ECT



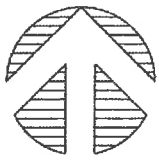
**PICKETT**  
SURVEYING • ENGINEERING

Project No.:	18775-2	No.		Date		Approved		REVISION	
Horiz. Scale:	1" = 300'	O.R.	3/21/19	GAP				Original Release	
DWG. Name:	18775_ROW_03	1	4/03/19	GAP				Changed additional R/W to 5' wide	
Drawn By:	JJC	2	4/09/19	GAP				Add additional R/W	
Field Bk / Pg.:	N/A								
Drawing No.:	SD 5140								

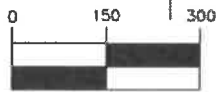
SEE SHEET 1 FOR  
THE SIGNATURE AND  
THE ORIGINAL RAISED  
SEAL OF A FLORIDA  
LICENSED SURVEYOR  
AND MAPPER.

20190072-DE-001103

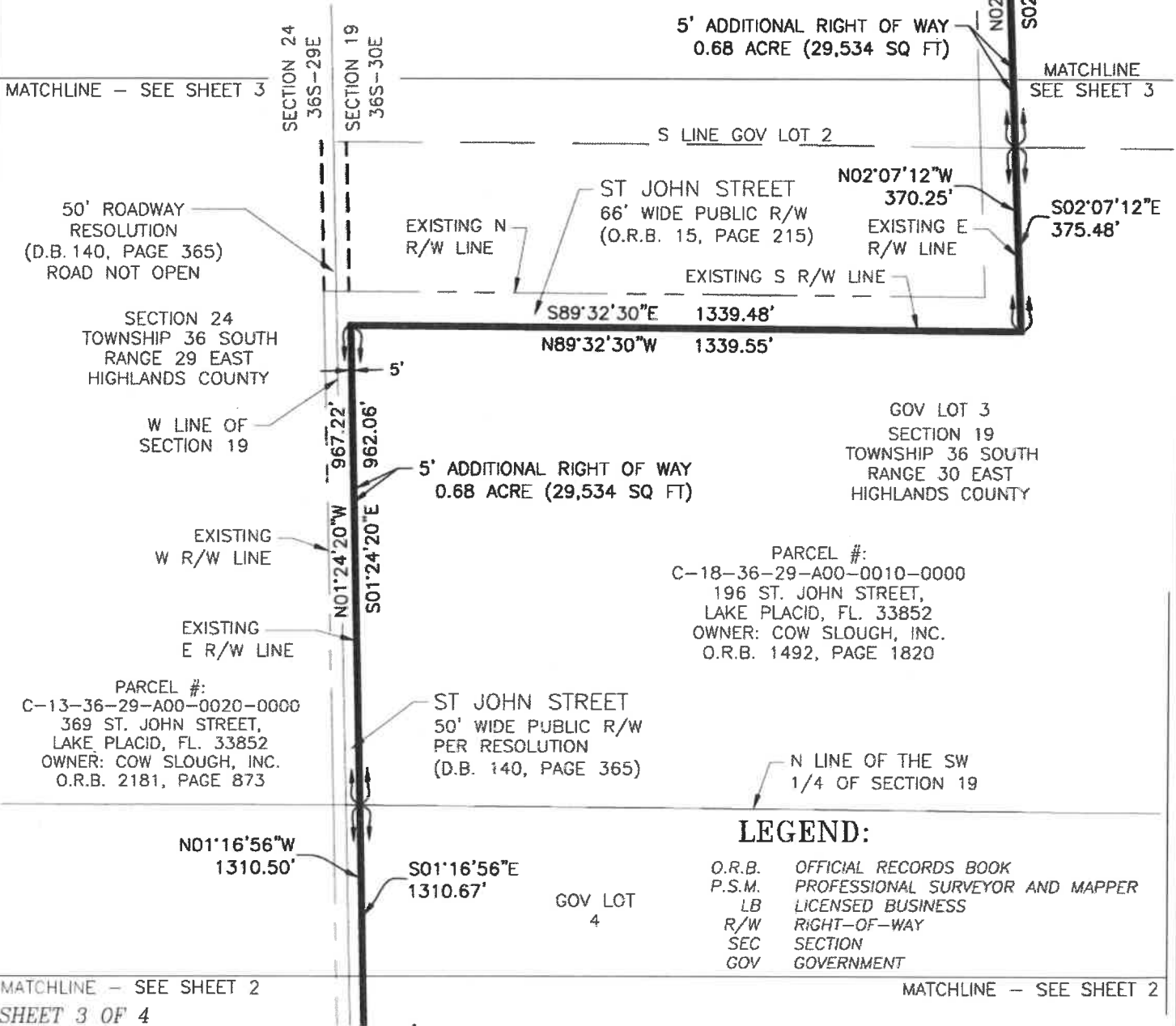
THIS IS NOT A SURVEY



NORTH



( IN FEET )  
1 inch = 300 ft.  
GRAPHIC & INTENDED DISPLAY SCALE



**LEGEND:**

- O.R.B. OFFICIAL RECORDS BOOK
- P.S.M. PROFESSIONAL SURVEYOR AND MAPPER
- LB LICENSED BUSINESS
- R/W RIGHT-OF-WAY
- SEC SECTION
- GOV GOVERNMENT

**DESCRIPTION SKETCH**  
IN SECTIONS 18 & 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
HIGHLANDS COUNTY, FL  
PREPARED FOR: ECT



**PICKETT**  
SURVEYING • ENGINEERING

Project No.:	18775-2	No.		Date		Approved		REVISION	
Horiz. Scale:	1" = 300'	O.R.	3/21/19	GAP				Original Release	
DWG. Name:	18775_ROW_03	1	4/03/19	GAP				Changed additional R/W to 5' wide	
Drawn By:	JJC	2	4/09/19	GAP				Add additional R/W	
Field Bk / Pg.:	N/A								
Drawing No.:	SD 5140								

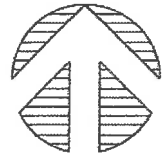
SEE SHEET 1 FOR THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

20190072-DE-001104

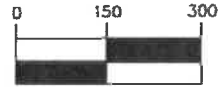
THIS IS NOT A SURVEY

**LEGEND:**

- O.R.B. OFFICIAL RECORDS BOOK
- P.S.M. PROFESSIONAL SURVEYOR AND MAPPER
- LB LICENSED BUSINESS
- R/W RIGHT-OF-WAY
- SEC SECTION
- GOV GOVERNMENT



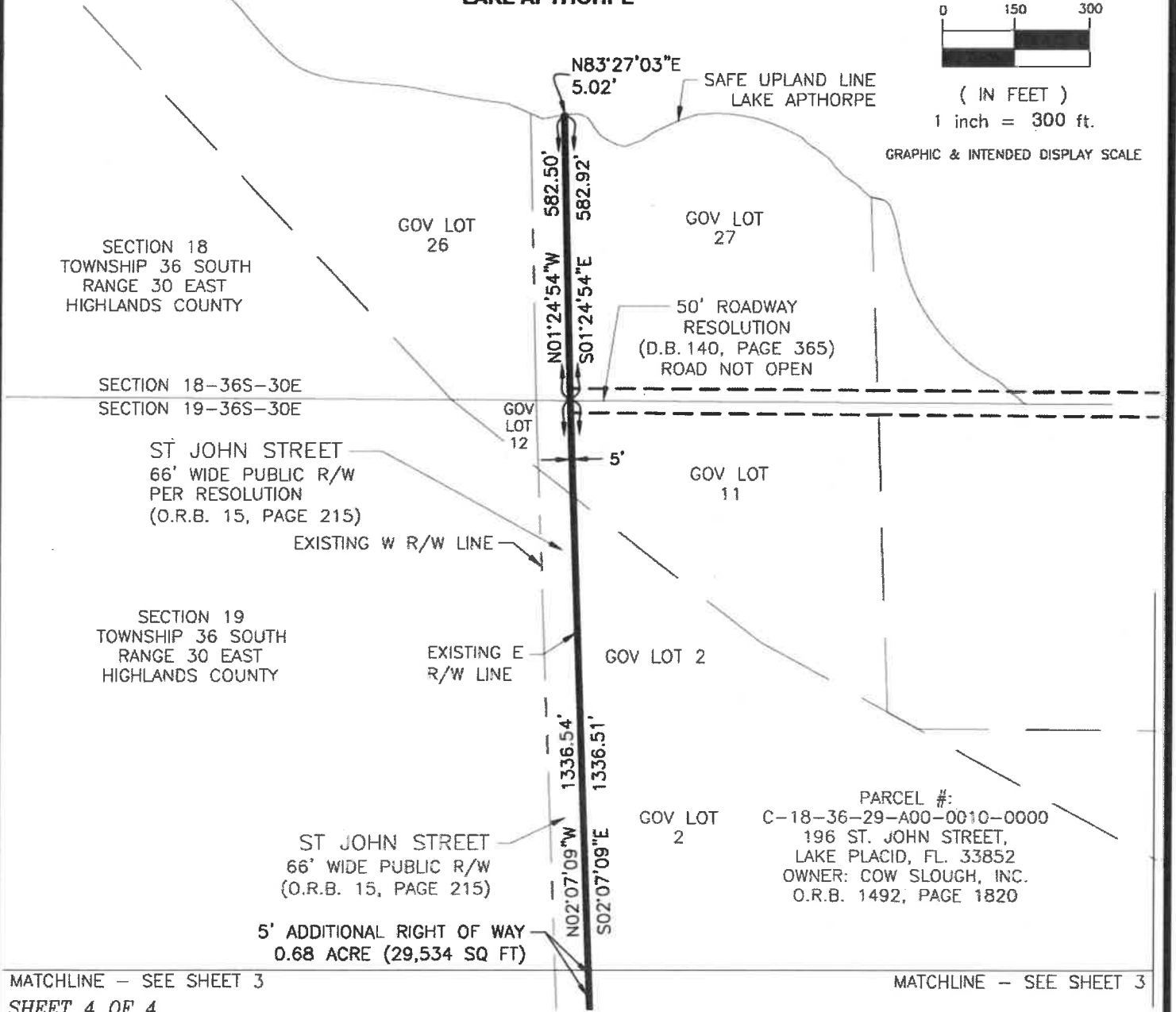
NORTH



( IN FEET )  
1 inch = 300 ft.

GRAPHIC & INTENDED DISPLAY SCALE

**LAKE APTHORPE**



MATCHLINE - SEE SHEET 3  
SHEET 4 OF 4

**DESCRIPTION SKETCH**  
IN SECTIONS 18 & 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
HIGHLANDS COUNTY, FL  
PREPARED FOR: ECT



**PICKETT**  
SURVEYING • ENGINEERING

Project No.:	18775-2	No.	Date	Approved	REVISION
Horiz. Scale:	1" = 300'	O.R.	3/21/19	GAP	Original Release
DWG. Name:	18775_ROW_03	1	4/03/19	GAP	Changed additional R/W to 5' wide
Drawn By:	JJC	2	4/09/19	GAP	Add additional R/W
Field Bk / Pg.:	N/A				
Drawing No.:	SD 5140				

SEE SHEET 1 FOR  
THE SIGNATURE AND  
THE ORIGINAL RAISED  
SEAL OF A FLORIDA  
LICENSED SURVEYOR  
AND MAPPER.

20190072-DE-001105

## SOLAR GROUND LEASE AGREEMENT

THIS SOLAR GROUND LEASE AGREEMENT (this "Lease") is made and entered into as of the 1st day of May, 2019 (the "Effective Date"), by and between Price Groves, LLC, a Florida limited liability company (the "Landlord"), and Duke Energy Florida, LLC, a Florida Limited Liability Company (the "Tenant").

### RECITALS

A. The Landlord, as the "Optionor" and EDF Renewables Distributed Solutions, Inc., a Delaware corporation, as the "Original Optionee", previously entered into that certain Option Agreement to Lease Real Property, dated as of July 17, 2018, a memorandum of which was recorded in the Official Records of Highlands County, Florida on 9/10/18 as Document No. Book 2654, Page 1987 (collectively, the "Option Agreement"), in connection with the Land (as defined in Section 1 below) located in Highlands County, Florida, and more particularly described on Exhibit A attached hereto and incorporated herein by reference.

B. As permitted by the Option Agreement, Original Optionee assigned all right, title and interest under the Option Agreement to Tenant, as the "Optionee" by that certain Assignment and Assumptions Agreement dated 1/24/19, recorded in the Official Records of Highlands County, Florida on \_\_\_\_\_ as Document No. \_\_\_\_\_.

C. In accordance with the terms of the Option Agreement, the Tenant exercised the option to lease the Land and Landlord and Tenant are entering into this Lease as of the Effective Date.

NOW THEREFORE, consideration of the mutual covenants and conditions contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the Landlord and the Tenant, the parties agree as follows:

### AGREEMENT

1. Premises and Intended Use. In consideration of the rents, terms, covenants, and agreements set forth in this Lease to be paid, kept, and performed, Landlord leases to Tenant and Tenant leases from Landlord approximately <sup>9.05</sup>~~19.01~~ acres of land, located in Highlands County, Florida, depicted and described on Exhibit A attached hereto and incorporated herein by reference (the "Land"), which Land is located on the approximately 40.58 acres of land ("Owner Parcel") having tax parcel identification number C-19-36-30-A00-0120-0000, also depicted and described on Exhibit A; together with all improvements, fixtures, personal property and trade fixtures now or in the future located on the Land (but excluding any property required to be removed by Landlord pursuant to Section 6(b) of this Lease), together with all other appurtenances, tenements, hereditaments, rights and easements pertaining to the Land and the improvements now or in the future located on the Land (the Land, together with the above-described property, improvements and appurtenances are hereinafter collectively referred to as the "Premises"), to be occupied and used upon the terms and conditions herein set forth. Tenant's intended use of the Premises is for (X) the development, construction, installation, operation, testing, and maintenance of a solar photovoltaic power array and related improvements for the generation of electric power and related ancillary technologies, including but not limited to, energy storage, voltage regulation, and power quality regulation, and (Y) any investigation, inspection, testing of the Premises in connection with a solar photovoltaic power array and related improvements on the Premises (the uses described in (X) and (Y), collectively, the "Intended Use"), and including without limitation, (i) electrical and communication lines, transformers, power inverters, equipment, cables, switches and electrical substation(s); (ii) laydown areas.

control buildings, and maintenance facilities; and (iii) roads, fences and gates, and other structures and facilities required for ingress and egress for pedestrians, motor vehicles and equipment and for security (collectively the "Solar Generating Facility").

2. Term of Lease, Commencement Date, and Renewal Terms.

(a) Term of Lease; Commencement Date; Commercial Operation Date.

(i) The term of this Lease (including any extensions or renewals, the "Term") shall commence on the Effective Date and shall end at 11:59 P.M. local time on the date that is thirty (30) years after the Commencement Date (the "Expiration Date"), unless extended or sooner terminated as herein provided. If the Expiration Date is other than the last day of a calendar month, the Term shall be extended automatically until 11:59 P.M. local time on the last day of the calendar month in which the Term otherwise would expire.

(ii) The "Commencement Date" shall be the Commercial Operation Date.

(iii) The "Commercial Operation Date" shall be the first day of the calendar month immediately following the date on which all of the following have occurred: (A) the Solar Generating Facility has been installed, constructed, tested, commissioned, and is fully capable of being operated for its Intended Use; (B) the Tenant has received all permits and approvals from governmental authorities having jurisdiction and the applicable electrical transmission provider for the Solar Generating Facility; and (C) the Solar Generating Facility begins delivering electricity to the electrical grid. Once the Commencement Date is ascertained, the parties agree to execute a memorandum or other writing confirming the Commencement Date.

(b) Renewal Terms. Tenant shall have the right to extend the initial Term granted herein for up to two (2) additional terms of five (5) years each (each a "Renewal Term" and collectively, the "Renewal Terms") by providing Landlord with written notice of Tenant's desire to extend the Term for the applicable Renewal Term prior to the Expiration Date (or prior to the expiration of the preceding Renewal Term, as applicable).

3. Due Diligence Period; Construction Period.

(a) Due Diligence Period. For purposes of this Lease, the Option Period as defined in the Option Agreement shall be considered as the "Due Diligence Period," and the Due Diligence Period shall have concluded prior to the Effective Date of this Lease. The conclusion of the Due Diligence Period as of the Effective Date shall not limit the Intended Use described in Section 1(Y).

(b) Construction Period. The "Construction Period" shall commence upon the Construction Commencement Date (as hereinafter defined) and expire upon the Commercial Operation Date (which is the same date as the Commencement Date of the Term of this Lease). The "Construction Commencement Date" shall be the Effective Date of this Lease.

(c) Landlord's Rights Prior to Construction Commencement Date. From and after the Construction Commencement Date through the last day of the Term, Landlord (and any other party claiming, by, through or under Landlord) shall not have any right to plant or harvest crops, or conduct forestry or timber practices on the Premises.

REDACTED

4. Rent.

(a) Construction Period Rent. During the Construction Period, Tenant shall pay Landlord rent in accordance with this Section 4(a).

(i) For the first year of the Construction Period, Tenant shall pay Landlord the sum equal to [REDACTED] located within the Premises (prorated for any fractional acres).

(ii) To the extent the Construction Period continues after the first anniversary of the Effective Date, from the first anniversary of the Effective Date through the last day of the Construction Period, Tenant shall pay Landlord the sum equal to [REDACTED] located within the Premises (prorated for any fractional acres).

(b) Commercial Operation Rent. From and after the Commercial Operation Date, Tenant shall pay Landlord rent in accordance with this Section 4(b).

(i) Commencing on the Commencement Date, Tenant shall pay Landlord annual rent during the Term in the sum equal to [REDACTED] located within the Premises (prorated for any fractional acres).

(ii) Commencing on the first (1st) annual anniversary of the Commencement Date, and on each anniversary of the Commencement Date thereafter (including any anniversary of the Commencement Date occurring during any Renewal Term), the annual rent payable hereunder shall increase over the annual rent payable for the prior year by [REDACTED]

(c) Rent Payments.

(i) Construction Period Rent. Rent payable for the Construction Period shall be payable monthly in advance in equal monthly installments for each year of the Construction Period, with the first monthly installment due 15 days after the Effective Date for the first month in the Construction Period, and each subsequent installment of Construction Period rent due on the first business day of each calendar month in the Construction Period thereafter. Calculation of rent shall be based on the acreage of the Land depicted in the ALTA survey prepared by or for Tenant (or such other survey of the Land reasonably acceptable to Landlord and Tenant).

(ii) Commercial Operation Rent. Rent due from and after the Commercial Operation Date shall be paid on a semiannual basis, with the first (1<sup>st</sup>) rent installment payable within thirty (30) days after the Commercial Operation Date, the second (2<sup>nd</sup>) rent installment being due on the first business day that is six (6) months after the Commercial Operation Date, and subsequent payments of rent being due on the first business day every six (6) months thereafter during the Term.

(iii) Calculation; Proration; Delinquency. Calculation of rent shall be based on the acreage of the Land depicted in the ALTA survey prepared by or for Tenant (or such other survey of the Land reasonably acceptable to Landlord and Tenant). The payment of rent for any fractional calendar month or half-year during the Term shall be prorated. If Tenant fails to pay any installment of rent to Landlord by the date that the same is due hereunder, and such failure continues for a period of (15) days after Landlord provides Tenant with written notice of such failure to pay, Tenant

will pay a late fee to the Landlord in the amount of three percent (3.0%) of such unpaid delinquent rent amount.

5. **Utilities, Maintenance and Repairs.** Tenant shall pay for all utilities used at the Premises by Tenant. Tenant, at Tenant's cost, shall be responsible for the repair and maintenance of the Solar Generating Facility and Tenant's improvements on the Premises.

6. **Alterations.**

(a) Tenant may, at its expense, make any alterations, additions, improvements and changes to the Premises as it may deem necessary or desirable in the operation of its business or Solar Generating Facility, without the consent of Landlord, including without limitation any fencing, security devices and or signage desired by Tenant. Any alteration, addition, improvement or change conducted by Tenant shall be done in compliance with applicable laws and requirements of governmental agencies having jurisdiction. Landlord, at no cost to Landlord, agrees to sign any permit applications and to take all such other actions as are reasonably required to allow Tenant to accomplish any such alterations, additions, improvements and changes to the Premises. The Solar Generating Facility and any and all improvements constructed on the Premises by or for Tenant, and all machinery, fixtures, trade fixtures, equipment, and other personal property installed or placed in the Premises by or for Tenant, shall, regardless of the manner of attachment to the Premises or the improvements thereon, be and at all times remain the property of Tenant, and shall be removable by it at any time and from time to time during the Term and at the expiration or earlier termination of this Lease. In the event that Tenant removes any trees, crops or other vegetation from the Premises during the Term, Tenant may sell and/or dispose of the same, and any revenues derived by Tenant from the sale of the same shall belong to Tenant.

(b) On or prior to the Effective Date, or within fifteen (15) days after the Effective Date, in Landlord's discretion and at Landlord's sole cost and expense, Landlord shall have removed or shall have the right to enter upon and remove from the Land all or any portion of the above ground irrigation system, including pumps, motors, lines and tanks on the Land. From and after the sixteenth (16<sup>th</sup>) day after the Effective Date, Tenant shall have the right to use or to remove and dispose of any above ground irrigation system, including pumps, motors, lines and tanks then remaining on the Land.

7. **Use and Occupancy.** Tenant shall be entitled to use the Premises for the Intended Use. Tenant agrees that no unlawful use of the Premises will be made, Landlord shall deliver sole and exclusive possession of the Premises to the Tenant on the Construction Commencement Date.

8. **Lease Termination and Surrender of Land.**

(a) **Termination Rights.** Tenant shall have the right to terminate this Lease for any reason or no reason. If an Excused Event (defined below), Tenant may terminate this Lease effective immediately upon delivery to Landlord of written notice of termination. Tenant may terminate this Lease for any other reason: (i) effective one month after the delivery to Landlord of a written termination notice prior to the Commercial Operation Date; or (ii) effective three (3) months after the delivery to Landlord of a written termination notice after the Commercial Operation Date. In the event Tenant terminates this Lease after the Effective Date for any reason, other than as a result of an Excused Event, Tenant shall pay to Landlord a termination fee (a "Termination Fee") in accordance with **Exhibit B** attached hereto and incorporated herein by this reference. Rent shall be prorated as of the effective date of the termination of this Lease. Upon a termination of this Lease by Tenant permitted hereunder, this Lease shall terminate and become null and void, and Tenant shall have no further obligations hereunder, except as specifically provided in this Lease.



(b) Surrender of Land. Upon the expiration or earlier termination of this Lease, Tenant shall (i) return the Land to Landlord in substantially the same condition the same were in as of the Construction Commencement Date, to the extent practicable and reasonable wear and tear excepted; and if applicable, (ii) decommission and remove Tenant's Solar Generating Facility and all improvements and equipment constructed or installed by Tenant on the Land. Notwithstanding the foregoing, in no event shall Tenant have any obligation to replace any crops or other vegetation damaged or removed by Tenant during the Term.

(c) An "**Excused Event**" means any of the following: (i) an event of default by Landlord, (ii) Landlord's willful misconduct, (iii) any event or casualty that renders the Premises substantially unusable for a Solar Generating Facility and for agricultural use as a citrus grove, (iv) a Total Taking (as defined **Section 12(a)**), or (v) a material interference with operations of the Solar Generating Facility resulting from the acts, omissions or negligence of Landlord (or Landlord's employees, agents, or contractors) or any mineral rights holder. For clarification, a material interference with operations of the Solar Generating Facility shall not mean Landlord's continued operation of a citrus grove on real property adjacent to the Land in compliance with industry standards and applicable laws.

9. Insurance. Tenant may, after the Solar Generating Facility and its improvements are completed, keep such improvements insured against loss or damage by fire, windstorm, earthquake and similar hazards. Each party hereto shall keep in force, at its sole cost and expense, comprehensive commercial general liability insurance, with a combined single limit of not less than one million dollars (\$1,000,000) per occurrence and two million dollars (\$2,000,000) aggregate, insuring such party, and the other party hereto as additional insured, against liability arising out of the use, occupancy or ownership of the Premises. Any provisions herein to the contrary notwithstanding, Landlord and Tenant mutually agree that, in respect to any loss which is covered by insurance then being carried by them respectively (or which would have been covered had such party maintained the insurance required hereunder), the one carrying such insurance and suffering said loss hereby releases the other of and from any and all claims with respect to such loss, and waives any rights of subrogation which might accrue to the carrier of such insurance. Notwithstanding the foregoing, Tenant may self-insure (either by use of deductibles or self-insured retention) the coverage required of Tenant hereunder and Tenant may satisfy its insurance obligations hereunder through a "blanket" policy or policies covering other properties or liabilities of Tenant.

10. Taxes. Commencing on the Effective Date, Tenant shall be solely responsible for any ad valorem and, if and when applicable, any non-ad-valorem property taxes that are assessed against either the Premises or Tenant's personal property for periods falling within the Term. Landlord and Tenant shall apportion taxes appropriately between the parties for any partial tax years falling within the Term. Tenant shall also be responsible for any deferred property taxes ("**Deferred Taxes**") due on the Premises as a result of Tenant's use of the Premises for the Intended Use to the extent required by applicable Florida laws. However, in the event that Tenant's use of the Premises for the Intended Use triggers the obligation to pay any Deferred Taxes, or any other taxes, assessments, penalties, fees or interest, on any other property owned by Landlord (other than the Premises), Landlord shall be solely responsible for paying the same. In the event that the Premises is a part of a larger tax parcel owned by Landlord, and Deferred Taxes become payable on the entire tax parcel as a result of Tenant's use of the Premises for the Intended Use, the Deferred Taxes shall be equitably apportioned as to Landlord and Tenant in a pro-rata manner such that Tenant is responsible only for such costs as they relate to the Premises and Landlord is responsible for the remainder. During the Term, Tenant, at its cost, shall have the right, at any time, to seek a reduction in the assessed valuation of the Premises or to contest any taxes that are assessed against the Premises (or any portion thereof) or are to be paid by Tenant. If Tenant seeks a reduction or contests any taxes, the failure on Tenant's part to pay the taxes shall not constitute a default as long as Tenant complies with the provisions of this **Section 10**.



**11. Fire or Other Casualty.** In the event that the Premises, Solar Generating Facility, the improvements thereon, or any portions thereof, are damaged by fire or other casualty during the Term (specifically excluding any event that renders the Premises substantially unusable for both a Solar Generating Facility and for agricultural use as a citrus grove), and if in Tenant's sole reasonable judgment, the damage is of such nature or extent that it is uneconomical to repair and restore the Premises, the Solar Generating Facility, or other improvements thereon, as the case may be, Tenant may terminate this Lease by written notice to Landlord. The proceeds of any casualty insurance policy maintained by Tenant shall be payable to Tenant. In the event of such termination, rent shall be prorated as of the effective date of termination. In the event Tenant terminates this Lease subject to the terms of this Section, Tenant shall pay Landlord a Termination Fee in accordance with Exhibit B.

**12. Condemnation.**

(a) If the whole of the Premises shall be taken under the exercise of the power of eminent domain or by agreement with any condemnor in lieu of such taking, or such portion thereof that, in Tenant's judgment, the remainder of the Premises is not suitable for Tenant's purposes (a "**Total Taking**"), then this Lease shall terminate as of the earlier of the date when title thereto vests in the condemnor or the date when possession thereof shall be delivered to the condemnor. The exercise of the power of eminent domain or condemnation agreement as to less than all of the Premises shall be a "**Total Taking**" if: (I) the area of the portion of the Premises subject to eminent domain, condemnation-by-agreement, or taking is equal to or greater than one-half (1/2) of the total area of the Premises; or (II) the System's transformers(s), interconnection equipment (point of interconnection, switchgear, recloser, meters), or central inverters, if any, are located within the area subject to eminent domain, condemnation-by-agreement, or taking.

(b) If a portion or portions of the Premises shall be taken under the exercise of the power of eminent domain or by agreement with any condemnor in lieu of such taking, and such taking does not constitute a Total Taking (a "**Partial Taking**"), then: (i) this Lease shall be modified so that the portion or portions so taken no longer are part of the "Premises" as of the date possession thereof shall be delivered to the condemnor, (ii) upon delivery to the condemnor of possession of the portion of the Premises so taken, the rent payable under this Lease shall be reduced pro-rata based on the acreage of the Premises so taken, and (iii) otherwise this Lease shall remain in full force and effect. If there is any Partial Taking, the Landlord and the Tenant shall both be entitled to participate in the condemnation proceeding to establish the condemnation award to the taking of each parties' interest in the Premises.

(c) If Landlord and Tenant are unable to obtain separate awards with respect to their respective interests in the Premises, then, the single award shall be fairly and equitably apportioned between Landlord and Tenant. The portion of the award to be received by Landlord shall be based upon the taking of or injury to the fee simple estate in the Land, but not the improvements thereon. The portion of the award to be received by Tenant shall be based upon the taking and reduction of Tenant's leasehold estate created by this Lease, the taking of any improvements constructed or placed by Tenant on the Land, loss or interruption of Tenant's business and the cost of any restoration or repair necessitated by such taking or condemnation. Notwithstanding the foregoing, however, in the event Tenant has exercised its right to terminate this Lease under this Section 12, then Tenant shall first receive all condemnation proceeds until Tenant has received an amount equal to the appraised value of the improvements made to the Land by Tenant prior to the taking. Tenant shall have the right to participate, at its own expense, in any such condemnation proceedings and to negotiate on behalf of itself and Landlord in such proceedings; provided, however, Tenant shall not enter into any binding agreement or settlement without the prior consent of Landlord, which consent shall not be unreasonably withheld, conditioned or delayed by Landlord. Landlord agrees to cooperate with Tenant and to execute such documentation as may be reasonably necessary to allow Tenant to participate in such condemnation proceedings.

(d) In the event Tenant terminates this Lease upon a Total Taking, Tenant shall have no obligation to pay any Termination Fee. However, if Tenant terminates this Lease upon a Partial Taking (or for any other reason, as described in Section 8), Tenant shall pay Landlord a Termination Fee in accordance with Exhibit B.

13. **Default.** If either party fails to comply with any term, covenant or condition of this Lease for a period of thirty (30) days after the defaulting party's receipt of written notice from the other party of such failure (provided, however, if such failure cannot reasonably be cured within such thirty (30) day period, the defaulting party shall not be in default hereunder if it commences to cure within such thirty (30) day period and prosecutes the cure to completion in good faith and with due diligence), then the defaulting party shall be deemed in default hereunder and the other party may, at its option, may pursue any and all remedies available to such party at law or in equity. If there a default by a party hereunder, the non-defaulting party will take commercially reasonable measures to mitigate its damages

14. **Binding Effect; Assignment and Subletting.** This Lease shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, legal representatives, successors and assigns. Tenant may assign this Lease, in whole or in part, or sublet the Premises, or any part thereof, without Landlord's prior consent, provided that any such assignee is an affiliate or a Florida public utility provider and shall agree in writing to be bound by all of the terms and conditions of this Lease. Landlord shall promptly notify Tenant in writing of the identity and address of any purchaser of Landlord's fee interest in the Premises and Landlord shall cause such purchaser to notify Tenant in writing of the address for payment of rent.

15. **Mutual Indemnification.** Except to the extent caused by Landlord, Tenant agrees to indemnify and hold Landlord harmless from any and all damages or claims which Landlord may be compelled to pay on account of injuries to person or damages to property on the Premises where the aforesaid injuries or damages are caused by Tenant (or Tenant's employees, agents, or contractors) or Tenant's breach of this Lease. Except to the extent caused by Tenant, Landlord agrees to indemnify and hold Tenant harmless from any and all damages or claims which Tenant may be compelled to pay on account of injuries to person or damages to property on the Premises where the aforesaid injuries or damages are caused by Landlord (or Landlord's employees, agents, or contractors) or Landlord's breach of this Lease.

16. **Quiet Enjoyment.** Landlord covenants and warrants that as long as Tenant is not in default under the terms and conditions of this Lease (beyond any applicable notice and cure periods), it will defend the right of possession to the Premises in Tenant against all parties whomsoever for the entire term hereof, and that Tenant shall have peaceable and quiet possession of the Premises during the Term without hindrance or molestation.

17. **Waiver.** The waiver by any party of any breach of any covenant or agreement herein contained shall not be deemed to be a waiver of any subsequent breach of the same or any other covenant or agreement herein contained.

18. **Possession After Termination.** If Tenant shall fail to vacate and surrender the possession of the Premises at the termination of this Lease, Landlord shall be entitled to recover from Tenant rent in an amount equal to one hundred twenty-five percent (125%) of the amount of rent payable hereunder for the period from the termination of this Lease until the date the Premises are vacated and surrendered.

19. **Notices.** All notices, elections, demands, requests, payments and other communications hereunder shall be in writing, signed by the party making the same and shall be sent by certified or registered United States mail, postage prepaid, or by national overnight courier service which provides tracking and acknowledgement of receipts, addressed to:

A

To Landlord: Price Groves, LLC  
Bryan J. Price, Managing Member  
1025 CR 17 N  
Lake Placid, FL 33852

Copy to: Rider & Thompson, P.A.  
13 N. Oak Ave  
Lake Placid, FL 33852

To Tenant: Duke Energy / JLL, Inc.  
~~Lease Administration~~  
~~Attn: Nancy J. Holmes, Manager~~  
550 South Tryon Street, Mail Code: DEC22A  
Charlotte, NC 28202

or at such other address as may hereafter be designated in writing by either party hereto. The time and date on which mail is postmarked shall be the time and date on which such communication is deemed to have been given.

20. **Memorandum of Lease.** Landlord and Tenant agree that this entire Lease shall not be recorded; provided however, promptly after the full execution of this Lease. Landlord and Tenant shall execute and record (at Tenant's expense) a memorandum of this Lease in the Office of the Register of Deeds in the County in which the Premises is located and which memorandum shall be in form sufficient to publish notice and protect the validity of this Lease and Tenant's rights hereunder. The lease memorandum shall specify the Commencement Date, the Expiration Date, the Renewal Terms granted herein, and such other provisions of this Lease as the parties mutually agree to incorporate therein.

21. **Governing Law.** This Lease shall be construed and enforced in accordance with the laws of the State of Florida.

22. **Invalidity of Particular Provisions.** If any term or provision of this Lease shall to any extent be ruled invalid or unenforceable by a court of competent jurisdiction, the remainder of this Lease shall not be affected thereby and each other term and provision of this Lease shall be valid and enforced to the fullest extent permitted by law.

23. **Subordination/Non-Disturbance Agreement.**

(a) Tenant's obligation to subordinate its interests or attorn to any mortgagees or beneficiaries of mortgages or deeds of trust, or any other holders of liens on the Premises or any portion thereof (each hereinafter a "Mortgagee") that may heretofore or hereafter be placed against the Premises by Landlord is conditioned upon the Mortgagee's written agreement not to disturb Tenant's possession, quiet enjoyment of the Premises, and rights under this Lease so long as Tenant is not in default under the terms of this Lease (beyond any applicable notice and cure periods). Landlord shall use commercially reasonable efforts to provide to Tenant, on or before the expiration date of the Due Diligence Period and Construction Commencement Date, a subordination, non-disturbance, and attornment agreement from any and all current Mortgagees that is reasonably acceptable to Tenant. With respect to any future Mortgagee of a mortgage or deed of trust, Landlord shall use commercially reasonable efforts to obtain from such future Mortgagee a subordination, non-disturbance, and attornment agreement that is reasonably acceptable to Tenant.

(b) In the event any proceedings are brought for foreclosure of any mortgage or deed of trust on the Premises, Tenant will attorn to the purchaser at a foreclosure sale on acquiring Landlord's interest in the Premises and the Lease, and any assignee thereof, and recognize such purchaser or assignee as Landlord under this Lease provided such purchaser or assignee agrees in writing not to disturb Tenant's

possession or rights under this Lease or in the Premises, and to acknowledge all of Tenant's rights hereunder, so long as Tenant is not in default under the terms of this Lease (beyond any applicable notice and cure periods). Tenant agrees to give any such Mortgagee of whom Tenant has been informed in writing, written notice of any default or failure to perform by Landlord under this Lease. Such Mortgagee shall have the same amount of time afforded to Landlord hereunder to cure any Landlord default; and Tenant shall accept such cure if timely and effectively made by such Mortgagee.

**24. Warranties and Representations.**

(a) Tenant hereby agrees with, and warrants and represents to Landlord as follows: (i) Tenant is a duly formed and validly existing entity, incorporated or organized under the laws of the State in which it was incorporated or organized; (ii) Tenant has the full legal right, power and authority to execute this Lease and all documents now or hereafter to be executed by it pursuant to this Lease; (iii) this Lease has been duly authorized by all requisite entity action on the part of the Tenant, and is the valid and legally binding obligation of Tenant, enforceable in accordance with its terms; (iv) this Lease will not contravene any provision of Tenant's organizational documents, any judgment, order, decree, writ or injunction issued against Tenant or any provision of any laws applicable to Tenant; and (v) the consummation of the transaction contemplated hereby will not result in a breach or constitute a default or event of default by Tenant under any agreement to which Tenant or any of its assets are subject or bound and will not result in a violation of any laws applicable to Tenant.

(b) Landlord hereby agrees with, and warrants and represents to Tenant as follows: (i) Landlord is the owner of the Owner Parcel and the Premises with full right and authority to execute this Lease and to lease the Premises to Tenant in accordance with the terms hereof; (ii) to the best of Landlord's knowledge, the Owner Parcel and Premises are free from environmental contamination of any sort, and the Premises complies with any and all applicable laws, rules, and ordinances; (iii) Landlord has not received any notice of condemnation, zoning change or legal noncompliance relating to the Premises or the Owner Parcel; (iv) Landlord will not institute or consent to any rezoning of the Premises or the Owner Parcel during the Term; (v) Landlord shall not further encumber the title to the Premises or the Owner Parcel after the Effective Date and during the Term; (vi) Landlord acknowledges that access to sunlight is essential to the value of the rights granted to Tenant under this Lease, and accordingly, Landlord shall not cause or permit any property owned or controlled by Landlord in the vicinity of the Premises or the Owner Parcel, or any activities, uses or improvements thereon, to impair Tenant's use of the Premises or the Solar Generating Facility thereon (for example, and without limiting the generality of the foregoing, Landlord shall not cause or permit any cell towers, water towers, billboards, silos or any other structures to be placed or constructed thereon or permit the growth of any foliage that may obstruct the sunlight that otherwise would reach the Premises, or that may cast shade or shadows upon the Premises or any portion thereof); (vii) each of the Owner Parcel and the Premises is free from any recorded or unrecorded use or occupancy restrictions or declarations of restrictive covenants; (viii) Landlord has not and, to the best of Landlord's knowledge, Landlord's tenants or predecessors in title have not used, manufactured, stored or released petroleum products or hazardous substances on, in or under the Owner Parcel or the Premises; (ix) there are no service or maintenance contracts affecting the Premises or the Owner Parcel for which Tenant may be obligated or liable for; (x) there are no delinquent or outstanding assessments, liens, taxes, or other impositions levied or assessed against the Premises or the Owner Parcel; (xi) there is no pending or threatened lawsuit, claim, or legal proceeding against Landlord, the Owner Parcel, or the Premises that could affect the Tenant's rights under this Lease or the Landlord's ability to perform Landlord's obligations hereunder; (xii) except for this Lease, there are no leases, options to purchase, license agreements or other third party rights to use or possess the Owner Parcel or the Premises (or any portion thereof), whether written or oral, recorded or unrecorded; (xiii) Landlord is not in the hands of a receiver nor is an application for such a receiver pending; (xiv) Landlord has made no assignment for the benefit of creditors, nor filed, or had filed against it, any petition in bankruptcy; and (xv) within five (5) days after the Effective Date, Landlord shall provide copies of the following documents with respect to the Premises or the Owner Parcel

in Landlord's possession; any notices of any statute or code violation; all "Phase I" and other environmental assessment reports; surveys of the Land; title insurance policy or title opinion; and any governmental permits or approvals.

(c) Tenant shall retain title to and be the legal and beneficial owner of the Solar Generating Facility at all times. Landlord shall provide timely notice of Tenant's title and sole ownership of the Solar Generating Facility to all persons that have, or may come to have, an interest in or lien upon the real property comprising the Premises. Tenant shall be the exclusive owner of the electricity generated by the Solar Generating Facility and the Environmental Attributes (as hereinafter defined) and Environmental Incentives (as hereinafter defined) thereof. "Environmental Attributes" means the characteristics of electric power generation at the Solar Generating Facility that have intrinsic value, separate and apart from the generated energy, arising from the perceived environmental benefits of the Solar Generating Facility or energy generated at the Solar Generating Facility, including but not limited to all environmental and other attributes that differentiate the Solar Generating Facility or energy generated at the Solar Generating Facility from energy generated by fossil-fuel based generation units, fuels or resources, characteristics of the Solar Generating Facility that may result in the avoidance of environmental impacts on air, soil or water, such as the absence of emission of any oxides of nitrogen, sulfur or carbon or of mercury, or other gas or chemical, soot, particulate matter or other substances attributable to the Solar Generating Facility or the compliance of the Solar Generating Facility or energy generated at the Solar Generating Facility with the law, rules and standards of the United Nations Framework Convention on Climate Change (the "UNFCCC") or the Kyoto Protocol to the UNFCCC or any successor laws, rules or standards or crediting "early action" with a view thereto, or laws or regulations involving or administered by the Environmental Protection Agency or successor administration or any state or federal entity having jurisdiction over a program involving transferability of rights arising from Environmental Attributes. Without limiting the foregoing, "Environmental Attributes" includes green tags, renewable energy credits, tradable renewable certificates, portfolio energy credits, the right to apply for (and entitlement to receive) incentives under any demand-side management or energy efficiency programs offered by a utility company, a third-party provider, or other incentive programs offered by the state and the right to claim federal income tax credits, if applicable. "Environmental Incentives" means all rights, credits (including tax credits), rebates, benefits, reductions, offsets, and allowances and entitlements of any kind, howsoever entitled or named (including carbon credits and allowances), whether arising under federal, state or local law, international treaty, trade association membership or the like, arising from the Environmental Attributes of the Solar Generating Facility or the energy generated at the Solar Generating Facility or otherwise from the development or installation of the Solar Generating Facility or the production, sale, purchase, consumption or use of the energy generated at the Solar Generating Facility.

(d) Tenant or its authorized agents, personnel, employees and consultants shall not bring or cause any hazardous waste to be brought on, released or left on the Land, except in such quantities as may be required in Tenant's normal operations on the Land pursuant to this Lease and only so long as such use is in compliance with applicable laws. Landlord represents and warrants to Tenant that no hazardous waste or substances exist on the Land that are not consistent with commercial citrus operations or in compliance with applicable laws.

25. **Brokerage Commission.** Neither Landlord nor Tenant knows of any real estate brokers or agents who are or may be entitled to any commission or finder's fee in connection with this Lease. Each party hereto agrees to indemnify and hold the other party harmless from and against any and all claims, demands, losses, liabilities, lawsuits, judgments, costs and expenses (including without limitation, fees for legal counsel and costs) with respect to any leasing commission or equivalent compensation alleged to be owing on account of such party's discussions, negotiations and/or dealings with any real estate broker or agent.

26. **Reserved.**

27. **Access.** Tenant, and Tenant's employees, agents, contractors, guests, subtenants and designees shall have access to the Premises at all times after the Effective Date and during the Term. On and after the Construction Commencement Date, neither Landlord nor any agent of Landlord shall, without a Tenant representative, enter upon any portion of the Premises.

28. **Confidentiality.** Landlord acknowledges that Landlord may become privy to confidential information of Tenant, in addition to information regarding the terms of this Lease. Landlord therefore agrees to take all steps to ensure that any information with regard to Tenant, Tenant's Intended Use of the Premises (and improvements thereon) and/or this Lease, shall remain confidential and shall not be disclosed or revealed to outside sources by Landlord or by its employees, officers, agents, counsel, accountants or representatives, except as otherwise required by law or court order. The terms of this Section 28 shall survive the expiration or any sooner termination of this Lease.

29. **Estoppel.** Within fifteen (15) business days after written request therefor by Tenant, Landlord shall deliver a certificate to Tenant, Tenant's lender (if applicable) and/or any proposed assignee of Tenant, in a commercially reasonable form, setting forth the terms of this Lease, the absence of default hereunder, and such other reasonable terms as may be requested by Tenant or by such lender or assignee. If the Landlord fails to respond within such fifteen (15) business day period, then, in addition to such failure constituting an event of default, all matters set forth in the estoppel certificate shall be deemed to be true, accurate and complete.

30. **Leasehold Mortgages.** Tenant and every successor and assign of Tenant is hereby given the right by Landlord, without Landlord's consent, to mortgage its interest in this Lease and assign its interest in this Lease as collateral security for such mortgage. If Tenant and/or Tenant's successors and assigns shall mortgage all or part of its interest in this Lease and if Tenant or the holder of such mortgage shall send to Landlord a true copy thereof together with written notice specifying the name and address of the mortgagee and the pertinent recording data with respect to such mortgage, Landlord agrees that so long as the leasehold mortgage remains unsatisfied of record or until written notice of satisfaction is given by the holder to Landlord, the following provisions shall apply:

(a) Landlord shall, upon serving Tenant with any notice of default, simultaneously serve a copy of such notice upon the holder of the leasehold mortgage. The leasehold mortgagee shall have the same period, after service of such notice upon it, to remedy or cause to be remedied the defaults complained of, and Landlord shall accept such leasehold mortgagee's acts if they had been performed by Tenant.

(b) Landlord agrees that in the event of termination of this Lease by reason of any default by Tenant, that Landlord will enter into a new lease for the Premises with the leasehold mortgagee or its nominee for the remainder of the Term effective as of the date of such termination, at the rent and other charges, and upon the terms, provisions, covenants and agreement contained in this Lease, provided:

(i) the mortgagee or its nominee shall pay to Landlord, at the time of execution and delivery of the new lease, any and all sums which would then be due pursuant to this Lease but for such termination; and

(ii) the mortgagee or its nominee shall perform and observe all covenants in this Lease to be performed by Tenant and shall further remedy any other conditions which Tenant was obligated to perform under the terms of this Lease.

(c) Landlord shall, upon request, execute, acknowledge and deliver to each leasehold mortgagee an agreement prepared at the sole cost and expense of Tenant, in form satisfactory to the

leasehold mortgagee and to Landlord, between Landlord, Tenant and the leasehold mortgagee confirming the provisions of this Section 30.

The term "mortgage," as used in this Section 30, shall include mortgages, deeds of trust and/or whatever security instruments are used in the State in which the Premises are located from time to time, as well as financing statements, security agreements and other documentation required pursuant to the Uniform Commercial Code.

**31. Right of First Refusal.** If Landlord, at any time during the Term (the "**Right of First Refusal Period**"), shall receive any offer from a third party to purchase the Premises, and such offer is acceptable to Landlord, Landlord agrees to notify Tenant in writing of such offer (the "**Refusal Notice**"). Tenant shall have thirty (30) days from and after receipt of the Refusal Notice to decide whether or not to purchase the Premises at the same purchase price and subject to the same material terms and conditions contained in the third party offer. Tenant shall deliver written notice to Landlord within thirty (30) after Tenant's receipt of the Refusal Notice if Tenant elects to purchase the Premises pursuant to the right of first refusal granted herein (the "**Right of First Refusal**"). If Tenant notifies Landlord of its intent not to purchase the Premises pursuant to the Right of First Refusal or Tenant shall give no notice to Landlord within the 30-day period after receipt of the Refusal Notice, then Tenant shall be deemed to have rejected such offer to purchase the Premises pursuant to the Right of First Refusal and Tenant's Right of First Refusal hereunder shall be terminated in all respects and of no further force and effect, and Landlord may accept such third party bona fide offer and proceed with the sale under the same terms presented to Tenant; provided however, if Landlord does not proceed with and consummate said sale within one hundred fifty (150) days after Tenant's receipt of the Refusal Notice, Tenant's Right of First Refusal shall be revived and continue until the expiration of the Right of First Refusal Period.

**32. Bankruptcy.** In the event (i) the Premises or any rights therein shall be levied on by execution or other process of law by a creditor of either party, (ii) if either party shall be adjudged bankrupt or insolvent, (iii) if any party has a petition in bankruptcy filed against it, and such petition is not dismissed within ninety (90) days after the filing thereof, (iv) if any receiver shall be appointed for the business and property of either party, or (v) if any assignment shall be made of either party's property for the benefit of creditors, thereby diminishing any right or privilege granted by this Lease to the other party, then the other party may terminate this Lease forthwith and otherwise exercise any other remedy it may have at law or equity or under this Lease.

**33. Nature and Extent of Agreement/Amendments.** This Lease contains the complete agreement of the parties regarding the terms and conditions of the lease of the Premises, and there are no oral or written conditions, terms, understandings or other agreements pertaining thereto which have not been incorporated herein. This Lease creates only the relationship of landlord and tenant between the parties as to the Premises; and nothing in this Lease shall in any way be construed to impose upon either party any obligations or restrictions not expressly set forth in this Lease. No amendment or modification of this Lease shall be binding unless in writing and duly executed by both parties.

**34. Counterparts.** This Lease may be executed in any number of counterparts, each of which shall be deemed an original once executed and delivered.

[REMAINDER OF PAGE BLANK. SIGNATURE PAGES FOLLOW.]

**IN WITNESS WHEREOF**, the parties hereto have duly executed this Lease by authority duly given, as of the day and year first above written. The signatures listed below do hereby confirm the substance and content of the original Solar Ground Lease Agreement executed on December 6, 2018, by Price Groves, LLC and on March 6, 2019, by Duke Energy Florida, LLC, and are being re-executed the same to cure the lack of witnesses on the original Solar Ground Lease Agreement referenced above.

**LANDLORD:**

**PRICE GROVES, LLC,**  
a Florida limited liability company

By: [Signature]  
Name: Bryan J. Price  
Title: Managing Member

Witnesses:

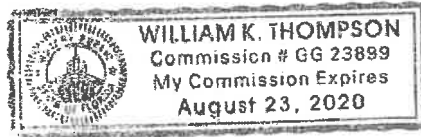
[Signature]  
Name: William K. Thompson  
[Signature]  
Name: Sarah E. Merrett

STATE OF FLORIDA  
COUNTY OF HIGHLANDS

The foregoing instrument was acknowledged before me this 17<sup>th</sup> day APRIL, 2019 by Bryan J. Price, a Managing Member of **PRICE GROVES, LLC**, a Florida limited liability company, on behalf of said company. He is personally known to me or has produced \_\_\_\_\_ as identification.

(Affix Seal)

[Signature]  
Print Name: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_





IN WITNESS WHEREOF, the parties hereto have duly executed this Lease by authority duly given, as of the day and year first above written. The signatures listed below do hereby confirm the substance and content of the original Solar Ground Lease Agreement executed on December 6, 2018, by Price Groves, LLC and on March 6, 2019, by Duke Energy Florida, LLC, and are being re-executed the same to cure the lack of witnesses on the original Solar Ground Lease Agreement referenced above.

TENANT:

DUKE ENERGY FLORIDA, LLC, a Florida limited liability company d/b/a Duke Energy

By: Karen Adams

Name: Karen Adams  
Title: Manager, Land Services – Florida Region

APPROVED  
By Chris King at 8:57 am, Apr 17, 2019

Witnesses:

[Signature]  
Name: Sam Evans

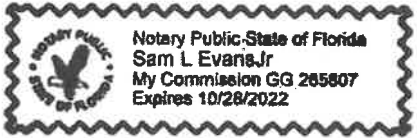
[Signature]  
Name: Tom Hinson

STATE OF FLORIDA  
COUNTY OF SEMINOLE

The foregoing instrument was acknowledged before me this 17<sup>th</sup> day April, 2019 by Karen Adams as Manager, Land Services – Florida Region of **DUKE ENERGY FLORIDA, LLC**, a Florida limited liability d/b/a Duke Energy, on behalf of said company. She is personally known to me or has produced \_\_\_\_\_ as identification.

(Affix Seal)

[Signature]  
Print Name: Sam L. Evans, Jr  
My Commission Expires: \_\_\_\_\_



**Exhibit A**  
**(Description of the Land)**

Attached.

**LEGAL DESCRIPTION:**

*Lease Parcel 3*

A part of the northwest 1/4 of the southeast 1/4 of the southwest 1/4 of Section 19, Township 36 South, Range 30 East, Highlands County, Florida. Being more particularly described as follows:


Commence at the southwest corner of Section 19, Township 36 South, Range 30 East, Highlands County, Florida; thence South 89°24'36" East, along the south line of said Section 19, a distance of 2042.73 feet to the east line of the southwest 1/4 of the southeast 1/4 of the southwest 1/4 of said Section 19 and the east line of the lands of Price Groves, LLC. as recorded in Official records Book 2265, page 678, of the public records of Highlands County, Florida; thence North 02°07'35" West, along said east line of the southwest 1/4 of the southeast 1/4 of the southwest 1/4 and said lands of Price Groves, LLC., a distance of 668.47 feet to the northeast corner of the southwest 1/4 of the southeast 1/4 of the southwest 1/4 of said Section 19; thence, North 00°17'16" East, along the east line of said lands of Price Groves, LLC., a distance of 50.00 feet to the Point-of-Beginning; thence North 89°25'45" West a distance of 660.93 feet to the west line of said lands of Price Groves, LLC.; thence North 00°33'58" West, along said west line, a distance of 592.63 feet to the south right-of-way line of Walker Road, a 50 foot wide right-of-way, thence South 89°26'55" East, along said south right-of-way line, a distance of 669.76 feet to the east line of said lands of Price Groves, LLC.; thence South 00°17'16" West, along said east line, a distance of 592.75 feet to the Point-of-Beginning.

Containing 9.05 acres.

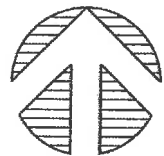
**SURVEYOR'S NOTES:**

- 1.) North and the bearings shown hereon are referenced to the West Zone of the Florida State Plane Coordinate System, NAD 83, 2011 adjustment. All measurements are in U.S. Survey Feet.
- 2.) The basis of all bearings shown hereon is referenced to the grid bearing of South 89°24'36" East along the south boundary of Section 19, Township 36 South, Range 30 East, Highlands County, Florida.

SHEET 5 OF 6

<p align="center"><b>DESCRIPTION SKETCH</b>                  IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,                  &amp; SECTION 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,                  HIGHLANDS COUNTY, FL                  PREPARED FOR: ECT</p>					 <p><b>PICKETT</b>                  SURVEYING • ENGINEERING</p>	<p><small>PICKETT AND ASSOCIATES, INC.                  475 SOUTH FIRST AVENUE BARTOW,                  FLORIDA 33830                  PHONE (883)-533-0085                  FAX (883)-534-1494                  LICENSED BUSINESS No. 18384</small></p>
Project No.:	18775	No.	Date	Approved	REVISION	SEE SHEET 1 FOR THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.  20190072-DE 001121
Horiz. Scale:	N/A	O.R.	2/22/19	GAP	Original Release	
DWG. Name:	18775_Ease_01	1	2/25/19	GAP	Revised Lease Parcel 3 boundary	
Drawn By:	ND	2	2/26/19	GAP	Corrected bearing	
Field Bk / Pg.:	N/A					
Drawing No.:	SD 5128					

THIS IS NOT A SURVEY



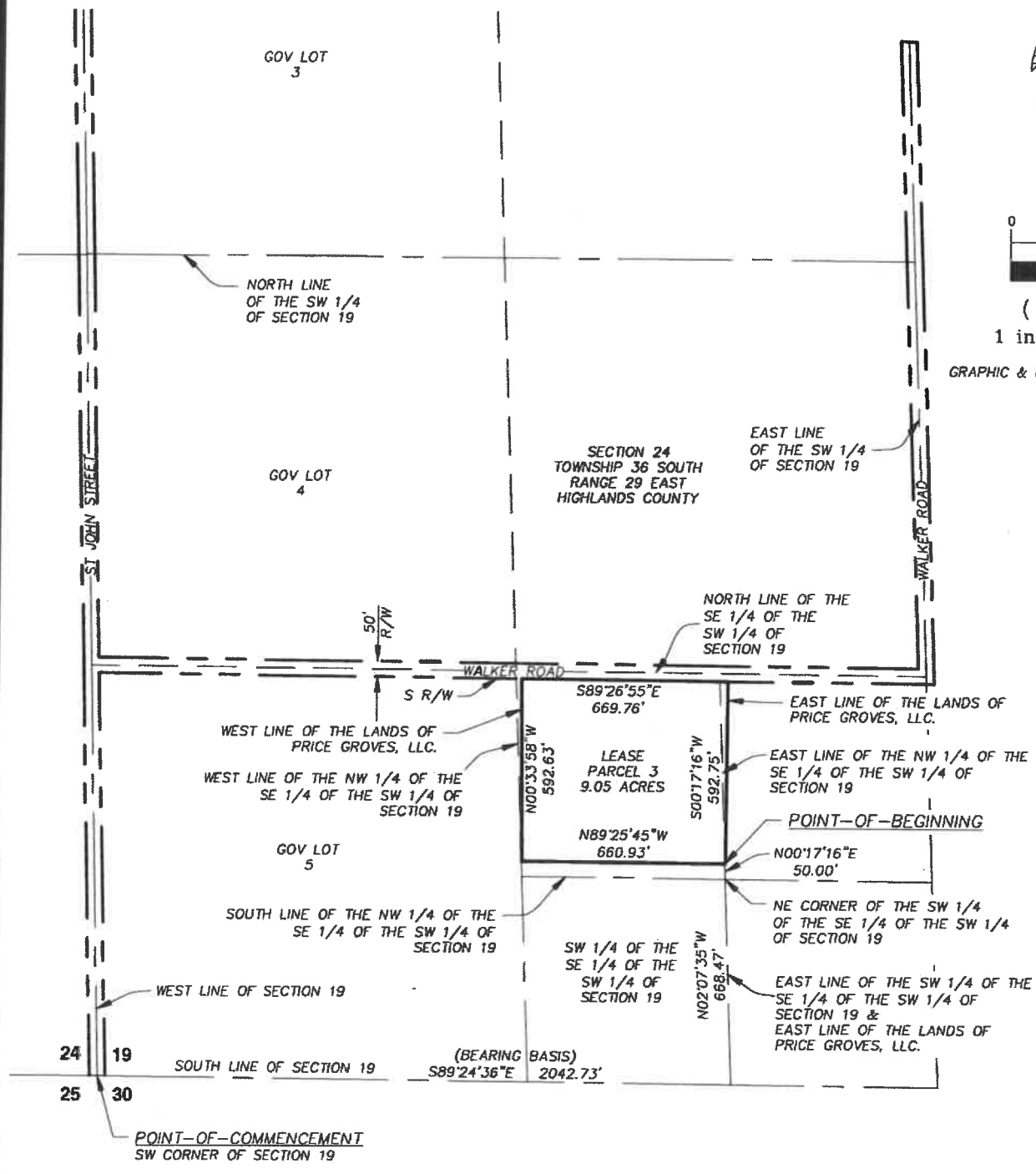
NORTH



( IN FEET )

1 inch = 500 ft.

GRAPHIC & INTENDED DISPLAY SCALE



SHEET 6 OF 6

**DESCRIPTION SKETCH**  
 IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,  
 & SECTION 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
 HIGHLANDS COUNTY, FL  
 PREPARED FOR: ECT



**PICKETT**  
 SURVEYING • ENGINEERING

PICKETT AND ASSOCIATES, INC.  
 475 SOUTH FIRST AVENUE BARTON,  
 FLORIDA 33830  
 PHONE: (863)-333-9085  
 FAX: (863)-534-1484  
 LICENSED BUSINESS No. 18304

Project No.:	18775	No.	Date	Approved	REVISION
Horiz. Scale:	1" = 500'	O.R.	2/22/19	GAP	Original Release
DWG. Name:	18775_Ease_01	1	2/25/19	GAP	Revised Lease Parcel 3 boundary
Drawn By:	ND	2	2/26/19	GAP	Corrected acreage
Field Bk / Pg.:	N/A				
Drawing No.:	SD 5128				

SEE SHEET 1 FOR THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

20190072-DE-001122

REDACTED

EXHIBIT B

Termination Fee

Upon termination of the Lease, other than due to an Excused Event, Tenant shall pay Landlord a Termination Fee in accordance with this EXHIBIT B.

1. If the Lease is terminated, other than due to an Excused Event, at any time prior to the Commercial Operation Date, Tenant shall pay Landlord a one-time "Termination Fee" equal to the total acres included in the Premises rounded to the nearest 10<sup>th</sup> of an acre, multiplied by [REDACTED]
2. If this Lease is terminated, other than due to an Excused Event, at any time from the Commercial Operation Date through the fourteenth (14<sup>th</sup>) anniversary of the Commercial Operation Date, Tenant shall pay Landlord a one-time "Termination Fee" equal to the total acres included in the Premises rounded to the nearest 10<sup>th</sup> of an acre multiplied by the dollar amount in the table below that corresponds to the year in which the effective termination date of the Lease occurs.

Year after Commercial Operation Date	\$ per Acre Terminated
1	\$ [REDACTED]
2	\$ [REDACTED]
3	\$ [REDACTED]
4	\$ [REDACTED]
5	\$ [REDACTED]
6	\$ [REDACTED]
7	\$ [REDACTED]
8	\$ [REDACTED]
9	\$ [REDACTED]
10	\$ [REDACTED]
11	\$ [REDACTED]
12	\$ [REDACTED]
13	\$ [REDACTED]

3. If this Lease is terminated from or after the 14<sup>th</sup> anniversary of the Commercial Operation Date, Tenant shall have no obligation to pay Landlord any "Termination Fee."

## EXECUTION COPY

### GROUND LEASE AGREEMENT

This GROUND LEASE AGREEMENT (this "Lease"), dated as of April 4, 2019, for reference purposes (the "Reference Date"), and effective as of April 4, 2019 ("Effective Date"), is by and between Carol T. Hill, with an address at 8450 NW 150<sup>th</sup> Street, Trenton FL 32693 and Helen T. Jordan with an address at 425 SW 3<sup>rd</sup> Ave., Trenton, FL 32693 (collectively, "Landlord"), and Duke Energy Florida, LLC, a Florida limited liability company ("Tenant"; together with Landlord, the "Parties" and individually each a Party).

### RECITALS

A. Landlord is the fee simple owner of certain real property in Gilchrist County, Florida, as more particularly described on Exhibit B attached hereto (the "Landlord Property").

B. Reference is hereby made to that certain Option Agreement dated as of April 4 2018 (the "Option Agreement"), pursuant to which, among other things, Landlord granted Tenant (or Tenant's predecessor in interest), the right to lease the Leased Property (as defined below) in accordance with the terms and conditions of this Lease.

C. Pursuant to the Option Agreement, Tenant (or its predecessor in interest) exercised an option to lease that certain portion of the Landlord Property described on Exhibit B2 (the "Leased Land"). The Leased Land does not include the area as described in Exhibit B1 which will be retained by the Landlord (Excluded Land).

D. The Parties are executing and delivering this Lease in connection with Tenant's exercise of such option.

### AGREEMENT

NOW, THEREFORE, Landlord hereby leases the Leased Property to Tenant, subject to the following terms and conditions:

### ARTICLE I LEASE OF PROPERTY

**Section 1.1 Leased Property.** Landlord does hereby lease unto Tenant, and Tenant does hereby lease from Landlord, (a) the Land and (b) any easements, rights-of-way, benefits, privileges, water rights, sub-surface rights, air rights, tenements, rights and interests appurtenant thereto or otherwise benefiting the Land or Landlord relating to the Land (the items in this Section 1.1, collectively, the "Leased Property").

**EXECUTION COPY**  
**ARTICLE II**  
**TERM OF LEASE**

**Section 2.1 Term.** Unless sooner terminated as expressly herein provided, this Lease shall continue in effect for a term commencing on the Effective Date and ending at midnight, Eastern Time, on the expiration of the Operating Term (the "**Initial Term**"). For purposes of this Lease:

(a) The "Development Term" shall commence on the Effective Date and expire on the earlier of (i) twenty-four (24) months thereafter and (ii) the date on which Tenant's Facility (as defined below) commences commercial operation in satisfaction of all applicable requirements under its power purchase agreement (the "Commercial Operation Date"); AND

(b) The "Operating Term" shall commence on the Commercial Operation Date and end at midnight, Eastern Time, on the date that is twenty (20) years after the Commercial Operation Date. The Development Term, together with the Operating Term, make up the Initial Term. The Initial Term, as it may be extended in accordance with Section 2.2 below, is referenced to herein as the "**Term**".

**Section 2.2 Extension Term.** Tenant shall have six (6) options (each, an "**Option**" and collectively, the "**Options**") to extend the Term for an additional period of five (5) years per Option (each, an "**Extension**" and collectively, the "**Extensions**") by delivering written notice to Landlord exercising such Option to extend prior to then-scheduled expiration of the Term.

**ARTICLE III**  
**RENT**

**Section 3.1 Base Rent.** Tenant shall pay to Landlord base rent ("Base Rent") per the usable acres of the Leased Property as shown on Exhibit A attached hereto and made a part hereof. Unless Tenant elects to have the usable acreage of the Leased Property determined by a licensed surveyor, the usable acreage of the Leased Property shall be that as shown on Exhibit C. If Tenant elects to have the usable acreage of the Leased Property determined by a licensed surveyor, the Base Rent will be adjusted to reflect the usable acreage of the Leased Property, as determined by such surveyor. The minimum acreage requirements in this Lease shall not be affected by this Section 3.1. Tenant's election to obtain a survey may happen at any time prior to the Commercial Operation Date. Until such survey is obtained, Tenant shall pay Base Rent on the full number of acres shown on Exhibit C. Once the survey is obtained and the Commercial Operation Date has been reached, the Base Rent shall be calculated based on the number of usable acres shown on the survey.

**Section 3.2 Additional Rent and Rent.** All amounts required to be paid by Tenant to Landlord under the terms of this Lease other than Base Rent are herein from time to time collectively referred to as "Additional Rent." Base Rent and Additional Rent are herein collectively referred to as "Rent."

**ARTICLE IV**  
**PROPERTY TAXES, UTILITIES**

**Section 4.1 Impositions Definition.** The term "**Impositions**" means all taxes, assessments, use and occupancy taxes, water and sewer charges, rates and rents, charges for public utilities, excises, levies, license and permit fees, and other charges by any public authority,



## EXECUTION COPY

general and special, ordinary and extraordinary, foreseen and unforeseen, of any kind and nature whatsoever (together, "Taxes"), which shall or may during the Term be assessed, levied, charged or imposed by any public authority upon or accrued or become a lien on (a) the Leased Property or any part thereof; or (b) the buildings or improvements now or hereafter located thereon. Impositions shall not include any Taxes upon any part of the Landlord Property other than the Leased Property, any income tax, capital, levy, estate, succession, inheritance or transfer taxes, or similar tax of Landlord; any franchise tax imposed upon any owner of the fee of the Leased Property; or any income, profits, or revenue tax, assessment, or charge imposed upon the rent or other benefit received by Landlord under this Lease by any municipality, county, state, the United States of America, or any other governmental body, subdivision, agency, or authority (hereinafter all of the foregoing governmental bodies are collectively referred to as "Governmental Authorities")

**Section 4.2 Landlord and Tenant's Obligations.** During the Term, Tenant will pay prior to delinquency all Impositions. Landlord will pay prior to delinquency (a) all Taxes on the Landlord Property other than the Leased Premises and (b) all debt or obligations of Landlord that are secured by Landlord's interest on or any part of the Leased Premises and which security interest may be senior to this Lease. Impositions that are payable by Tenant for the tax year in which this Lease commences as well as during the year in which the Term ends shall be apportioned so that Tenant and Landlord each pay their respective shares, prior to delinquency. Landlord shall promptly deliver to Tenant any tax statements or invoices received by Landlord for any Impositions. Landlord and Tenant agree to work with each other in good faith to cause the Landlord Property other than the Leased Property, the Leased Property, and the Improvements (as defined in Section 5.2) to be separately assessed and taxed by the applicable Governmental Authorities. In the event the Leased Property is not separately assessed from the remainder of the Landlord Property for the tax year in which the Term commences, then taxes for such year shall be apportioned between the Leased Property and the remainder of the Landlord Property based upon relative value, and Tenant shall pay prior to delinquency the proportionate share attributable to the Leased Property as Impositions and Landlord shall pay prior to delinquency the proportionate share attributable to the remainder of the Landlord Property. Tenant shall, if so requested, deliver to Landlord evidence of due payment of all Impositions Tenant is obligated to pay hereunder, concurrently with the making of such payment. Landlord shall, if so requested, deliver to Tenant evidence of due payment of all Taxes that Landlord is obligated to pay hereunder, concurrently with the making of such payment. If Landlord does not satisfy its obligation under this Section 4.2 to make payment prior to delinquency, Tenant is authorized to make such payments on behalf of Landlord at Landlord's expense with right of offset against Rent due from Tenant from time to time.

**Section 4.3 Tax Contest.** Tenant or Landlord may, at its expense, contest the validity or amount of any Imposition for which it is responsible, in which event the payment thereof may be deferred, as permitted by law, during the pendency of such contest, if diligently prosecuted. Nothing herein contained, however, shall be construed to allow any Imposition to remain unpaid for such length of time as would permit the Leased Property, or any part thereof, to be sold or seized by any Governmental Authority for the nonpayment of the same.

**Section 4.4 Imposition Contest.** Tenant may, if it shall so desire, endeavor at any time or times to obtain a lowering of the valuation of the Leased Property and the



## EXECUTION COPY

Improvements for any year for the purpose of reducing *ad valorem* taxes thereon and, in such event, Landlord will, at the request of Tenant, cooperate in effecting such a reduction, provided the Landlord shall not be required to incur any expense in connection therewith without its prior consent.

**Section 4.5 Agricultural Tax Exemption and Rollback Taxes.** Anything in this Lease to the contrary notwithstanding, if the Leased Property or any portion thereof is the beneficiary of any special tax valuation, agricultural tax exemption, or other tax exemption and Landlord changes the use of the Leased Property prior to the Effective Date such that the Leased Property or portion thereof does not qualify for such special valuation or exemption or such valuation or exemption is denied or lost prior to the Effective Date, then any resulting rollback taxes, additional taxes, penalties, interest, or assessments will be paid by Landlord. If this Lease or Tenant's use of the Leased Property after the Effective Date results in rollback taxes, additional taxes, penalties, interest, or assessments, the same will be the obligation of the Tenant. In the event that the Leased Property or any portion thereof is subject to a special tax valuation, agricultural tax exemption, or other tax exemption, then at the request of Tenant, Landlord, at Tenant's sole cost and expense, shall cooperate with Tenant to maintain such special valuation or exemption for so long as Tenant elects to do so.

**Section 4.6 Utilities.** Tenant shall pay all charges for gas, electricity, light, heat, air conditioning, power, telephone and other communication services, water rents, sewer service charges and all other utilities and similar services rendered or supplied to the Leased Property and the Improvements (as defined in Section 5.2 below).

### ARTICLE V IMPROVEMENTS AND DEVELOPMENT

**Section 5.1 Tenant's Facility.** Without limitation upon the other provisions of this Article 5, Landlord agrees that Tenant, at Tenant's sole cost and expense, may (but shall not be obligated to) construct upon the Leased Property one or more solar electric power generating and transmissions facilities together with related improvements, one or more substations, transmission poles and wires, electrical storage facilities, appurtenances, streets, sidewalks and facilities determined by Tenant to be necessary or useful to such facilities (together, "**Tenant's Facility**").

**Section 5.2 Construction of Improvements.** Tenant may, from time to time and at any time, at its sole cost and risk, construct improvements upon the Leased Property (including, without limitation, Tenant's Facility) if Tenant so elects in compliance with applicable laws. It is specifically acknowledged that Tenant may construct improvements located partially upon the Leased Property and partially upon adjoining parcels of real estate in which Tenant has ownership, leasehold or other interests. As used hereafter, the term "**Improvements**" means any buildings, structures, or other improvements located at any time upon the Leased Property. Such Improvements shall be constructed in accordance with permits and licenses from any Governmental Authority as may be reasonably necessary to construct and operate the Improvements and use and enjoy the Leased Property and the Improvements. The Improvements shall be the sole and exclusive property of Tenant and Landlord waives any and all lien rights it may have in the Improvements.

## EXECUTION COPY

**Section 5.3 Alterations.** At any time and from time to time during the Term, Tenant may perform such alteration, renovation, repair, refurbishment, replacement, repowering, removal, and other work with regard to any Improvements as Tenant may elect.

**Section 5.4 Liens.** Tenant shall have no right, authority, or power to bind Landlord or any interest of Landlord in the Leased Property for any claim for labor or for material or for any other charge or expense incurred in construction of any Improvements or performing any alteration, renovation, repair, refurbishment, or other work with regard thereto, nor to render Landlord's interest in the Leased Property liable for any lien or right of lien for any labor, materials, or other charge or expense incurred in connection therewith, and Tenant shall in no way be considered as the agent of Landlord in the construction, erection, or operation of any such Improvements. If any liens or claims for labor or materials supplied or claimed to have been supplied to the Leased Property shall be filed, Tenant shall promptly pay or bond such liens to Landlord's reasonable satisfaction or otherwise obtain the release or discharge thereof.

**Section 5.5 Removal of Property.** Tenant shall remove any and all Improvements, fixtures, machinery, equipment, furniture, furnishings and/or movable personal property installed by Tenant of the Leased Property and/or the Improvements, in each case to the extent located within 2 feet below grade, prior to the expiration of the then current Term, or within 180 days following the earlier termination thereof.

(a) It is understood that Tenant shall return the Leased Property to Landlord in a farmable condition. Accordingly, if concrete, wooden or metal structures are imbedded in the ground, and within two (2) feet of the ground surface, such structures shall be removed.

(b) At least 18 months prior to the end of the then current Term, and within 30 days following any payment default by Tenant that is continuing after any applicable cure period with respect thereto, Tenant shall obtain and furnish to Landlord a written cost estimate (the "Cost Estimate") from a reputable source to remove the Improvements of Tenant installed on or in the Property (with credit for the salvage value of Tenant's Facility) that Tenant is required to remove pursuant to this Section 5.5(b). If Tenant fails to obtain such estimate, Landlord shall obtain a Cost Estimate at Tenant's expense. At the time payment of the final year's installment of rent is due, or on the 60th day following an uncured payment default, Tenant shall, unless Tenant has exercised its renewal option to extend the Term, either:

(i) pay to American Government Services Corporation, as escrow agent, (or Landlord) an amount to be held in escrow equal to 115% of the written cost estimate, such sum to be released (A) to Tenant following Landlord's certification under oath that the Improvements have been removed (which certification Landlord shall promptly give), or (B) to Landlord following the written certification made by Landlord under oath stating the final day of the lease Term and that the Improvements were not removed within 180 days thereafter;

## EXECUTION COPY

(ii) furnish to Landlord an irrevocable, stand-by letter of credit or completion bond having an expiry date of at least 12 months thereafter (and automatically renewable to extend the expiry date by an additional 6 months at Tenant's expense), in amount equal to 115% of the Cost Estimate, such letter of credit to be draw by sight draft upon receipt of Landlord's certification made at least 180 days following termination of the Lease that the Improvements have not been removed; or

(iii) provide a guaranty from a credit-worthy entity (with a net worth of at least 200% of the Cost Estimate) for the completion of Tenant's obligations under Section 5.5(a).

Failure to perform the conditions of subparagraphs (i), (ii) or (iii) shall be deemed a monetary default. Landlord shall promptly remit to Tenant any amounts of such escrow deposit or letter of credit draw that exceed the remaining costs of removing the Improvements in accordance with the requirements of Sections 5.5(a). If funds are remitted by Tenant to an escrow agent under subparagraph (i), the Escrow Agent may deduct from the deposit its customary fees (not to exceed 5% of the amount deposited) when disbursement is made.

(c) Should Tenant on termination of this Lease fail to deliver the Leased Property in the condition required, Tenant shall be deemed to have held over and shall be liable for holdover rent (as provided in Section 14.8) during the reasonable period it would take Landlord to remove the Improvements as required by Section 5.5(a).

### **Section 5.6 Permits, Licenses, Development Approvals and Encumbrances.**

(a) Landlord agrees to cooperate with Tenant in all reasonable respects in connection with seeking and obtaining all necessary or appropriate permits, licenses, entitlements and other approvals ("**Permits**") for Tenant's proposed use of the Property provided that such cooperation shall include, but not be limited to (i) joining with Tenant in the execution of such applications for Permits from any governmental authority as may be reasonably necessary or useful to use the Property, any proposed improvements on the Property, and/or any easements granted to Tenant, in the manner proposed by Tenant; (ii) not to publicly oppose any aspect of Tenant's efforts to obtain Permits for use of the Property as proposed by Tenant, such improvements or project on the Property or any easements granted to Tenant or any of its affiliates (or any portion thereof) and, (iii) submit all required filings as and when required by applicable law to governmental entities to maintain the property tax agricultural exemption for the Property.

(b) Tenant may determine it is necessary, desirable, or required that drainage or power lines, one or more substations, and other easements, dedications and similar rights be granted or dedicated (the "**Development Easements**") over or within real property owned by Landlord other than the Leased Premises ("**Other Property**"). Tenant shall obtain the prior written approval of Landlord to the creation of such Development Easements, which approval shall not be unreasonably withheld, delayed or conditioned. Any Development Easements approved by Landlord shall be in a location reasonably acceptable to Landlord. Landlord shall, on request of Tenant, join with Tenant in executing and delivering such documents, from time to time, and throughout the Term,

## EXECUTION COPY

as Tenant determines are appropriate, necessary, or required to create Development Easements approved by Landlord in accordance with this paragraph, provided, however, that the costs of any utility lines, easements, dedications, and documents shall be borne by Tenant.

(c) Landlord agrees to cooperate with Tenant in all reasonable respects in connection with seeking and obtaining any right of way, access, transmission line or equipment or any other easements reasonably required by Tenant on neighboring lands, provided the Landlord shall not be required to incur any expense in connection therewith without its prior consent.

(d) With respect to the Leased Premises or rights received by Tenant as described in the preceding clauses (b) and (c), Tenant has the right to grant its affiliates any of its rights relating to rights of way, drainage or power lines, one or more substations, access, transmission line or equipment or any other easements, dedications and similar easements. Upon Tenant's request, Landlord will execute recognition agreements with execution not to be unreasonably withheld, delayed or conditioned, such that the easements will be separate and independent from the Lease.

(e) Landlord agrees to cooperate with Tenant in all reasonable respects in connection with seeking and obtaining any reductions and/or exemptions from property taxes or any other taxes, fees, charges typically imposed by any municipality, county, state, the United States of America, or any other governmental body, subdivision, agency, or authority (hereinafter all of the foregoing governmental bodies are collectively referred to as "**Governmental Authorities**", provided the Landlord shall not be required to incur any expense in connection therewith without its prior consent.

### ARTICLE VI

#### USE, MAINTENANCE, AND REPAIRS

**Section 6.1 Use.** Subject to the terms and provisions hereof, Tenant shall have the sole and exclusive right to use and possess the Leased Property for the development, construction, operation, maintenance, replacement and removal of one or more solar electrical generating facilities, any ancillary uses as well as also for agricultural and any other legal use.

**Section 6.2 Maintenance and Repairs.** Landlord shall have no obligation to maintain or repair the Leased Property and Improvements.

**Section 6.3 Access Easements to Non-Leased Property.** Tenant shall designate a road easement at a location on the Leased Premises which provides Landlord with reasonable access to the Other Property. Tenant has the right at any time and from time to time (at Tenant's cost) to relocate such access easement with reasonably comparable access to the Other Property.

## EXECUTION COPY

### ARTICLE VII INSURANCE AND INDEMNITY

**Section 7.1 Casualty Insurance.** Tenant will, at its cost and expense, keep and maintain in force the following policies of insurance:

(a) Insurance on the Improvements against loss or damage by fire and against loss or damage by any other risk of a type with limit of liability shall not be less than \$1,000,000 per incident.

(b) Workman's Compensation Insurance as to Tenant's employees involved in the construction, operation, or maintenance of the Leased Property in compliance with applicable law with limits not less than \$1,000,000 per person per accident.

**Section 7.2 Liability Insurance.** Tenant shall secure and maintain in force commercial general liability insurance with a limit of liability shall not be less than \$1,000,000 per occurrence and in the aggregate if applicable.

**Section 7.3 Policies.** All insurance maintained in accordance with the provisions of Section 7.1 and 7.2 shall be issued by credit worthy and commercially reasonable licensed companies, and shall be carried in the name of both Landlord and Tenant, as their respective interests may appear.

#### **Section 7.4 Indemnity.**

(a) Except to the extent caused by the negligence or willful misconduct of Landlord or its agents or otherwise relating to conditions existing with respect to the Leased Property prior to the Effective Date, Tenant shall indemnify and hold harmless Landlord, its successors and assigns (the "**Indemnified Parties**"), from all claims, suits, actions, and proceedings whatsoever ("**Claims**") which may be brought or instituted on account of or growing out of any and all injuries or damages, including death, to persons or property relating to the use or occupancy of the Leased Property by Tenant and all losses, liabilities, judgments, settlements, costs, penalties, damages, and expenses relating thereto, including but not limited to attorneys' fees and other costs of defending against, investigating, and settling the Claims. Tenant shall assume on behalf of the Indemnified Parties and conduct with due diligence and in good faith the defense of all Claims against any of the Indemnified Parties. Tenant shall be relieved of its obligation of indemnity to the extent of the amount actually recovered from one or more of the insurance carriers of Tenant or Landlord and either (i) paid to Landlord or (ii) paid for Landlord's benefit in reduction of any liability, penalty, damage, expense, or charge actually imposed upon, or incurred by, Landlord in connection with the Claims. Tenant may contest the validity of any Claims, in the name of Landlord or Tenant, as Tenant may deem appropriate, provided that the expenses thereof shall be paid by Tenant, or Tenant shall cause the same to be paid by its insurer.

(b) Except to the extent caused by the negligence or willful misconduct of Tenant or its agents, Landlord shall indemnify and hold harmless Tenant, its successors and assigns (the "**Tenant Indemnified Parties**"), from all Claims which may be

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brought or instituted on account of or growing out of any and all injuries or damages, including death, to persons or property relating to any breach of this Lease by Landlord, any operations of the Landlord on the Landlord Property or any negligence or willful misconduct on the part of Landlord or anyone acting on behalf of Landlord, any conditions existing with respect to the Leased Property prior to the Effective Date and all losses, liabilities, judgments, settlements, costs, penalties, damages, and expenses relating thereto, including but not limited to attorneys' fees and other costs of defending against, investigating, and settling the Claims. Landlord shall assume on behalf of the Tenant Indemnified Parties and conduct with due diligence and in good faith the defense of all Claims against any of the Tenant Indemnified Parties. Landlord shall be relieved of its obligation of indemnity to the extent of the amount actually recovered from one or more of the insurance carriers of Tenant or Landlord and either (i) paid to Tenant or (ii) paid for Tenant's benefit in reduction of any liability, penalty, damage, expense, or charge actually imposed upon, or incurred by, Tenant in connection with the Claims. Landlord may contest the validity of any Claims, in the name of Landlord or Tenant, as Landlord may deem appropriate, provided that the expenses thereof shall be paid by Landlord, or Landlord shall cause the same to be paid by its insurer.

**Section 7.5 Subrogation.** Anything in this Lease to the contrary notwithstanding, Landlord and Tenant each hereby waive any and all rights of recovery, claims, or actions against the other, its agents, officers, and employees for any injury, death, loss, or damage that may occur to persons or the Improvements, or any part thereof, or any personal property of such party therein, by reason of fire, the elements, or any other cause which is insured against under the terms of the policies of casualty insurance or worker's compensation insurance that Tenant is required to provide hereunder, or under any policies of insurance maintained by Landlord, to the extent, and only to the extent, of any proceeds actually received by Landlord or Tenant, respectively, with respect thereto, regardless of cause or origin, including the negligence of either party hereto, its agents, contractors, invitees or licensees, and each party covenants that no insurer shall hold any right of subrogation against the other.

**Section 7.6 Coverage.** All insurance described in this Article 7 may be obtained by Tenant by endorsement or equivalent means under any blanket insurance policies maintained by Tenant, provided that the coverage and other terms of such insurance otherwise comply with this Article 7.

### ARTICLE VIII CASUALTY LOSS

**Section 8.1 Tenant's Obligation to Restore.** Should any Improvements be wholly or partially destroyed or damaged by fire or any other casualty, Tenant may repair, replace, restore, reconstruct, improve, modify and/or expand the same.

### ARTICLE IX CONDEMNATION

**Section 9.1 Total Taking.** Should the entire Leased Property or Improvements be taken (which term, as used in this Article 9, shall include any conveyance in avoidance or settlement of eminent domain, condemnation, or other similar proceedings) by any Governmental Authority, corporation, or other entity under the right of eminent domain,

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condemnation, or similar right, then Tenant's right of possession under this Lease shall terminate as of the date of taking possession by the condemning authority, and the award therefor will be distributed (subject to the requirements of any Permitted Mortgagees) as follows: (a) first, to the payment of all reasonable fees and expenses incurred in collecting the award; and (b) next, the balance of the award shall be equitably apportioned between Landlord and Tenant based on the then respective fair market values of Landlord's interest in the Leased Property and Tenant's interest in the Leased Property and the Improvements. After the determination and distribution of the condemnation award as herein provided, the Lease shall terminate.

**Section 9.2 Partial Taking.** Should a portion of the Leased Property or Improvements be taken by any Governmental Authority or other entity under the right of eminent domain, condemnation, or similar right, this Lease shall nevertheless continue in effect as to the remainder of the Leased Property or Improvements unless, in Tenant's good faith judgment, so much of the Leased Property or Improvements shall be so taken as to make it economically unsound to use the remainder for the uses and purposes contemplated hereby, whereupon this Lease shall terminate as of the date of taking of possession by the condemning authority in the same manner as if the whole of the Leased Property and Improvements had thus been taken, and the award therefor shall be distributed as provided in Section 9.1.

**Section 9.3 Award on Partial Taking; Base Rent Reduction.** In the event of a partial taking where this Lease is not terminated, and as a result thereof Tenant will need to restore, repair, or refurbish the remainder of the Leased Property and the Improvements in order to put them in a useable condition, then the award shall first be apportioned as provided in Section 9.1, considering the respective interests of Landlord and Tenant in the portion of the Leased Property and the Improvements taken. If a portion of the Leased Property or the Improvements is taken and no repair or restoration work is required because thereof, the award therefor shall be apportioned as provided in Section 9.1, considering the respective interests of Landlord and Tenant in the portion of the Leased Property taken. In the event of a partial taking where this Lease is not terminated, the Base Rent shall be proportionately reduced, as of the date of such taking, for the remainder of the Term based on the number of acres of the Leased Property which were taken.

**Section 9.4 Temporary Taking.** If the whole or any portion of the Leased Property or the Improvements shall be taken for temporary use or occupancy, the Term shall not be reduced or affected. Except to the extent Tenant is prevented from so doing pursuant to the terms of the order of the condemning authority, Tenant shall continue to perform and observe all of the other covenants, agreements, terms, and provisions of this Lease. Rent shall continue to be paid during the temporary taking and Tenant shall be entitled to receive the entire amount of any award. In the event that Landlord receives an award for the estimated cost of restoration of the Leased Property, then Tenant shall be relieved from its obligations to restore the Leased Property.

**Section 9.5 Parties to Condemnation Proceeding.** Tenant, if it so desires, shall be made a party to any condemnation proceeding.

**Section 9.6 Notice of Taking, Cooperation.** Tenant and Landlord shall

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immediately notify each other of the commencement of any eminent domain, condemnation, or other similar proceedings with regard to the Leased Property or the Improvements of which Tenant or Landlord (as the case may be) has actual knowledge. Landlord and Tenant covenant and agree to fully cooperate in any condemnation, eminent domain, or similar proceeding in order to maximize the total award receivable in respect thereof.

### **ARTICLE X ASSIGNMENT**

**Section 10.1 Tenant's Right to Assign Agreement.** The Tenant shall have the right to assign or sublet this Lease, in whole or in part.

### **ARTICLE XI TENANT'S FINANCING**

**Section 11.1 Tenant's Right to Encumber.** Tenant may, from time to time and at any time, without Landlord's consent or joinder, encumber its interest in this Lease and the leasehold estate hereby created with one or more deeds of trust, mortgages, or other lien instruments to secure any borrowings or obligations of Tenant or Tenant's affiliates. Any such mortgages, deeds of trust, and/or other lien instruments, and the indebtedness secured thereby, provided that Landlord has been given notice thereof as set forth in Section 11.2, are herein referred to as "Permitted Mortgages," and the holder or other beneficiary thereof are herein referred to as "Permitted Mortgagees." No lien of Tenant upon its interest in this Lease and the leasehold estate hereby created shall encumber or affect in any way the interest of Landlord hereunder or in and to the Leased Property, except insofar as Landlord is obligated to take certain actions as to Permitted Mortgagees as provided in this Article 11. The Improvements and the leasehold estate created hereby shall at all times remain separate and apart from the title to the Leased Property for all purposes relating to the interests of any mortgagees of Landlord and Tenant.

**Section 11.2 Mortgagee Protective Provisions.** If Tenant encumbers its interest in this Lease and the leasehold estate hereby created with liens as above provided, then Tenant shall notify Landlord thereof, providing with such notice the name and mailing address of the Permitted Mortgagee in question, Landlord shall, upon request, acknowledge receipt of such notice, and for so long as the Permitted Mortgage in question remains in effect the following shall apply:

(a) Landlord shall give to the Permitted Mortgagee a duplicate copy of any and all notices which Landlord gives to Tenant pursuant to the terms hereof, including notices of default, and no such notice shall be effective until such duplicate copy is actually received by such Permitted Mortgagee, in the manner provided in Section 14.1.

(b) There shall be no cancellation, surrender, or modification of this Lease by joint action of Landlord and Tenant without the prior written consent of the Permitted Mortgagee.

(c) If a Default should occur hereunder, then Landlord specifically agrees that:



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(1) Landlord shall not enforce or seek to enforce any of its rights, recourses, or remedies, including but not limited to termination of this Lease or Tenant's right to possession hereunder, until a notice specifying the Default and the event giving rise to such Default has been received by the Permitted Mortgagee, in the manner provided in Section 14.1, and if the Permitted Mortgagee proceeds to cure the Default within a period of 30 days after the later of receipt of such notice or the occurrence of such Default, as to events of Default which Permitted Mortgagee cannot reasonably cure within such time period, the Permitted Mortgagee, to the extent it is reasonably able to do so, commences curing such Default within such time period and thereafter diligently pursues such cure to completion, then any payments made and all things done by the Permitted Mortgagee to effect such cure shall be as fully effective to prevent the exercise of any rights, recourses, or remedies by Landlord as if done by Tenant;

(2) if the Default is a non-monetary default that a Permitted Mortgagee cannot reasonably cure without being in possession of the Leased Property, then for so long as the Permitted Mortgagee is diligently attempting to secure possession of the Leased Property (whether by foreclosure or other procedures), provided the Permitted Mortgagee cures any monetary Defaults as well as any other Defaults that are reasonably susceptible of then being cured by the Permitted Mortgagee, then Landlord shall allow the Permitted Mortgagee such time as may be reasonably necessary under the circumstances to obtain possession of the Leased Property in order to cure such Default, and during such time Landlord shall not enforce or seek to enforce any of its rights, remedies or recourses hereunder; and

(3) if the Default is a non-monetary default of such a nature that it is not reasonably susceptible of being cured by the Permitted Mortgagee, then Landlord shall not enforce or seek to enforce any of its rights, remedies, or recourses hereunder so long as Permitted Mortgagee pays all Rent then due and thereafter keeps the monetary obligations of Tenant hereunder current and complies with those other provisions of this Lease which, by their nature, Permitted Mortgagee may then reasonably comply with.

(d) Should the Lease be terminated for any reason other than expiration of the stated Term, then the Permitted Mortgagee shall have the right and option, exercisable by delivering notice to Landlord not later than 60 days after receipt from Landlord of written notice of such termination (which notice Landlord agrees to give) to elect to receive, in its own name or in the name of its nominee or assignee, a new lease of the Leased Property for the unexpired balance of the Term on the same terms and conditions as herein set forth, having the same priority as this Lease, and Landlord agrees to execute such new lease provided such Permitted Mortgagee shall undertake forthwith to remedy any then uncured Default reasonably susceptible by its nature of being remedied by such Permitted Mortgagee, including the payment of any amount due hereunder.

(e) No Permitted Mortgagee shall be or become liable to Landlord as an assignee of this Lease until such time as such Permitted Mortgagee, by foreclosure or other

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procedures, shall either acquire the rights and interests of Tenant under this Lease or shall actually take possession of the Leased Property, and upon such Permitted Mortgagee's assigning such rights and interests to another party or upon relinquishment of such possession, as the case may be, such Permitted Mortgagee shall have no further such liability.

(f) From time to time during the Term, Landlord shall, within ten (10) business days after receipt, execute and deliver to a Permitted Mortgagee, or a prospective Permitted Mortgagee, any estoppel, subordination, consent, lien waiver or other commercially reasonable document requested by any Permitted Mortgagee or prospective Permitted Mortgagee.

(g) Landlord shall not encumber the Leased Property without obtaining Tenant's prior written consent. Tenant may condition its consent to any encumbrance on fee title to the Leased Property on the execution by the fee lender of a subordination agreement in form and substance acceptable to all Permitted Mortgagees.

**Section 11.3 Modifications.** If any prospective Permitted Mortgagee requires modifications to this Lease as a condition to granting a Permitted Mortgage, Landlord shall not unreasonably withhold its consent to such modifications, provided that Landlord shall not be required to consent to any such modification pertaining to Rent, the Term, or any other material economic provision of this Lease, nor to any modification which would materially decrease Landlord's rights or increase its burdens or obligations hereunder. Any out-of-pocket cost incurred by Landlord in connection with any such proposed modification shall be borne by Tenant.

### ARTICLE XII WARRANTY OF PEACEFUL POSSESSION

**Section 12.1 Warranty.** Landlord covenants that Tenant shall and may peaceably and quietly have, use, and enjoy the Leased Property during the Term, and may exercise all of its rights hereunder, subject only to the provisions of this Lease and applicable governmental laws, rules, and regulations; and Landlord agrees to warrant and forever defend Tenant's right to such occupancy, use, and enjoyment and the title to the Leased Property against the claims of any and all persons whomsoever lawfully claim the same, or any part thereof, by, through or under Landlord, but not otherwise, subject only to provisions of this Lease and all applicable governmental laws, rules, and regulations.

### ARTICLE XIII DEFAULT AND REMEDIES

**Section 13.1 Default.** Each of the following shall be deemed a "Default" by Tenant hereunder and a material breach of this Lease:

(a) Whenever Tenant shall fail to pay any installment of Rent or any other sum payable by Tenant to Landlord or any third party under this Lease on the date upon which the same is due to be paid, and such default shall continue for fifteen (15) days after Tenant shall have received a written notice specifying such default; or

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(b) Whenever Tenant shall fail to keep or perform any of the covenants or terms contained in this Lease that are to be kept or performed by Tenant other than with respect to payment of Rent or other liquidated sums of money, and Tenant shall fail to commence such steps as are necessary to remedy the same within sixty (60) days (or longer if the default cannot reasonably be cured in such period of time and Tenant uses reasonable efforts to complete such cure) after Tenant shall have received written notice specifying the same, *provided, however, that* as to any default that Tenant cannot reasonably cure with reasonable diligence within such period, Tenant shall not be in Default for so long as Tenant proceeds in a commercially reasonable manner to remedy the same;

**Section 13.2 Remedies.** If a Default occurs, then subject to the rights of any Permitted Mortgagee as provided in Article XI Landlord may at any time thereafter prior to the curing thereof pursue any rights and remedies available to Landlord hereunder, at law, in equity or otherwise.

### ARTICLE XIV MISCELLANEOUS

**Section 14.1 Notices.** All notices or communications required or permitted hereunder or by law shall, unless otherwise provided herein, be (a) in writing and shall be personally delivered, sent by telecopy, sent by reputable overnight courier (such as FedEx) or sent by registered, certified or express mail, return receipt requested, together with (b) email to the parties as set forth below. Notices given by hand, sent by telecopy or sent by reputable overnight courier shall be deemed given the day such notice was received. No notice shall be effective unless and until an email with such notice is provided to the party receiving the written communication with such written communication attached to such email. Notice of change of address shall be given in written notice in the manner detailed in this Section 14.1.

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To Landlord: Carol T. Hill  
8450 NW 150<sup>th</sup> Street  
Trenton, FL 32693  
Telephone: (352) 493-9620  
Email: carolturnrthill@gmail.com

and

Helen T. Jordan  
425 SW 3<sup>rd</sup> Ave.  
Trenton, FL 32693  
Telephone (352) 463-2195  
Email:

To Tenant: Duke Energy Florida, LLC  
550 S. Tryon Street, DEC22A  
Charlotte, NC 28202  
Attn: Lease Administration

With a copy to: Duke Energy Corporation  
50 S. Tryon Street, DEC45A  
Charlotte, NC 28202  
Attn: Christopher G. King

Any Party, by written notice to the others in the manner herein provided, may designate an address different from that set forth above. Notices required pursuant to the terms of this Agreement shall be delivered prior to 5 p.m. on the date such notice is due.

**Section 14.2 Modification and Non Waiver.** No variations, modifications, or changes herein or hereof shall be binding upon any Party unless set forth in a writing executed by it or by a duly authorized officer or agent. No waiver by either Party of any breach or default of any term or provision hereof shall be deemed a waiver of any other or subsequent breaches or defaults. No waiver of any breach or default of any term or provision hereof shall be implied from any action of any Party, and any such waiver, to be effective, shall be set out in a written instrument signed by the waiving Party.

**Section 14.3 Setback Waiver and Landscaping.** Landlord hereby waives any and all setbacks and setback requirements, whether imposed by law or by any person or entity,

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including any setback requirements described in any applicable zoning ordinance or in any governmental entitlement or permit heretofore or hereafter issued to Tenant. Further, if so requested by Tenant, Landlord shall promptly, without demanding additional consideration thereof, execute, and if appropriate cause to be acknowledged and recorded, any setback waiver, setback elimination or other document or instrument required by any governmental authority or that Tenant deems necessary or convenient to the obtaining of any entitlement or permit.

**Section 14.4 Oil and Gas Leases.** Landlord hereby promises, represents, and warrants that it shall use commercially reasonable efforts to: (a) Provide notice to Tenant of any proposed oil and gas drilling or mining permits and the location of all proposed facilities prior to the close of public comment for those permits; (b) consult with Tenant on the location of any proposed facilities, drilling, and associated activities, anticipated to be initiated on the Leased Property pursuant to any existing oil, gas or mineral lease (or grant of such rights) and associated permits; and (c) instruct said user of such lease or associated rights to cooperate and coordinate with Tenant to ensure those proposed facilities, drilling, and associated activities, accommodate Tenant's rights and activities authorized and envisioned hereunder, provided, however, that in no event shall Landlord (or any party deriving rights by or through Landlord) have the right to conduct any drilling, mining or resource exploration or extraction activities within four hundred feet of the surface of the Leased Premises.

### **Section 14.5 Early Termination Right.**

(a) Tenant does not anticipate exercising the right to terminate this Lease prior to the scheduled expiration date, and will use commercially reasonable efforts to avoid exercising the early termination right described in subsection (b) below.

(b) At any time after five (5) years from the Effective Date, Tenant may terminate this Lease by notice to Landlord by giving Landlord at least ninety (90) days' notice and paying all payments due through the date of termination. Within said ninety (90) day period, Tenant shall pay to Landlord an early termination fee in an amount equal to the rent paid by Tenant to Landlord for the twelve-month period immediately preceding the date of the termination notice. Landlord shall be entitled to retain all payments made to the date of termination. Any rights or obligations incurred during the Term of this Agreement shall survive and be enforceable in the event of such termination.

**Section 14.6 Safety Measures.** Landlord authorizes Tenant to take reasonable safety measures to reduce the risk of damage to Tenant's Facility or the risk that the Tenant's Facility will cause damage, injury or death to people, livestock, other animals or property, and Tenant may take security precautions if Tenant determines, in its sole discretion, that such security measures will reduce such risks of damage, death or injury. The cost of any security measures taken by Tenant shall be borne solely by Tenant.

**Section 14.7 Subordination.** From and after the Effective Date, any right, title or interest created by Landlord in favor of or granted to any third-party and related to the Property shall be subject and subordinate to (i) this Lease and all of Tenant's rights, title and interests created hereby, (ii) any lender's lien then in existence on Tenant's leasehold interest created by the Lease, (iii) Tenant's right to create a lender's lien, (iv) any and all documents executed or to be executed by Tenant in connection with Tenant's exercise of its rights under, and that are

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consistent with, this Lease, and (v) Tenant's prior written consent.

If any encumbrance on title to the Property which was created prior to the Effective Date is found, exists or is claimed to exist against the Property or any portion thereof, and such encumbrance creates rights superior to those of Tenant, and Tenant in its sole discretion determines that the existence, use, operation, implementation or exercise of such encumbrance could delay, interfere with, impair or prevent Tenant's intended operations or the exercise of any of Tenant's other rights under the Lease, Tenant shall be entitled to seek to obtain a subordination, non-disturbance agreement, consent or other agreement (in a form and containing provisions acceptable to Tenant) from the holder of such encumbrance that will eliminate such risks for the benefit of Tenant, and Landlord shall reasonably cooperate with and assist Tenant in connection therewith. The holder of such encumbrance shall be permitted to rely on this section as Landlord's express consent, without further consent required, to Tenant's request for a subordination, non-disturbance agreement, consent or other agreement (in a form and containing provisions reasonably acceptable to Tenant) that will eliminate such risks for the benefit of Tenant.

**Section 14.8 Governing Law.** Lease shall be construed and enforced in accordance with the laws of the State of Florida.

**Section 14.9 Number and Gender; Captions; References.** Pronouns, wherever used herein, and of whatever gender, shall include natural persons and corporations and associations of every kind and character, and the singular shall include the plural wherever and as often as may be appropriate. Article and Section headings in this Lease are for convenience of reference and shall not affect the construction or interpretation of this Lease. Whenever the terms "hereof," "hereby," "herein," or words of similar import are used in this Lease they shall be construed as referring to this Lease in its entirety rather than to a particular Section or provision, unless the context specifically indicates to the contrary. Any reference to a particular "Article" or "Section" shall be construed as referring to the indicated Article or Section of this Lease.

**Section 14.10 Estoppel Certificate.** Landlord and Tenant shall execute and deliver to each other, within 10 days after request therefor from time to time by the other Party, or by any Permitted Mortgagee, a certificate addressed as indicated by the requesting Party and stating:

- (a) whether or not this Lease is in full force and effect;
- (b) whether or not this Lease has been modified or amended in any respect, and submitting copies of such modifications or amendments;
- (c) whether or not there are any existing defaults hereunder known to the Party executing the certificate, and specifying the nature thereof; whether or not any particular Article, Section, or provision of this Lease has been complied with; and
- (d) such other matters as may be reasonably requested.

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In the event that the Party to whom such a certificate is requested fails to execute and deliver such estoppel certificate as and when required, then all matters in the requested certificate shall be irrefutably deemed true and correct. In the event that the requested party has its legal counsel comply with this request then the requesting party shall pay any reasonable legal fees for this service.

**Section 14.11 Severability.** If any provision of this Lease or the application thereof to any person or circumstance shall, at any time or to any extent, be invalid or unenforceable, and the basis of the transaction between the Parties is not rendered ineffective thereby, the remainder of this Lease shall not be affected thereby.

**Section 14.12 Attorney Fees.** If litigation is ever instituted by either Party hereto to enforce, interpret, or to seek damages for the breach of, any provision hereof, the prevailing Party therein shall be promptly reimbursed by the other Party for all attorneys' fees and expenses reasonably incurred by the prevailing party in connection with such litigation.

**Section 14.13 Surrender of Leased Property; Holding Over.** Upon termination or the expiration of this Lease, Tenant shall peaceably quit, deliver up, and surrender the Leased Property and, subject to the provisions of this Agreement, the Improvements that are then located on the Leased Property. Except if Tenant is continuing removal of the Improvements as provided in Section 5.5, if Tenant does not surrender possession of the Leased Property and the Improvements at the end of the Term, such action shall not extend the Term, Tenant shall be a tenant at sufferance, and during such time of occupancy Tenant shall pay to Landlord, as damages, an amount equal to 150% the amount of Base Rent that was being paid immediately prior to the end of the Term, prorated on a daily basis. Landlord shall not be deemed to have accepted a surrender of the Leased Property by Tenant, or to have extended the Term, other than by execution of a written agreement specifically so stating.

**Section 14.14 Force Majeure.** As used herein "Force Majeure" means the occurrence of any event (including, but not limited to, any aircraft accidents on or near the Leased Premises or any restriction by a Governmental Authority with restricts Tenant's use of the Leased Premises) which prevents or delays the performance by Landlord or Tenant of any obligation imposed upon it hereunder (other than payment of Rent) and the prevention or cessation of which event is beyond the reasonable control of the obligor. If Tenant shall be delayed, hindered, or prevented from performance of any of its obligations (other than to pay Rent) by reason of Force Majeure (and Tenant shall not otherwise be in default hereunder) the time for performance of such obligation shall be extended for the period of such delay, provided that the following requirements are complied with by Tenant:

(a) Tenant shall give prompt written notice of such occurrence to Landlord, and

(b) Tenant shall diligently attempt to remove, resolve, or otherwise eliminate such event, keep Landlord advised with respect thereto, and shall commence performance of its obligations hereunder immediately upon such removal, resolution, or elimination. Anything contained in or inferable from this Lease to the contrary notwithstanding, Tenant shall not be relieved by any event of Force Majeure from Tenant's

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obligations to pay Rent hereunder, nor shall the Term be extended thereby.

**Section 14.15 Non Merger.** Notwithstanding the fact that fee title to the Leased Property and to the leasehold estate hereby created may, at any time, be held by the same Party, there shall be no merger of the leasehold estate hereby created unless the owner thereof executes and files for record in the land records for the county in which the Leased Property is located a document expressly providing for the merger of such estates.

**Section 14.16 Relation of Parties.** It is the intention of Landlord and Tenant to hereby create the relationship of landlord and tenant, and no other relationship whatsoever is hereby created. Nothing in this Lease shall be construed to make Landlord and Tenant partners or joint venturers or to render either Party hereto liable for any obligation of the other Party.

**Section 14.17 Entireties.** This Lease, together with the Option Agreement, constitutes the entire agreement of the Parties with respect to its subject matter, and all prior agreements (whether written or oral) with respect thereto are merged herein. Any agreements entered into between Landlord and Tenant of even date herewith are not, however, merged herein.

**Section 14.18 Consents and Approvals.** If and to the extent the consent or approval of any of the Parties is required under this Agreement or applicable law, Landlord and Tenant agree that such consent shall not be unreasonably withheld, conditioned or delayed.

**Section 14.19 Recordation.** Landlord and Tenant will, at the request of the other, promptly execute an instrument in the form attached hereto as Exhibit D (the "Memorandum of Lease"), which Tenant may cause to be filed for record in the land records for the county in which the Leased Property is located, or at the request of either Party this Lease shall be so filed for record.

**Section 14.20 Successors and Assigns.** This Lease shall constitute a real right and covenant running with the Leased Property, and, subject to the provisions hereof pertaining to Tenant's rights to assign, sublet, or encumber, this Lease shall be binding upon and inure to the benefit of the Parties and their respective successors and assigns. Whenever a reference is made herein to either Party, such reference shall include the party's successors and assigns.

**Section 14.21 Performance of Landlord's Obligations.** If Landlord fails to perform or observe any of its covenants, agreements, or obligations hereunder for a period of thirty (30) days after notice of such failure is given by Tenant, then Tenant may, at its sole election (but not as its exclusive remedy), (a) perform or observe the covenants, agreements, or obligations which are asserted to have not been performed or observed at the expense of Landlord and to recover from Landlord (or offset against amounts owing to Landlord under this Lease) all reasonable costs or expenses incurred in connection therewith, (b) bring and maintain a suit for specific performance against Landlord, and/or (c) pursue such other rights as may be available to Tenant at law, in equity or otherwise.

**Section 14.22 No Third Parties Benefited.** Except as herein specifically and expressly otherwise provided with regard to notices, opportunities to cure defaults, right to



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execute a new lease, and certain other enumerated rights granted to Permitted Mortgagees, the terms and provisions of this Lease are for the sole benefit of Landlord and Tenant, and no third party whatsoever, is intended to benefit here from.

**Section 14.23 Survival.** Any terms and provisions of this Lease pertaining to rights, duties, or liabilities extending beyond the expiration or termination of this Lease shall survive the end of the Term.

**Section 14.24 Transfer of Landlord's Interest.** Landlord may freely transfer and/or mortgage its interest in the Leased Property and under this Lease from time to time and at any time, provided that any such transfer or mortgage is expressly made subject to the terms, provisions, and conditions of this Lease, and the transferee or mortgagee agrees to be bound by the provisions hereof (in the case of a mortgagee, such agreement being contingent upon the mortgagee actually succeeding to the Landlord's interest in the Leased Property and hereunder by virtue of a foreclosure or conveyance in lieu thereof).

**Section 14.25 Tax Efficiency.** The parties shall cooperate in finding a tax efficient structure for this transaction that does not materially and adversely affect the Landlord or materially enhance its obligations or diminish its rights.

*[Rest of page left intentionally blank – signature page to follow]*

IN WITNESS WHEREOF, the parties hereto have duly executed this Lease by authority duly given, as of the day and year first above written.

**Landlord's Witnesses**

  
\_\_\_\_\_  
Witness Signature


  
\_\_\_\_\_  
Witness Signature

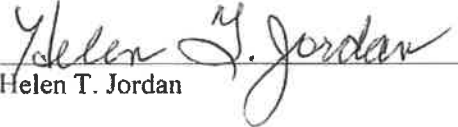
**Tenant's Witnesses**

\_\_\_\_\_  
Witness Signature

\_\_\_\_\_  
Witness Signature

**Landlord**

  
\_\_\_\_\_  
Carol T. Hill

  
\_\_\_\_\_  
Helen T. Jordan

**Tenant**

Duke Energy Florida, LLC

By: \_\_\_\_\_  
Name: Karen Adams  
Title: Manager, Land Services – Florida Region

**IN WITNESS WHEREOF**, the parties hereto have duly executed this Lease by authority duly given, as of the day and year first above written.

**Landlord's Witnesses**

**Landlord**

\_\_\_\_\_  
Witness Signature

\_\_\_\_\_  
Carol T. Hill

\_\_\_\_\_  
Witness Signature

\_\_\_\_\_  
Helen T. Jordan

**Tenant's Witnesses**

**Tenant**

*Ben Todd Boyer*  
\_\_\_\_\_  
Witness Signature

Duke Energy Florida, LLC

*[Signature]*  
\_\_\_\_\_  
Witness Signature

By: *Karen Adams*  
\_\_\_\_\_  
Name: Karen Adams  
Title: Manager, Land Services – Florida Region

REDACTED

**EXECUTION COPY**

**Exhibit A to the Ground Lease**

**RENT SCHEDULE**

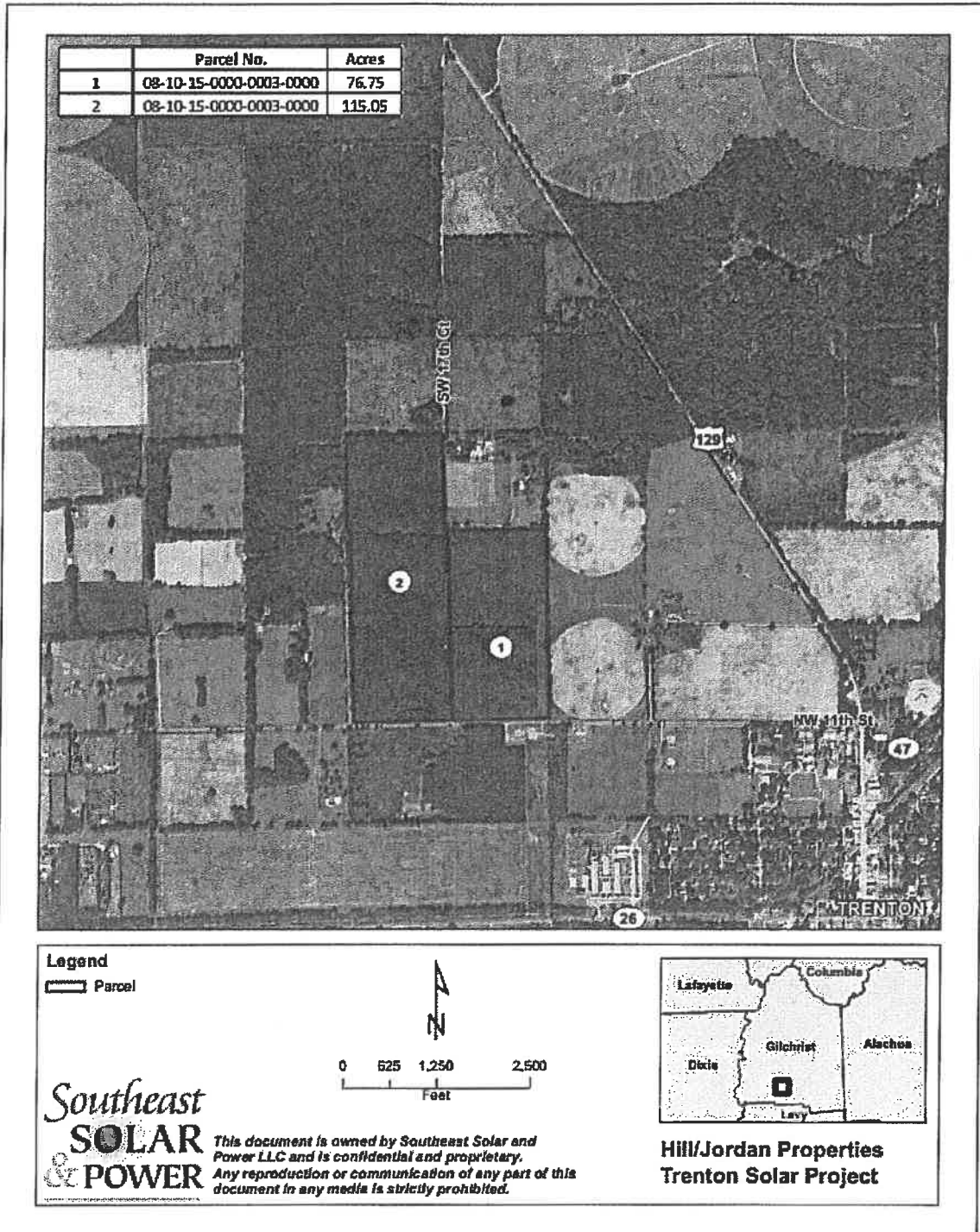
Base Rent of [REDACTED] per acre per year which shall be increased at the end of each five (5) year period of the Initial Term and for each Extension based on the cumulative increase in the Consumer Price Index (CPI-U as published by the U.S. Bureau of Labor Statistics) for the preceding five years.

Base Rent shall be paid once per year on the Effective Date and each anniversary thereafter, during the term of this Agreement.

# EXECUTION COPY

Exhibit B to the Ground Lease  
[Attached hereto and made a part hereof]

## LANDLORD PROPERTY



**EXECUTION COPY**

**Exhibit B1 to the Ground Lease**

**EXCLUDED LANDS**

[Attached hereto and made a part hereof]

Lands excluded by landowner from this Lease.

NONE

# July 2019

WWW.WIKI-CALENDAR.COM

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
	1	2	3	4	5
7	8	9	10	11	12
14	15	16	17	18	19
21	22	23	24	25	26
28	29	30	31		

Public Holidays: 4: Independence Day

## **EXECUTION COPY**

### **Exhibit C to the Ground Lease**

#### **LEASED LAND**

Those certain lands identified within the tax parcel numbers attached hereto identified as Exhibit B in the Option Agreement, while not being excluded by Exhibit B1 of that same Option Agreement, between these Parties and shall further be those lands identified by Tenant during the Option Period set forth in the Option Agreement.

For purposes of calculating the Base Rent, Leased Land shall minimally consist of 100 acres less the Substation Area.



## GROUND LEASE AGREEMENT

This GROUND LEASE AGREEMENT (this "Lease"), dated as of April 4, 2019 reference purposes (the "Reference Date"), and effective as of April 4, 2019 ("Effective Date"), is made by and between PIEDMONT FARMS, INC., a Florida corporation, with an address at 569 Edgewood Avenue South, Jacksonville, FL 32205 ("Landlord"), and DUKE ENERGY FLORIDA, LLC, a Florida limited liability company ("Tenant"; together with Landlord, the "Parties" and each, a "Party").

### RECITALS

- A. Landlord is the fee simple owner of certain real property in Gilchrist County, Florida, as more particularly described on Exhibit A attached hereto (the "Landlord Property").
- B. Reference is hereby made to that certain Option Agreement dated as of May 20, 2016 (as amended from time to time, the "Option Agreement"), pursuant to which, among other things, Landlord granted Tenant (or Tenant's predecessor in interest), the right to lease the Leased Property (as defined below) in accordance with the terms and conditions of this Lease.
- C. Pursuant to the Option Agreement, Tenant (or its predecessor in interest) exercised an option to lease that certain portion of the Landlord Property described on Exhibit B (the "Leased Land"). The Leased Land for Tract 1 does not include the area as described in Exhibit C1 which will be retained by the Optionor (the "Excluded Land").
- D. The Parties are executing and delivering this Lease in connection with Tenant's exercise of such option.

### AGREEMENT

NOW, THEREFORE, Landlord hereby leases to the Leased Property to Tenant, subject to the following terms and conditions:

#### ARTICLE I LEASE OF PROPERTY

**Section 1.1 Leased Property.** Landlord does hereby lease unto Tenant, and Tenant does hereby lease from Landlord, (a) the Land and (b) any easements, rights-of-way, benefits, privileges, water rights, sub-surface rights, air rights, tenements, rights and interests appurtenant thereto or otherwise benefiting the Land or Landlord relating to the Land (the items in this Section I.I, collectively, the "Leased Property") for the purposes set forth in Section 6.1 below.

**ARTICLE II**  
**TERM OF LEASE**

**Section 2.1 Term.** Unless sooner terminated as expressly herein provided, this Lease shall continue in effect for a term commencing on the Effective Date and ending at midnight, Eastern Time, on the date that is twenty (20) years after the Effective Date (the "Initial Term"). The Initial Term, as it may be extended in accordance with Section 2.2 below, is referenced to herein as the "Term".

**Section 2.2 Extension Term.** Tenant shall have six (6) options (each, an "Option" and collectively, the "Options") to extend the Term for an additional period of five (5) years per Option (each, an "Extension" and collectively, the "Extensions") by delivering written notice to Landlord exercising such Option to extend prior to the then-scheduled expiration of the Term.

**ARTICLE III**  
**RENT**

**Section 3.1 Base Rent.** Tenant shall pay to Landlord base rent ("Base Rent") per acre pursuant to the schedule attached hereto as Exhibit C, along with any applicable sales tax on Base Rent or Additional Rent. Unless Tenant elects to have the acreage of the Property determined by a licensed surveyor, the acreage of the Property shall be that as shown in Exhibit C. If Tenant elects to have the acreage of the Property determined by a licensed surveyor, the Base Rent will be adjusted to reflect the acreage, as determined by such surveyor. The minimum acreage requirements in this Lease shall not be affected by this Section 3.1. Tenant's election to obtain a survey may happen at any time prior to the Commercial Operation Date. Until such survey is obtained, Tenant shall pay Base Rent on the full number of acres shown on Exhibit B. Once the survey is obtained and the Commercial Operation Date has been reached, the Base Rent shall be calculated based on the number of usable acres shown on the survey.

**Section 3.2 Additional Rent and Rent.** All amounts required to be paid by Tenant to Landlord under the terms of this Lease other than Base Rent are herein from time to time collectively referred to as "Additional Rent." Base Rent and Additional Rent are herein collectively referred to as "Rent."

**ARTICLE IV**  
**PROPERTY TAXES, UTILITIES**

**Section 4.1 Impositions Definition.** The term "Impositions" means all taxes, assessments, use and occupancy taxes, water and sewer charges, rates and rents, charges for public utilities, excises, levies, license and permit fees, and other charges by any public authority, general and special, ordinary and extraordinary, foreseen and unforeseen, of any kind and nature whatsoever (together, "Taxes"), which shall or may during the Term be assessed, levied, charged or imposed by any public authority upon or accrued or become a lien on (a) the Leased Property or any part thereof; or (b) the buildings or improvements now or hereafter located thereon. Impositions shall not include any Taxes upon any part of the Landlord Property other than the Leased Property, any income tax, capital levy, estate, succession, inheritance or transfer taxes, or similar tax of Landlord; any franchise tax imposed upon any owner of the fee of the Leased Property; or any income, profits, or revenue tax, assessment, or charge imposed upon the rent or other benefit received by Landlord under this Lease by any municipality, county, state, the United States of America, or any other governmental body, subdivision, agency, or authority (hereinafter all of the foregoing governmental bodies are collectively referred to as "Governmental Authorities")

**Section 4.2 Landlord and Tenant's Obligations.** During the Term, Tenant will pay prior to delinquency all Impositions. Landlord will pay prior to delinquency all Taxes on the Landlord Property other than the Leased Property. Impositions that are payable by Tenant for the tax year in which

this Lease commences as well as during the year in which the Term ends shall be apportioned so that Tenant and Landlord each pay their respective shares, prior to delinquency. Landlord shall promptly deliver to Tenant any tax statements or invoices received by Landlord for any Impositions. Landlord and Tenant agree to work with each other in good faith to cause the Landlord Property other than the Leased Property, the Leased Property, and the Improvements (as defined in Section 5.2) to be separately assessed and taxed by the applicable Governmental Authorities. In the event the Leased Property is not separately assessed from the remainder of the Landlord Property for the tax year in which the Term commences, then taxes for such year shall be apportioned between the Leased Property and the remainder of the Landlord Property based upon relative value, and Tenant shall pay prior to delinquency the proportionate share attributable to the Leased Property as Impositions and Landlord shall pay prior to delinquency the proportionate share attributable to the remainder of the Landlord Property. Tenant shall, if so requested, deliver to Landlord evidence of due payment of all Impositions Tenant is obligated to pay hereunder, concurrently with the making of such payment. Landlord shall, if so requested, deliver to Tenant evidence of due payment of all Taxes that Landlord is obligated to pay hereunder, concurrently with the making of such payment. If Landlord does not satisfy its obligation under this Section 4.2 to make payment prior to delinquency, Tenant is authorized to make such payments on behalf of Landlord at Landlord's expense with right of offset against Rent due from Tenant from time to time.

**Section 4.3 Tax Contest.** Tenant or Landlord may, at its expense, contest the validity or amount of any Imposition for which it is responsible, in which event the payment thereof may be deferred, as permitted by law, during the pendency of such contest, if diligently prosecuted. Nothing herein contained, however, shall be construed to allow any Imposition to remain unpaid for such length of time as would permit the sale of a tax certificate on the Leased Property, or for the Leased Property or any part thereof, to be sold or seized by any Governmental Authority for the nonpayment of the same.

**Section 4.4 Imposition Contest.** Tenant may, if it shall so desire, endeavor at any time or times to obtain a lowering of the valuation of the Leased Property and the Improvements for any year for the purpose of reducing *ad valorem* taxes thereon and, in such event, Landlord will, at the request of Tenant, cooperate in effecting such a reduction, provided the Landlord shall not be required to incur any expense in connection therewith without its prior consent.

**Section 4.5 Agricultural Tax Exemption and Rollback Taxes.** Anything in this Lease to the contrary notwithstanding, if the Leased Property or any portion thereof is the beneficiary of any special tax valuation, agricultural tax exemption, or other tax exemption and Landlord changes the use of the Leased Property prior to the Effective Date such that the Leased Property or portion thereof does not qualify for such special valuation or exemption or such valuation or exemption is denied or lost prior to the Effective Date, then any resulting rollback taxes, additional taxes, penalties, interest, or assessments will be paid by Landlord. If this Lease or Tenant's use of the Leased Property after the Effective Date results in rollback taxes, additional taxes, penalties, interest, or assessments, the same will be the obligation of the Tenant. In the event that the Leased Property or any portion thereof is subject to a special tax valuation, agricultural tax exemption, or other tax exemption, then at the request of Tenant, Landlord, at Tenant's sole cost and expense, shall cooperate with Tenant to maintain such special valuation or exemption for so long as Tenant elects to do so. If the Term ends on a basis other than on a calendar year basis and if Landlord intends to return the use of the Leased Property to an agricultural classification (as disclosed in written notice to Tenant no later than ninety (90) days prior to the expiration of the Term), Tenant shall pay as additional Base Rent the additional taxes, if any, for that portion of the remainder of the calendar year following expiration of the Term that is caused by the lack of an agricultural classification on the Leased Property occasioned by Tenant's use of the Leased Property as of January 1 of such calendar year.

**Section 4.6 Utilities.** Tenant shall pay all charges for gas, electricity, light, heat, air conditioning, power, telephone and other communication services, water rents, sewer service charges and all other utilities and similar services rendered or supplied to the Leased Property and the Improvements (as defined in Section 5.2 below).

## **ARTICLE V IMPROVEMENTS AND DEVELOPMENT**

**Section 5.1 Tenant's Facility.** Without limitation upon the other provisions of this Article 5, Landlord agrees that Tenant, at Tenant's sole cost and expense, may (but shall not be obligated to) construct upon the Leased Property one or more solar electric power generating and transmissions facilities together with related improvements, one or more substations, transmission poles and wires, appurtenances, streets, sidewalks and facilities determined by Tenant to be necessary or useful to such facilities (together, "Tenant's Facility").

**Section 5.2 Construction of Improvements.** Tenant may, from time to time and at any time, at its sole cost and risk, construct improvements upon the Leased Property (including, without limitation, Tenant's Facility) if Tenant so elects in compliance with applicable laws. It is specifically acknowledged that Tenant may construct improvements located partially upon the Leased Property and partially upon adjoining parcels of real estate in which Tenant has ownership, leasehold or other interests. As used hereafter, the term "Improvements" means any buildings, structures, or other improvements located at any time upon the Leased Property. Such Improvements shall be constructed in accordance with permits and licenses from any Governmental Authority as may be reasonably necessary to construct and operate the Improvements and use and enjoy the Leased Property and the Improvements. The Improvements shall be the sole and exclusive property of Tenant and Landlord waives any and all lien rights it may have in the Improvements.

**Section 5.3 Alterations.** At any time and from time to time during the Term, Tenant may perform such alteration, renovation, repair, refurbishment, replacement, repowering, removal, and other work with regard to any Improvements as Tenant may elect.

**Section 5.4 Liens.** Landlord's fee interest in the Leased Property shall not subject to liens for improvements made by Tenant. Tenant shall have no right, authority, or power to bind Landlord or any interest of Landlord in the Leased Property for any claim for labor or for material or for any other charge or expense incurred in construction of any Improvements or performing any alteration, renovation, repair, refurbishment, or other work with regard thereto, nor to render Landlord's interest in the Leased Property liable for any lien or right of lien for any labor, materials, or other charge or expense incurred in connection therewith, and Tenant shall in no way be considered as the agent of Landlord in the construction, erection, or operation of any such Improvements. If any liens or claims for labor or materials supplied or claimed to have been supplied to the Leased Property shall be filed, Tenant shall promptly pay or bond such liens to Landlord's reasonable satisfaction or otherwise obtain the release or discharge thereof.

**Section 5.5 Removal of Property.** Tenant shall remove any and all Improvements, fixtures, machinery, equipment, furniture, furnishings and/or movable personal property installed by Tenant on the Leased Property, provided that as to Improvements below grade Tenant shall not be required to remove those Improvements located more than 3 feet below the grade unless the same are storage tanks or constitute Hazardous Materials("grade" being the grade level as of the date of this Lease, which is substantially the same as the grade of the surrounding lands) prior to the expiration of the Term, or within 180 days following an earlier termination thereof.

(a) It is understood that Tenant shall return the Leased Property to Landlord in a farmable condition. Accordingly, if concrete, wooden or metal structures are imbedded in the ground, and within three (3) feet of the ground surface, such structures shall have a metal band or strap on the top surface (such as rebar) such that the imbedded structure may be grasped by a forklift or back hoe and readily lifted for removal.

(b) At least 18 months prior to the end of the then current Term, and within 30 days following any payment default by Tenant that is continuing after any applicable cure period with respect thereto, Tenant shall obtain and furnish to Landlord a written cost estimate (the "Cost Estimate") from a reputable source to remove the Improvements of Tenant installed on or in the Property that Tenant is required to remove pursuant to this Section 5.5(a). If Tenant fails to obtain such estimate, Landlord shall obtain a Cost Estimate at Tenant's expense. At the time payment of the final year's installment of rent is due, or on the 60<sup>th</sup> day following an uncured payment default, Tenant shall, unless Tenant has exercised its renewal option to extend the Term, either

(i) pay to First American Title Insurance Company, as escrow agent, (or Landlord) an amount to be held in escrow equal to 115% of the written cost estimate, such sum to be released (A) to Tenant following Landlord's certification under oath that the Improvements have been removed (which certification Landlord shall promptly give), or (B) to Landlord following the written certification made by Landlord under oath stating the final day of the lease Term and that the Improvements were not removed within 90 days thereafter;

(ii) furnish to Landlord an irrevocable, stand-by letter of credit or completion bond having an expiry date of at least 12 months thereafter (and automatically renewable to extend the expiry date by an additional 6 months at Tenant's expense), in amount equal to 115% of the Cost Estimate, such letter of credit or completion bond, as applicable, to be draw by sight draft upon receipt of Landlord's certification made at least 60 days following termination of the Lease that the Improvements have not been removed; or

(iii) provide a guaranty from a credit-worthy entity (with a tangible net worth of at least 1,000% of the Cost Estimate as demonstrated by financial statements certified by its chief financial officer) for the completion of Tenant's obligations under Section 5.5(a).

Failure to perform the conditions of subparagraphs (i), (ii) or (iii) shall be deemed a monetary default. Landlord shall promptly remit to Tenant any amounts of such escrow deposit or letter of credit draw that exceed the remaining costs of removing the Improvements in accordance with the requirements of Sections 5.5(a). If funds are remitted by Tenant to an escrow agent under subparagraph (i), the Escrow Agent may deduct from the deposit its customary fees (not to exceed 5% of the amount deposited) when disbursement is made.

(c) Should Tenant on termination of this Lease fail to deliver the Leased Property in the condition required, Tenant shall be deemed to have held over and shall be liable for holdover rent (as provided in Section 14.8) during the reasonable period it would take Landlord to remove the Improvements as required by Section 5.5(a).

#### **Section 5.6 Permits, Licenses, Development Approvals and Encumbrances.**

(a) Landlord agrees to cooperate with Tenant in all reasonable respects in connection with seeking and obtaining all necessary or appropriate permits, licenses, entitlements and other approvals ("Permits") for Tenant's proposed use of the Property provided that such cooperation shall include, but not be limited to (i) joining with Tenant in the execution of such applications for Permits from any

governmental authority as may be reasonably necessary or useful to use the Property, any proposed improvements on the Property, and/or any easements granted to Tenant, in the manner proposed by Tenant; (ii) not to publicly oppose any aspect of Tenant's efforts to obtain Permits for use of the Property as proposed by Tenant, such improvements or project on the Property or any easements granted to Tenant or any of its affiliates (or any portion thereof) and, (iii) submit all required filings as and when required by applicable law to governmental entities to maintain the property tax agricultural exemption for the Property.

(b) Tenant may determine it is necessary, desirable, or required that drainage or power lines, one or more substations, and other easements, dedications and similar rights be granted or dedicated over or within the Excluded Lands or other neighboring lands owned by Landlord (the "Development Easements"). Before creating or permitting to be created any such Development Easements, Tenant shall obtain the prior written approval of Landlord to the creation of such Development Easements, which approval shall not be unreasonably withheld, delayed or conditioned. Any Development Easements approved by Landlord shall be in a location reasonably acceptable to Landlord. Landlord shall, on request of Tenant, join with Tenant in executing and delivering such documents, from time to time, and throughout the Term, as Tenant determines are appropriate, necessary, or required to create Development Easements approved by Landlord in accordance with this paragraph, provided, however, that (i) the costs of any utility lines, easements, dedications, and documents shall be borne by Tenant and (ii) Landlord shall be entitled to reasonable compensation for the use of any of Excluded Lands on the same economic terms as provided in this Lease with respect to the area on the Excluded Lands proposed to be used by Tenant and (iii) nothing herein shall encumber or be deemed to create an interest in Excluded Lands (or neighboring lands owned by Landlord) unless and until a Development Easement is executed. For the avoidance of doubt, Landlord's obligations under this paragraph are limited to negotiating in good faith and on commercially reasonable terms with respect to the Excluded Lands, and nothing herein affects or imposes any legal obligations with respect to neighboring lands. Should Landlord sell or dispose of the Excluded Lands, the grantee thereof will have no obligations under this paragraph.

(c) Landlord agrees to cooperate with Tenant in all reasonable respects in connection with seeking and obtaining any right of way, access, transmission line or equipment or any other easements reasonably required by Tenant on neighboring lands, provided the Landlord shall not be required to incur any expense in connection therewith without its prior consent.

(d) Tenant may determine that it is necessary, desirable, or required that Lease 1 include a separate and independent easement on Tract 2 for power lines, one or more substations, access and other easements, dedications and similar rights (the "Tract 2 Easements"). Such easements (to be appurtenant to Tract 1) would be limited to the northeastern portion of Tract 2, measuring up to two acres in area and located adjacent to the utility substations presently situated at the northeastern corner of the parcel. Landlord shall, on request of Tenant, join with Tenant in executing and delivering such documents, from time to time, and throughout the Term, as Tenant determines are appropriate, necessary, or required to create Tract 2 Easements in accordance with this paragraph, provided, however, that the costs of any utility lines, easements, dedications, and documents shall be borne by Tenant. The Lease area and Base Rent for Tract 1 will be increased accordingly and the Lease area and Base Rent for Tract 2 will be reduced by the same amounts.

(e) Subject to the terms of this Lease, Tenant has the right to grant its affiliates any of its rights relating to rights of way, drainage or power lines, one or more substations, access, transmission line or equipment or any other easements, dedications and similar easements provided that the primary use of such easements is the transmission of power and/or communications generated on the Leased Property (or any portion thereof).

(f) Landlord agrees to cooperate with Tenant in all reasonable respects in connection with seeking and obtaining any reductions and/or exemptions from property taxes or any other taxes, fees, charges typically imposed by any municipality, county, state, the United States of America, or any other governmental body, subdivision, agency, or authority (hereinafter all of the foregoing governmental bodies are collectively referred to as "Governmental Authorities"), provided the Landlord shall not be required to incur any expense in connection therewith without its prior consent.

## **ARTICLE VI**

### **USE, MAINTENANCE, AND REPAIRS**

**Section 6.1 Use.** Subject to the terms and provisions hereof, Tenant shall have the sole and exclusive right to use and possess the Leased Property for the development, construction, operation, maintenance, replacement and removal of one or more solar electrical generating facilities, any ancillary uses as well as also for agricultural use. For the avoidance of doubt, Tenant's permitted use does not include mining, drilling or mineral exploration.

**Section 6.2 Maintenance and Repairs.** Landlord shall have no obligation to maintain or repair the Leased Property and Improvements.

**Section 6.3 Water Line and Existing Power Line.** Landlord shall have the right to install and maintain an underground water line from the Landlord's wells located on Excluded Lands which shall not unreasonably interfere with the construction and operation of the Tenant's Facility. Landlord can maintain any existing above-ground power lines over the Leased Property provided that such maintenance would not be reasonably be expected to interfere (or actually interferes) with the construction or operation of Tenant's Facility, provided further that Tenant shall have the right to relocate the same at Tenant's expense.

**Section 6.4 Fences.** Landlord agrees that Tenant is permitted to replace the existing fences along the roads excluded from Tract 1.

**Section 6.5 Removal of Timber.** Landlord shall have the right to remove timber and/or equipment from the Property at any time prior to the date of the Option Notice. In the event that Tenant (or its predecessor in interest) delivers the Option Notice, and at that time the Property is partially or fully covered with trees, Landlord shall have three (3) months from the date of the Option Notice to cut, grub and clear the trees. In the event the trees have not been cleared by this date, Tenant (or its predecessor in interest) is permitted to: (i) effect their removal and deduct the cost thereof from any Lease payments, and (ii) reduce the Lease payment on a one-time basis for the period of time required to clear the Property.

**Section 6.6 Land within Municipal Boundary.** Tract 1 includes land which is within the municipal boundary of Trenton ("Municipal Land"). In the event that development of the Municipal Land may delay or add costs to the development of the project, Tenant (or its predecessor in interest), at its sole discretion prior to the scheduled commencement of construction of Tenant's Facility, may notify the Landlord that it is excluding all of the Municipal Land from the Property of Tract 1 which would result in the cancellation of the separate Lease on Tract 1 (exclusion of less than all of Tract 1 requires the written consent of Landlord). In such an event, Lease 1 would be amended so that the Leased Land area would be decreased accordingly and the Base Rent would be reduced proportionately.

**ARTICLE VII**  
**INSURANCE AND INDEMNITY**

**Section 7.1 Casualty Insurance.** Tenant will, at its cost and expense, keep and maintain in force the following policies of insurance:

(a) Insurance on the Improvements against loss or damage by fire and against loss or damage by any other risk of a type with limit of liability shall not be less than \$1,000,000 per incident.

(b) Workman's Compensation Insurance as to Tenant's employees involved in the construction, operation, or maintenance of the Leased Property in compliance with applicable law with limits not less than \$1,000,000 per person per accident.

**Section 7.2 Liability Insurance.** Tenant shall secure and maintain in force commercial general liability insurance with a limit of liability shall not be less than \$1,000,000 per occurrence and in the aggregate if applicable.

**Section 7.3 Policies.** All insurance maintained in accordance with the provisions of Section 7.1 and 7.2 shall be issued by credit worthy and commercially reasonable licensed companies, and shall be carried in the name of both Landlord and Tenant, as their respective interests may appear.

**Section 7.4 Indemnity.** Except to the extent caused by the negligence or willful misconduct of Landlord or its agents or otherwise relating to conditions existing with respect to the Leased Property prior to the Effective Date, Tenant shall indemnify and hold harmless Landlord, its successors and assigns (the "**Indemnified Parties**"), from all claims, suits, actions, and proceedings whatsoever ("**Claims**") which may be brought or instituted on account of or growing out of any and all injuries or damages, including death, to persons or property relating to the use or occupancy of the Leased Property by Tenant and all losses, liabilities, judgments, settlements, costs, penalties, damages, and expenses relating thereto, including but not limited to attorneys' fees and other costs of defending against, investigating, and settling the Claims. Tenant shall assume on behalf of the Indemnified Parties and conduct with due diligence and in good faith the defense of all Claims against any of the Indemnified Parties. Tenant shall be relieved of its obligation of indemnity to the extent of the amount actually recovered from one or more of the insurance carriers of Tenant or Landlord and either (i) paid to Landlord or (ii) paid for Landlord's benefit in reduction of any liability, penalty, damage, expense, or charge actually imposed upon, or incurred by, Landlord in connection with the Claims. Tenant may contest the validity of any Claims, in the name of Landlord or Tenant, as Tenant may deem appropriate, provided that the expenses thereof shall be paid by Tenant, or Tenant shall cause the same to be paid by its insurer.

(b) Except to the extent caused by the negligence or willful misconduct of Tenant or its agents, Landlord shall indemnify and hold harmless Tenant, its successors and assigns (the "**Tenant Indemnified Parties**"), from all Claims which may be brought or instituted on account of or growing out of any and all injuries or damages, including death, to persons or property relating to any breach of this Lease by Landlord, any operations of the Landlord on the Landlord Property or any negligence or willful misconduct on the part of Landlord or anyone acting on behalf of Landlord, any conditions existing with respect to the Leased Property prior to the Effective Date and all losses, liabilities, judgments, settlements, costs, penalties, damages, and expenses relating thereto, including but not limited to attorneys' fees and other costs of defending against, investigating, and settling the Claims. Landlord shall assume on behalf of the Tenant Indemnified Parties and conduct with due diligence and in good faith the defense of all Claims against any of the Tenant Indemnified Parties. Landlord shall be relieved of its obligation of indemnity to the extent of the amount actually recovered from one or more of the insurance carriers of Tenant or Landlord and either (a) paid to Tenant or (b) paid for Tenant's benefit in reduction of any liability, penalty,



damage, expense, or charge actually imposed upon, or incurred by, Tenant in connection with the Claims. Landlord may contest the validity of any Claims, in the name of Landlord or Tenant, as Landlord may deem appropriate, provided that the expenses thereof shall be paid by Landlord, or Landlord shall cause the same to be paid by its insurer.

**Section 7.5 Subrogation.** Anything in this Lease to the contrary notwithstanding, Landlord and Tenant each hereby waive any and all rights of recovery, claims, or actions against the other, its agents, officers, and employees for any injury, death, loss, or damage that may occur to persons or the Improvements, or any part thereof, or any personal property of such party therein, by reason of fire, the elements, or any other cause which is insured against under the terms of the policies of casualty insurance or worker's compensation insurance that Tenant is required to provide hereunder, or under any policies of insurance maintained by Landlord, to the extent, and only to the extent, of any proceeds actually received by Landlord or Tenant, respectively, with respect thereto, regardless of cause or origin, including the negligence of either party hereto, its agents, contractors, invitees or licensees, and each party covenants that no insurer shall hold any right of subrogation against the other.

**Section 7.6 Coverage.** All insurance described in this Article 7 may be obtained by Tenant by endorsement or equivalent means under any blanket insurance policies maintained by Tenant, provided that the coverage and other terms of such insurance otherwise comply with this Article 7.

#### **ARTICLE VIII** **CASUALTY LOSS**

**Section 8.1 Tenant's Obligation to Restore.** Should any Improvements be wholly or partially destroyed or damaged by fire or any other casualty, Tenant may repair, replace, restore, reconstruct, improve, modify and/or expand the same.

#### **ARTICLE IX** **CONDEMNATION**

**Section 9.1 Total Taking.** Should the entire Leased Property or Improvements be taken (which term, as used in this Article 9, shall include any conveyance in avoidance or settlement of eminent domain, condemnation, or other similar proceedings) by any Governmental Authority, corporation, or other entity under the right of eminent domain, condemnation, or similar right, then Tenant's right of possession under this Lease shall terminate as of the date of taking possession by the condemning authority, and the award therefor will be distributed (subject to the requirements of any Permitted Mortgagees) as follows: (a) first, to the payment of all reasonable fees and expenses incurred in collecting the award; and (b) next, the balance of the award shall be equitably apportioned between Landlord and Tenant based on the then respective fair market values of Landlord's interest in the Leased Property and Tenant's interest in the Leased Property and the Improvements. After the determination and distribution of the condemnation award as herein provided, the Lease shall terminate.

**Section 9.2 Partial Taking.** Should a portion of the Leased Property or Improvements be taken by any Governmental Authority or other entity under the right of eminent domain, condemnation, or similar right, this Lease shall nevertheless continue in effect as to the remainder of the Leased Property or Improvements unless, in Tenant's good faith judgment, so much of the Leased Property or Improvements shall be so taken as to make it economically unsound to use the remainder for the uses and purposes contemplated hereby, whereupon this Lease shall terminate as of the date of taking of possession by the condemning authority in the same manner as if the whole of the Leased Property and Improvements had thus been taken, and the award therefor shall be distributed as provided in Section 9.1.

**Section 9.3 Award on Partial Taking; Base Rent Reduction.** In the event of a partial taking where this Lease is not terminated, and as a result thereof Tenant will need to restore, repair, or refurbish the remainder of the Leased Property and the Improvements in order to put them in a useable condition, then the award shall first be apportioned as provided in Section 9.1, considering the respective interests of Landlord and Tenant in the portion of the Leased Property and the Improvements taken. If a portion of the Leased Property or the Improvements is taken and no repair or restoration work is required because thereof, the award therefor shall be apportioned as provided in Section 9.1, considering the respective interests of Landlord and Tenant in the portion of the Leased Property taken. In the event of a partial taking where this Lease is not terminated, the Base Rent shall be proportionately reduced, as of the date of such taking, for the remainder of the Term based on the number of acres of the Leased Property which were taken.

**Section 9.4 Temporary Taking.** If the whole or any portion of the Leased Property or the Improvements shall be taken for temporary use or occupancy, the Term shall not be reduced or affected. Except to the extent Tenant is prevented from so doing pursuant to the terms of the order of the condemning authority, Tenant shall continue to perform and observe all of the other covenants, agreements, terms, and provisions of this Lease. Rent shall continue to be paid during the temporary taking and Tenant shall be entitled to receive the entire amount of any award. In the event that Landlord receives an award for the estimated cost of restoration of the Leased Property, then Tenant shall be relieved from its obligations to restore the Leased Property.

**Section 9.5 Parties to Condemnation Proceeding.** Tenant, if it so desires, shall be made a party to any condemnation proceeding.

**Section 9.6 Notice of Taking, Cooperation.** Tenant and Landlord shall immediately notify each other of the commencement of any eminent domain, condemnation, or other similar proceedings with regard to the Leased Property or the Improvements of which Tenant or Landlord (as the case may be) has actual knowledge. Landlord and Tenant covenant and agree to fully cooperate in any condemnation, eminent domain, or similar proceeding in order to maximize the total award receivable in respect thereof.

## **ARTICLE X** **ASSIGNMENT**

**Section 10.1 Tenant's Right to Assign Agreement.** The Tenant shall have the right to assign or sublet this Lease, in whole or in part. If the assignment occurs on or after the Effective Date: (i) The Minimum Capitalization of the Assignee at the time of the start of construction of Tenant's Facility is required to be at least \$10,000,000 (for Lease 1) (\$4,000,000 for Lease 2) (except that such Minimum Capitalization may be less than the foregoing amounts if such lower Minimum Capitalization has been approved by the construction financier(s) of Tenant's Facility), and (ii) no assignment of this Lease shall relieve Tenant from responsibility for environmental performance under this Lease relating to an environmental condition first created during the Lease Term and such liability accrued prior to the date of such assignment. For purpose of this Lease, "Minimum Capitalization" means, as to the proposed assignee or nominee, the sum of the value of its assets, amounts of equity in it and availability of committed funds to it from third parties.

**ARTICLE XI**  
**TENANT'S FINANCING**

**Section 11.1 Tenant's Right to Encumber.** Tenant may, from time to time and at any time, without Landlord's consent or joinder, encumber its interest in this Lease and the leasehold estate hereby created with one or more deeds of trust, mortgages, or other lien instruments to secure any borrowings or obligations of Tenant or Tenant's affiliates. Any such mortgages, deeds of trust, and/or other lien instruments, and the indebtedness secured thereby, provided that Landlord has been given notice thereof as set forth in Section 11.2, are herein referred to as "Permitted Mortgages," and the holder or other beneficiary thereof are herein referred to as "Permitted Mortgagees." No lien of Tenant upon its interest in this Lease and the leasehold estate hereby created shall encumber or affect in any way the interest of Landlord hereunder or in and to the Leased Property, except insofar as Landlord is obligated to take certain actions as to Permitted Mortgagees as provided in this Article 11. The Improvements and the leasehold estate created hereby shall at all times remain separate and apart from the title to the Leased Property for all purposes relating to the interests of any mortgagees of Landlord and Tenant.

**Section 11.2 Mortgagee Protective Provisions.** If Tenant encumbers its interest in this Lease and the leasehold estate hereby created with liens as above provided, then Tenant shall notify Landlord thereof, providing with such notice the name and mailing address of the Permitted Mortgagee in question, Landlord shall, upon request, acknowledge receipt of such notice, and for so long as the Permitted Mortgagee in question remains in effect the following shall apply:

(a) Landlord shall give to the Permitted Mortgagee a duplicate copy of any and all notices which Landlord gives to Tenant pursuant to the terms hereof, including notices of default, and no such notice shall be effective until such duplicate copy is actually received by such Permitted Mortgagee, in the manner provided in Section 14.1.

(b) There shall be no cancellation, surrender, or modification of this Lease by joint action of Landlord and Tenant without the prior written consent of the Permitted Mortgagee.

(c) if a Default should occur hereunder, then Landlord specifically agrees that:

(1) Landlord shall not enforce or seek to enforce any of its rights, recourses, or remedies, including but not limited to termination of this Lease or Tenant's right to possession hereunder, until a notice specifying the Default and the event giving rise to such Default has been received by the Permitted Mortgagee, in the manner provided in Section 14.1, and if the Permitted Mortgagee proceeds to cure the Default within a period of 30 days after the later of receipt of such notice or the occurrence of such Default, as to events of Default which Permitted Mortgagee cannot reasonably cure within such time period, the Permitted Mortgagee, to the extent it is reasonably able to do so, commences curing such Default within such time period and thereafter diligently pursues such cure to completion, then any payments made and all things done by the Permitted Mortgagee to effect such cure shall be as fully effective to prevent the exercise of any rights, recourses, or remedies by Landlord as if done by Tenant;

(2) if the Default is a non monetary default that a Permitted Mortgagee cannot reasonably cure without being in possession of the Leased Property, then for so long as the Permitted Mortgagee is diligently attempting to secure possession of the Leased Property (whether by foreclosure or other procedures), provided the Permitted Mortgagee cures any monetary Defaults as well as any other Defaults that are reasonably susceptible of then being

cured by the Permitted Mortgagee, then Landlord shall allow the Permitted Mortgagee such time as may be reasonably necessary under the circumstances to obtain possession of the Leased Property in order to cure such Default, and during such time Landlord shall not enforce or seek to enforce any of its rights, remedies or recourses hereunder; and

(3) if the Default is a non monetary default of such a nature that it is not reasonably susceptible of being cured by the Permitted Mortgagee, then Landlord shall not enforce or seek to enforce any of its rights, remedies, or recourses hereunder so long as Permitted Mortgagee pays all Rent then due and thereafter keeps the monetary obligations of Tenant hereunder current and complies with those other provisions of this Lease which, by their nature, Permitted Mortgagee may then reasonably comply with.

(d) Should the Lease be terminated for any reason other than expiration of the stated Term, then the Permitted Mortgagee shall have the right and option, exercisable by delivering notice to Landlord accompanied by the payment of the amount of any default in Base Rent, Additional Rent and applicable taxes due from Tenant hereunder then existing, not later than 60 days after receipt from Landlord of written notice of such termination (which notice Landlord agrees to give) to elect to receive, in its own name or in the name of its nominee or assignee, a new lease of the Leased Property for the unexpired balance of the Term on the same terms and conditions as herein set forth, having the same priority as this Lease, and Landlord agrees to execute such new lease provided such Permitted Mortgagee shall undertake forthwith to remedy any then uncured Default reasonably susceptible by its nature of being remedied by such Permitted Mortgagee, including the payment of any amount due hereunder.

(e) No Permitted Mortgagee shall be or become liable to Landlord as an assignee of this Lease until such time as such Permitted Mortgagee, by foreclosure or other procedures, shall either acquire the rights and interests of Tenant under this Lease or shall actually take possession of the Leased Property, and upon such Permitted Mortgagee's assigning such rights and interests to another party or upon relinquishment of such possession, as the case may be, such Permitted Mortgagee shall have no further such liability.

(f) From time to time during the Term, Landlord shall, within ten (10) business days after receipt, execute and deliver to a Permitted Mortgagee, or a prospective Permitted Mortgagee, any stoppel, subordination, consent, lien waiver or other commercially reasonable document requested by any Permitted Mortgagee or prospective Permitted Mortgagee.

(g) Landlord shall not encumber the Leased Property unless Landlord's mortgagee executes a non-disturbance agreement recognizing the rights of Tenant and of Tenant's Permitted Mortgagees under this Lease, such non-disturbance agreement to be commercially reasonable and customary (in terms of form and content) and approved by any Permitted Mortgagees. Tenant agrees to execute an attornment agreement in favor of such lender in commercially reasonable and customary form and content.

**Section 11.3 Modifications.** If any prospective Permitted Mortgagee requires modifications to this Lease as a condition to granting a Permitted Mortgage, Landlord shall not unreasonably withhold its consent to such modifications, provided that Landlord shall not be required to consent to any such modification pertaining to Rent, the Term, or any other material economic provision of this Lease, nor to any modification which would materially decrease Landlord's rights or increase its burdens or obligations hereunder. Any out of pocket cost incurred by Landlord in connection with any such proposed modification shall be borne by Tenant.

**ARTICLE XII**  
**WARRANTY OF PEACEFUL POSSESSION**

Landlord covenants that Tenant shall and may peaceably and quietly have, use, and enjoy the Leased Property during the Term, and may exercise all of its rights hereunder, subject only to the provisions of this Lease and applicable governmental laws, rules, and regulations; and Landlord agrees to warrant and forever defend Tenant's right to such occupancy, use, and enjoyment and the title to the Leased Property against the claims of any and all persons whomsoever lawfully claim the same, or any part thereof, by, through or under Landlord, but not otherwise, subject only to provisions of this Lease and all applicable governmental laws, rules, and regulations.

**ARTICLE XIII**  
**DEFAULT AND REMEDIES**

**Section 13.1 Default.** Each of the following shall be deemed a "Default" by Tenant hereunder and a material breach of this Lease:

(a) Whenever Tenant shall fail to pay any installment of Rent or any other sum payable by Tenant to Landlord or any third party under this Lease on the date upon which the same is due to be paid, and such default shall continue for fifteen (15) days after Tenant shall have received a written notice specifying such default; or

(b) Whenever Tenant shall fail to keep or perform any of the covenants or terms contained in this Lease that are to be kept or performed by Tenant other than with respect to payment of Rent or other liquidated sums of money, and Tenant shall fail to commence such steps as are necessary to remedy the same within sixty (60) days (or longer if the default cannot reasonably be cured in such period of time and Tenant uses reasonable efforts to complete such cure) after Tenant shall have received written notice specifying the same, *provided, however, that* as to any default that Tenant cannot reasonably cure with reasonable diligence within such period, Tenant shall not be in Default for so long as Tenant proceeds in a commercially reasonable manner to remedy the same;

**Section 13.2 Remedies.** If a Default occurs, then subject to the rights of any Permitted Mortgagee as provided in Article XI Landlord may at any time thereafter prior to the curing thereof pursue any rights and remedies available to Landlord hereunder, at law, in equity or otherwise. Without limiting the foregoing, Landlord shall, without prejudice to any other rights, which it has pursuant to this Lease, at law, in equity or otherwise, have the following rights and remedies, which are cumulative and not alternative:

(a) Landlord may do nothing, and hold Tenant liable for any sums as they become due under the Lease;

(b) Landlord may elect to terminate this Lease by notice to Tenant and retake possession of the Leased Property and recover any unpaid sums due hereunder, including all sums due or that may become due until such time as Tenant removes Tenant's Improvements, fixtures and other property from the Landlord Property;

(c) Retake possession of the Leased Property for Tenant's account, holding Tenant liable for any difference in rent stipulated to be paid under this Lease and the amount of rent Landlord is able to recover when re-letting to a third party, and have this Lease remain in full force and effect, whereupon Landlord may make or remove Improvements, fixtures and personal property at the expense and for the account of Tenant, and incur reasonable re-letting expenses for the account of Tenant, in

which case Tenant's liability under all of the provisions of this Lease shall continue notwithstanding any such default, including to the extent legally possible, payment of all Rent and other sums due for the remainder of the Term;

(d) Landlord may enter the Leased Property as agent of the Tenant to take possession of any property of the Tenant on the Leased Property, to store such property at the expense and risk of the Tenant or to sell or otherwise dispose of such property in such manner as the Landlord may see fit without notice to the Tenant. Re-entry and removal may be effected by summary dispossess proceedings, by any suitable action or proceeding, or otherwise. Landlord shall not be liable in any way in connection with its actions pursuant to this Section, to the extent that its actions are in accordance with law;

(e) Landlord may re-let all or any part of the Leased Property for all or any part of the unexpired portion of the Term of this Lease or for any longer period, and may accept any Rent then attainable; grant any concessions of Rent, and agree, at Tenant's expense, to improve or make any special repairs, alterations, and decorations for any new Tenant as it may deem advisable in its sole and absolute discretion; or

(f) Landlord may, without notice to Tenant, and at Tenant's sole expense, remedy or attempt to remedy any Default of the Tenant under this Lease for the account of the Tenant and enter upon the Leased Property for such purposes. The Landlord shall not be liable to the Tenant for any loss or damage caused by acts of the Landlord in remedying or attempting to remedy such Default. Any expenses incurred by Landlord shall accrue interest from the date of payment by Landlord until repaid by Tenant at the highest rate permitted by law.

(g) If neither Tenant nor the Lender to whom notice is given under Section 11.2 has cured the default within the time period specified under such Section, Landlord may accelerate and declare due and payable all rent and other sums due within the succeeding 24 months.

Upon the occurrence of a default by Tenant, Tenant shall be responsible for all reasonable costs and expenses of Landlord in seeking a remedy for the default, including reasonable attorneys' fees. Any sums not paid by Tenant when due hereunder shall, after 30 days, bear interest at 12% simple interest per annum. For the avoidance of doubt, any recovery of damages by, or payment of damages to, Landlord due to a Default is subject to Landlord acting in good faith and reasonably to mitigate and avoid its damages, provided that Landlord shall not be obligated to mitigate damages unless and until Tenant has removed its property and Improvements from the Leased Premises or has deposited with Landlord a sufficient sum for that purpose. Any determination or calculation of future damages (including, but not limited to, payment of Rent or Base Rent and except for any sums due within the next 24 months) shall be its worth at time of award or payment (using the then-prevailing discount factor of not less than 4% or more than 8%).

#### **ARTICLE XIV** **MISCELLANEOUS**

**Section 14.1 Notices.** All written notices and demands of any kind which either Party may be required or may desire to serve upon the other Party in connection with this Agreement may be served by (a) personal service, (b) registered or certified mail (postage pre-paid), (c) facsimile transmission (followed by next day overnight delivery service) or (d) next day overnight delivery service. Any such notice or demand shall be addressed to the parties as listed in this Section 14.1 Service of any such notice or demand shall be deemed complete (i) upon receipt in the event of personal service or if sent via registered or certified mail, (iii) upon transmission with a printed receipt from the transmitting

facsimile machine in the event sent via facsimile transmission and (iii) on the next business day if sent via an overnight delivery service, if sent to each Party at the address set forth below with the required proper postage:

**To Landlord:** Piedmont Farms, Inc.  
Attn: William A. McArthur  
569 Edgewood Avenue South  
Jacksonville, FL 32205  
Telephone: (904) 388-3561  
Facsimile: (904) 388-5323  
Email: SMcArthur@ngwic.com

**With a copy to:** John T. Sefton  
Sheftall & Associates, P.A.  
Suite 3201  
1 Independent Drive  
Jacksonville, FL 32202-5026  
Telephone (904) 647-2297  
Facsimile: (904) 3789-6871;  
e-mail: sefton@SheftallLaw.com

**To Tenant:** Duke Energy Florida, LLC  
Attn: Lease Administration  
550 S. Tryon Street, DEC22A  
Charlotte, NC 28202

**With a copy to:** Duke Energy Florida, LLC  
Attn: Christopher King  
550 S. Tryon Street, DEC45A  
Charlotte, NC 28202

Any Party, by written notice to the others in the manner herein provided, may designate an address different from that set forth above. Notices required pursuant to the terms of this Agreement shall be delivered prior to 5 p.m. on the date such notice is due.

**Section 14.2 Modification and Non Waiver.** No variations, modifications, or changes herein or hereof shall be binding upon any Party unless set forth in a writing executed by it or by a duly authorized officer or agent. No waiver by either Party of any breach or default of any term or provision hereof shall be deemed a waiver of any other or subsequent breaches or defaults. No waiver of any breach or default of any term or provision hereof shall be implied from any action of any Party, and any such waiver, to be effective, shall be set out in a written instrument signed by the waiving Party.

**Section 14.3 Governing Law.** This Lease shall be construed and enforced in accordance with the laws of the State of Florida.

**Section 14.4 Number and Gender; Captions; References.** Pronouns, wherever used herein, and of whatever gender, shall include natural persons and corporations and associations of every kind and character, and the singular shall include the plural wherever and as often as may be appropriate.

Article and Section headings in this Lease are for convenience of reference and shall not affect the construction or interpretation of this Lease. Whenever the terms "hereof," "hereby," "herein," or words of similar import are used in this Lease they shall be construed as referring to this Lease in its entirety rather than to a particular Section or provision, unless the context specifically indicates to the contrary. Any reference to a particular "Article" or "Section" shall be construed as referring to the indicated Article or Section of this Lease.

**Section 14.5 Estoppel Certificate.** Landlord and Tenant shall execute and deliver to each other, within 10 business days after request therefor from time to time by the other Party, or by any Permitted Mortgagee, a certificate addressed as indicated by the requesting Party and stating:

- (a) whether or not this Lease is in full force and effect;
- (b) whether or not this Lease has been modified or amended in any respect, and submitting copies of such modifications or amendments;
- (c) whether or not there are any existing defaults hereunder known to the Party executing the certificate, and specifying the nature thereof;
- (d) whether or not any particular Article, Section, or provision of this Lease has been complied with; and
- (e) such other matters as may be reasonably requested.

In the event that the Party to whom such a certificate is requested fails to execute and deliver such estoppel certificate as and when required, then all matters in the requested certificate shall be irrefutably deemed true and correct. In the event that the requested party has its legal counsel comply with this request then the requesting party shall pay any reasonable legal fees for this service.

**Section 14.6 Severability.** If any provision of this Lease or the application thereof to any person or circumstance shall, at any time or to any extent, be invalid or unenforceable, and the basis of the transaction between the Parties is not rendered ineffective thereby, the remainder of this Lease shall not be affected thereby.

**Section 14.7 Attorney Fees.** If litigation is ever instituted by either Party hereto to enforce, interpret, or to seek damages for the breach of, any provision hereof, the prevailing Party therein shall be promptly reimbursed by the other Party for all attorneys' fees and expenses reasonably incurred by the prevailing party in connection with such litigation.

**Section 14.8 Surrender of Leased Property; Holding Over.** Upon termination or the expiration of this Lease, Tenant shall peaceably quit, deliver up, and surrender the Leased Property and, subject to the provisions of this Agreement, the Improvements that are then located on the Leased Property. Except if Tenant is continuing removal of the Improvements as provided in Section 5.5, if Tenant does not surrender possession of the Leased Property at the end of the Term, such action shall not extend the Term, Tenant shall be a tenant at sufferance, and during such time of occupancy Tenant shall pay to Landlord, as damages, an amount equal to 200% the amount of Base Rent that was being paid immediately prior to the end of the Term, prorated on a daily basis. Landlord shall not be deemed to have accepted a surrender of the Leased Property by Tenant, or to have extended the Term, other than by execution of a written agreement specifically so stating.



**Section 14.9 Force Majeure.** As used herein "Force Majeure" means the occurrence of any event (including, but not limited to, any aircraft accidents on or near the Leased Premises or any restriction by a Governmental Authority with restricts Tenant's use of the Leased Premises) which prevents or delays the performance by Landlord or Tenant of any obligation imposed upon it hereunder (other than payment of Rent) and the prevention or cessation of which event is beyond the reasonable control of the obligor. If Tenant shall be delayed, hindered, or prevented from performance of any of its obligations (other than to pay Rent) by reason of Force Majeure (and Tenant shall not otherwise be in default hereunder) the time for performance of such obligation shall be extended for the period of such delay, provided that the following requirements are complied with by Tenant:

(a) Tenant shall give prompt written notice of such occurrence to Landlord, and

(b) Tenant shall diligently attempt to remove, resolve, or otherwise eliminate such event, keep Landlord advised with respect thereto, and shall commence performance of its obligations hereunder immediately upon such removal, resolution, or elimination. Anything contained in or inferable from this Lease to the contrary notwithstanding, Tenant shall not be relieved by any event of Force Majeure from Tenant's obligations to pay Rent hereunder, nor shall the Term be extended thereby.

**Section 14.10 Non Merger.** Notwithstanding the fact that fee title to the Leased Property and to the leasehold estate hereby created may, at any time, be held by the same Party, there shall be no merger of the leasehold estate hereby created unless the owner thereof executes and files for record in the land records for the county in which the Leased Property is located a document expressly providing for the merger of such estates.

**Section 14.11 Relation of Parties.** It is the intention of Landlord and Tenant to hereby create the relationship of landlord and tenant, and no other relationship whatsoever is hereby created. Nothing in this Lease shall be construed to make Landlord and Tenant partners or joint venturers or to render either Party hereto liable for any obligation of the other Party.

**Section 14.12 Entireties.** This Lease, together with the Option Agreement, constitutes the entire agreement of the Parties with respect to its subject matter, and all prior agreements (whether written or oral) with respect thereto are merged herein. Any agreements entered into between Landlord and Tenant of even date herewith are not, however, merged herein.

**Section 14.13 Consents and Approvals.** If and to the extent the consent or approval of any of the Parties is required under this Agreement or applicable law, Landlord and Tenant agree that such consent shall not be unreasonably withheld, conditioned or delayed.

**Section 14.14 Recordation.** Landlord and Tenant will, at the request of the other, promptly execute an instrument in the form attached hereto as Exhibit D (the "Memorandum of Lease"), which Tenant may cause to be filed for record in the land records for the county in which the Leased Property is located, or at the request of either Party this Lease shall be so filed for record. Upon Termination of this Lease, Tenant shall promptly record in the public records of Gilchrist County, Florida a statement that the Lease has been terminated.

**Section 14.15 Successors and Assigns.** This Lease shall constitute a real right and covenant running with the Leased Property, and, subject to the provisions hereof pertaining to Tenant's rights to assign, sublet, or encumber, this Lease shall be binding upon and inure to the benefit of the

Parties and their respective successors and assigns. Whenever a reference is made herein to either Party, such reference shall include the party's successors and permitted assigns.

**Section 14.16 Performance of Landlord's Obligations.** If Landlord fails to perform or observe any of its covenants, agreements, or obligations hereunder for a period of thirty (30) days after notice of such failure is given by Tenant, then Tenant may, at its sole election (but not as its exclusive remedy), (i) perform or observe the covenants, agreements, or obligations which are asserted to have not been performed or observed at the expense of Landlord and to recover from Landlord (or offset against amounts owing to Landlord under this Lease) all reasonable costs or expenses incurred in connection therewith, (ii) bring and maintain a suit for specific performance against Landlord, and/or (iii) pursue such other rights as may be available to Tenant at law, in equity or otherwise.

**Section 14.17 No Third Parties Benefited.** Except as herein specifically and expressly otherwise provided with regard to notices, opportunities to cure defaults, right to execute a new lease, and certain other enumerated rights granted to Permitted Mortgagees, the terms and provisions of this Lease are for the sole benefit of Landlord and Tenant, and no third party whatsoever, is intended to benefit herefrom.

**Section 14.18 Survival.** Any terms and provisions of this Lease pertaining to rights, duties, or liabilities extending beyond the expiration or termination of this Lease shall survive the end of the Term.

**Section 14.19 Transfer of Landlord's Interest; Landlord's Liability.** Landlord may freely transfer and/or mortgage its interest in the Leased Property and under this Lease from time to time and at any time, provided that any such transfer or mortgage is expressly made subject to the terms, provisions, and conditions of this Lease, and the transferee or mortgagee agrees to be bound by the provisions hereof (in the case of a mortgagee, such agreement being contingent upon the mortgagee actually succeeding to the Landlord's interest in the Leased Property and hereunder by virtue of a foreclosure or conveyance in lieu thereof). Landlord's liability under this Lease is limited to Landlord's interest in the Premises.

**Section 14.20 Tax Efficiency.** The parties shall cooperate in finding a tax efficient structure for this transaction that does not materially and adversely affect the Landlord or materially enhance its obligations or diminish its rights.

## ARTICLE XV

### RIGHT OF FIRST REFUSAL [OMITTED]

*[Remainder of Page Intentionally Left Blank – Signature Page Follows]*

IN WITNESS WHEREOF, the Parties have executed this Lease as of the Reference Date and made it effective as of the Effective Date.

**LANDLORD:**

**Piedmont Farms, Inc.,**  
a Florida corporation



By: William A. McArthur III  
Its: President

**WITNESS:**

Karennee Garnett  
By: Karina Garnett

Karen Meyer  
By: Karen Meyer

**TENANT:**

**Duke Energy Florida, LLC,**  
a Florida limited liability company

\_\_\_\_\_  
By: **Karen Adams**  
Its: **Manager, Land Services - Florida Region**

**WITNESS:**

\_\_\_\_\_  
By: \_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_

IN WITNESS WHEREOF, the Parties have executed this Lease as of the Reference Date and made it effective as of the Effective Date.

**LANDLORD:**

**Piedmont Farms, Inc.,**  
a Florida corporation

By: \_\_\_\_\_  
Its: \_\_\_\_\_

**WITNESS:**

By: \_\_\_\_\_

By: \_\_\_\_\_

**TENANT:**

**Duke Energy Florida, LLC,**  
a Florida limited liability company

  
By: **Karen Adams**  
Its: **Manager, Land Services - Florida Region**

**WITNESS:**

  
By: **Bruce Todd Boyer**

  
By: **THOMAS R. HUDSON**

**EXHIBIT A**

**LANDLORD PROPERTY**

The following tax parcels in Gilchrist County, Florida:

*08-10-15-0000-0001-0000,  
09-10-15-0000-0006-0030,  
09-10-15-0000-0006-0010, and  
17-10-15-0000-0005-0000*

**EXHIBIT "B"**

**LEASED PROPERTY**

**Tract "1" is comprised of:**

*TID Nos.:*

*8-10-15-0000-0001-0000,*

*9-10-15-0000-0006-0030,*

*09-10-15-0000-0006-0010*

*(Approximately 274 acres)*

*Less and except the following (the "Excluded Lands"):*

*(a) the lands containing the barn, outbuildings, headquarters and roads (between the fences) substantially as shown on the "Excluded Lands" shown on Attachment "C-1" (being 14.8 acres) and (b) the water well and associated outbuildings and equipment located at or near the mid-point of the Westerly boundary of tract 09-10-15-0000-0006-0010 (the "Non-Contiguous Well"), being a parcel of land less than 1 acre, (c) Parcel No 09-10-15-000-0006-0010 (37.4 acres), and (d) Parcel No. 09-10-15-0000-0006-0030 (18.2 acres).*

*And reserving unto Landlord and its assigns the following easements:*

- (1) Easement for ingress, egress and utilities over road running almost due west from CR 129 to the Excluded Lands generally along the North boundary of tract 09-10-15-0000-0006-0010 and the westerly prolongation thereof (the "Farm Road");*
- (2) Easement for existing power lines serving the Non-Contiguous Well, provided that Tenant at Tenant's expense may re-locate the same.*
- (3) Easement to access the Non-Contiguous Well from the Farm Road along such route as Tenant may reasonably agree and subject to Tenant's reasonable security procedures.*
- (4) Easement for underground water pipes, controls and maintenance thereof from the Non-Contiguous Well (a) ENE to CR 129, (b) north to the Farm Road and then along the Farm Road East to CR 129 and West to the Excluded lands, and (c) adjacent running northerly and southerly along Landlord's lands adjacent to CR129. Tenant shall mark the route of such underground liens within tracts 09-10-15-0000-0006-0010 & 0030 and Landlord shall install the same within 60 days of such notification. Any ingress and egress by Landlord shall be subject to Tenant's reasonable security procedures.*

The "Excluded Lands" also includes the small (< 1 acre) inked area comprising the Contiguous Well area shown in the SW portion of Tract A (a/k/a Tract 1) and being located near the mid-point of the Westerly boundary of tract 09-10-15-0000-0006-0010.

*Total area of land is approximately 204 acres*

**Tract 3 is comprised of:**

***The following parcels of land lying, being and situate in Gilchrist County, Florida and being depicted below on the sketch attached hereto:***

***All that portion of the SE 1/4 of Section 6, Township 10 South, Range 15 East owned by Piedmont Farms, Inc. (the same being the southeastern portion of parcel 06-10-15-0000-0002-0000 (approximately 160 acres));***

***All of parcel 07-10-15-0000-0002-0000 (approximately 110 acres); and***

***All that portion of the W 1/2 of the SW 1/4 owned by Piedmont Farms, Inc. and lying west of SW 17th Court (the same being the westerly portion of tax parcel no. 05-10-15-0000-0001-0010 lying west of SW 17th Court) (approximately 70 acres) LESS AND EXCEPT all that portion of the SE 1/4 of the SW 1/4 of the SW 1/4 of Section 5, Township 10 South, Range 15 East (approximately 10 acres)***

***Total land area of approximately 340 acres***



REDACTED

**EXHIBIT C**

**RENT SCHEDULE**

Base Rent of [REDACTED] per acre per year which shall be increased at the end of each five (5) year period of the Initial Term and for each Extension based on the cumulative increase in the Consumer Price Index (CPI-U as published by the U.S. Bureau of Labor Statistics) for the preceding five years.

For Tract 1: Based on 204 acres, the initial annual Base Rent payment is [REDACTED]

For Tract 3: Based on 340 acres, the initial annual Base Rent payment is [REDACTED]

Base Rent shall be paid once per year on the Effective Date and each anniversary thereafter, during the term of this Agreement.

(The Base Rent may be adjusted due to adjustments in the Leased acreage per Sections 3.1, 5.6 (d), and 6.6)



**EXHIBIT D**

**MEMORANDUM OF LEASE**

**See Following Page**

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

---

In re: Duke Energy Florida, LLC's Petition  
for a Limited Proceeding to Approve Second  
Solar Base Rate Adjustment

---

Docket No. 20190072-EI

Filed: June 28, 2019

**DUKE ENERGY FLORIDA, LLC'S SUPPLEMENTAL RESPONSE TO STAFF'S  
THIRD REQUEST FOR PRODUCTION OF DOCUMENTS (NO. 6)**

Duke Energy Florida, LLC ("DEF"), supplements its response to the Staff of the Florida Public Service Commission's ("Staff") Third Request for Production of Documents to DEF (No. 6) as follows:

**DOCUMENTS REQUESTED**

- 6 Please provide copies of the land leases for the Trenton and Lake Placid Projects.

**Response:**

Please see the attached documents bearing bates numbers 20190072-DEF-001175 through 20190072-DEF-001197.

PREPARED BY: Christopher G. King, Counsel, Duke Energy  
Mail To: Duke Energy Carolinas, LLC  
550 South Tryon Street, DEC 22A  
Charlotte, North Carolina 28202

Site: 108116  
Land Unit: 1710417  
Project No.: 108116-461394

**STATE OF FLORIDA**

**MEMORANDUM OF LEASE**

**COUNTY OF HIGHLANDS**

KNOW ALL MEN BY THESE PRESENTS, that for and in consideration of the rents and covenants set forth in a certain Ground Lease Agreement (the "Lease"), pursuant to certain Assignment and Assumption of Option Agreement to Lease Real Property, a memorandum of which was recorded in the Official Records of Highlands County, Florida on March 8, 2019 as Book 2681, page 802, by and between COW SLOUGH INC., a Florida corporation, ("Lessor"), and DUKE ENERGY FLORIDA, LLC, a Florida limited liability company d/b/a Duke Energy ("Lessee"). Lessor has leased to Lessee that property located in Highlands County, Florida, more particularly described as follows:

Those certain real properties identified on Exhibit A, attached hereto and incorporated herein by reference (the "Premises").

**TOGETHER WITH:** the right at all times to enter upon said Premises from the nearest public road or highway for the purpose of constructing, operating, inspecting and maintaining a Solar Generating Facility during the term of this Lease including the right to clear and/or trim trees and clear structures and other objects of any kind which might in any way endanger or interfere with the proper construction, maintenance and operation of said Solar Generating Facility.

This Lease shall take effect on May 1, 2019 (the "Effective Date") and continue for a period not to exceed forty (40) years including the Construction Period and any of the optional Renewal Terms.

The provisions set forth in the Lease are hereby incorporated in this Memorandum as though stated herein.

**[SIGNATURES BEGIN ON FOLLOWING PAGE]**

IN WITNESS WHEREOF, the parties hereto have duly executed this Memorandum of Lease by authority duly given, as of the day and year first above written. The signatures listed below do hereby confirm the substance and content of the original Memorandum of Lease between Cow Slough, Inc. and Duke Energy Florida, LLC, recorded on April 9, 2019, in Official Records Book 2686, Page 1403, and is being re-executed the same to cure the lack of witnesses.

LANDLORD:

COW SLOUGH INC.,  
a Florida limited liability company

Witnesses:

W.K. Thompson  
Name: William K. Thompson  
Sarah E. Monetto  
Name: Sarah E. Monetto

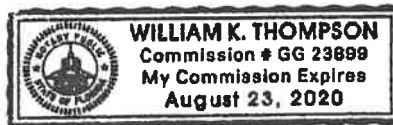
By: John F. Smoak, III  
Name: John F. Smoak, III  
Title: President

STATE OF FLORIDA  
COUNTY OF HERNANDO

The foregoing instrument was acknowledged before me this 18<sup>th</sup> day April, 2019 by John F. Smoak, III, a President of COW SLOUGH INC., a Florida corporation, on behalf of said company. He is personally known to me or has produced \_\_\_\_\_ as identification.

(Affix Seal)

W.K. Thompson  
Print Name: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_



IN WITNESS WHEREOF, the parties hereto have duly executed this Memorandum of Lease by authority duly given, as of the day and year first above written. The signatures listed below do hereby confirm the substance and content of the original Memorandum of Lease between Cow Slough, Inc. and Duke Energy Florida, LLC, recorded on April 9, 2019, in Official Records Book 2686, Page 1403, and is being re-executed the same to cure the lack of witnesses.

TENANT:

DUKE ENERGY FLORIDA, LLC, a Florida limited liability company d/b/a Duke Energy

By: Karen Adams

Name: Karen Adams  
Title: Manager, Land Services – Florida Region

APPROVED  
By Chris King at 8:47 am, Apr 17, 2019

Witnesses:

[Signature]  
Name: Sam Evans

[Signature]  
Name: Tom Hudson

STATE OF FLORIDA  
COUNTY OF Seminole

The foregoing instrument was acknowledged before me this 17<sup>th</sup> day April, 2019 by Karen Adams as Manager, Land Services – Florida Region of **DUKE ENERGY FLORIDA, LLC**, a Florida limited liability d/b/a Duke Energy, on behalf of said company. She is personally known to me or has produced \_\_\_\_\_ as identification.

(Affix Seal)

[Signature]  
Print Name: Sam L. Evans, Jr  
My Commission Expires: \_\_\_\_\_

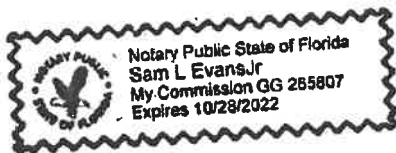


Exhibit A  
(Description of the Land)

Attached.

**THIS IS NOT A SURVEY**

**LEGAL DESCRIPTION:**

*Lease Parcel 1*

A part of the east 1/2 of Section 24, Township 36 South, Range 29 East, Highlands County, Florida. Being more particularly described as follows:  
 Commence at the southeast corner of Section 24, Township 36 South, Range 29 East, Highlands County, Florida; thence North 89°48'19" West, along the south line of said Section 24, a distance of 25.01 feet to the west right-of-way line of St. John Street, a 50 foot wide right-of-way, and the Point-of-Beginning; thence continue North 89°48'19" West, along the south line of said Section 24, a distance of 2141.69 feet to the east right-of-way line of U.S. Highway 27 as shown on FDOT R/W Map Section 09010-2501; thence North 51°51'43" West, along said right-of-way line, a distance of 109.51 feet; thence North 38°08'17" East, along said right-of-way line, a distance of 30.00 feet; thence North 51°51'43" West, along said right-of-way line, a distance of 527.02 feet; thence, leaving said right-of-way line, North 01°33'15" West, along the west line of the southeast 1/4 of said Section 24, a distance of 2252.56 feet to the center of said Section 24; thence South 89°51'02" East, along the north line of the southeast 1/4 of said Section 24, a distance of 420.20 feet; thence North 01°33'15" West a distance of 596.99 feet; thence South 89°51'40" East a distance of 925.50 feet; thence North 01°28'47" West a distance of 436.66 feet; thence South 89°52'17" East a distance of 1281.25 feet to the west right-of-way line of St. John Street, a 50 foot wide right-of-way; thence South 01°24'20" East, along said west right-of-way line, a distance of 1034.88 feet; thence South 01°16'56" East, along said west right-of-way line, a distance of 1334.72 feet; thence South 01°17'44" East a distance of 1334.16 feet to the Point-of-Beginning.

Containing 201.04 acres.

**SURVEYOR'S NOTES:**

- 1.) North and the bearings shown hereon are referenced to the West Zone of the Florida State Plane Coordinate System, NAD 83, 2011 adjustment. All measurements are in U.S. Survey Feet.
- 2.) The basis of all bearings shown hereon is referenced to the grid bearing of North 89°48'19" West along the south boundary of Section 24, Township 36 South, Range 29 East, Highlands County, Florida.



Digitally signed by  
 Gregory A Prather  
 Date: 2019.02.26  
 13:33:39 -05'00'

GREGORY A. PRATHER, P.S.M. - FL. REGISTRATION No. 5135  
 PICKETT & ASSOCIATES, INC. - FL. REGISTRATION No. LB 364

DATE

**SHEET 1 OF 6**

**DESCRIPTION SKETCH**  
 IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,  
 & SECTION 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
 HIGHLANDS COUNTY, FL  
 PREPARED FOR: ECT



**PICKETT**  
 SURVEYING • ENGINEERING

PICKETT AND ASSOCIATES, INC.  
 478 SOUTH FIRST AVENUE BARTON,  
 FLORIDA 32830  
 PHONE: (863)-833-9885  
 FAX: (863)-834-1484  
 LICENSED BUSINESS No. LB364

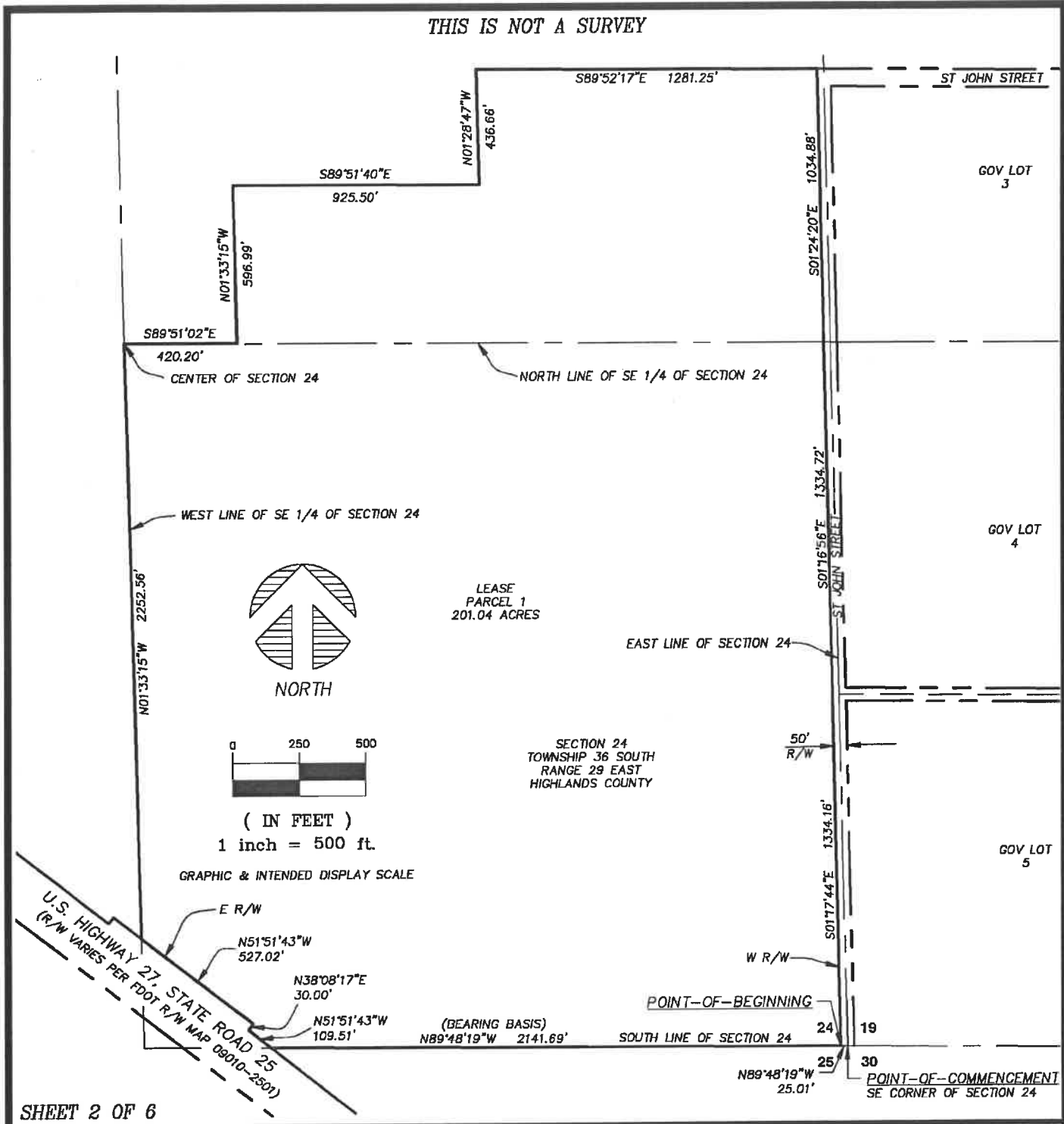
Project No.:	18775	No.		Date		Approved		REVISION	
Horiz. Scale:	N/A	O.R.	2/22/19	GAP	Original Release				
DWG. Name:	18775_Ease_01	1	2/26/19	GAP	Revised Legal description				
Drawn By:	ND								
Field Bk / Pg.:	N/A								
Drawing No.:	SD 5128								

NOT VALID WITHOUT  
 THE SIGNATURE AND  
 THE ORIGINAL RAISED  
 SEAL OF A FLORIDA  
 LICENSED SURVEYOR  
 AND MAPPER.

20190072-DEF-001179

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D  
A  
3

THIS IS NOT A SURVEY



SHEET 2 OF 6

DESCRIPTION SKETCH

IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,  
& SECTION 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
HIGHLANDS COUNTY, FL  
PREPARED FOR: ECT



**PICKETT**  
SURVEYING • ENGINEERING

PICKETT AND ASSOCIATES, INC.  
476 SOUTH FIRST AVENUE BARTON  
FLORIDA 32830  
PHONE: (863)-533-9095  
FAX: (863)-534-1464  
LICENSED BUSINESS No. 18384

Project No.:	18775	No.	Date	Approved	REVISION
Horiz. Scale:	1" = 500'	O.R.	2/22/19	GAP	Original Release
DWG. Name:	18775_Ease_01	1	2/26/19	GAP	Added clarifying text
Drawn By:	ND				
Field Bk / Pg.:	N/A				
Drawing No.:	SD 5128				

SEE SHEET 1 FOR  
THE SIGNATURE AND  
THE ORIGINAL RAISED  
SEAL OF A FLORIDA  
LICENSED SURVEYOR  
AND MAPPER.

20190072-DEF-001180



**THIS IS NOT A SURVEY**

**LEGAL DESCRIPTION:**

*Lease Parcel 2*


A part of the west 1/2 of Section 19, Township 36 South, Range 30 East, Highlands County, Florida. Being more particularly described as follows:  
 Commence at the southwest corner of Section 19, Township 36 South, Range 30 East, Highlands County, Florida; thence South 89°24'36"East, along the south line of said Section 19, a distance of 25.01 feet to the east right-of-way line of St. John Street, a 50 foot wide right-of-way; thence North 01°17'44"West, along said east right-of-way line, a distance of 1309.81 feet to the south right-of-way line of Walker Road, a 50 foot wide right-of-way, thence North 01°17'21"West a distance of 50.02 feet to the north right-of-way line of said Walker Road and the Point-of-Beginning; thence North 01°16'56"West, along said east right-of-way line, a distance of 1310.56 feet; thence North 01°24'20"West, along said east right-of-way line, a distance of 967.26 feet to the south right-of-way line of St. John Street, a 66 foot wide right-of-way; thence South 89°32'30"East, along said south right-of-way, a distance of 1339.54 feet to the east right-of-way line of St. John Street, a 66 foot wide right-of-way; thence North 02°07'14"West, along said east right-of-way line, a distance of 1063.76 feet; thence South 89°37'52" East a distance of 1286.95 feet to the east line of the west 1/2 of said Section 19; thence South 02°06'34" East a distance of 1312.42 feet to the north right-of-way line of said Walker Road; thence North 88°10'02"West, along said north right-of-way line, a distance of 25.06 feet to the west right-of-way line of said Walker Road; thence South 02°06'34"East, along said west right-of-way line, a distance of 726.04 feet; thence South 02°07'59"East, along said west right-of-way line, a distance of 1311.21 feet to the north right-of-way line of said Walker Road; thence North 89°26'55"West, along said north right-of-way line, a distance of 2632.92 feet to the Point-of-Beginning.

Containing 168.44 acres.

**SURVEYOR'S NOTES:**

- 1.) North and the bearings shown hereon are referenced to the West Zone of the Florida State Plane Coordinate System, NAD 83, 2011 adjustment. All measurements are in U.S. Survey Feet.
- 2.) The basis of all bearings shown hereon is referenced to the grid bearing of South 89°24'36" East along the south boundary of Section 19, Township 36 South, Range 30 East, Highlands County, Florida.

**SHEET 3 OF 6**

<p><b>DESCRIPTION SKETCH</b>                  IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,                  &amp; SECTION 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,                  HIGHLANDS COUNTY, FL                  PREPARED FOR: ECT</p>					 <p><b>PICKETT</b>                  SURVEYING • ENGINEERING</p>	PICKETT AND ASSOCIATES, INC. 476 SOUTH FIRST AVENUE BARTOW, FLORIDA 33530 PHONE: (863)-833-9005 FAX: (863)-834-1484 LICENSED BUSINESS NO. LB364
Project No.:	18775	No.	Date	Approved	REVISION	
Horiz. Scale:	N/A	O.R.	2/22/19	GAP	Original Release	
DWG. Name:	18775_Ease_01	1	2/26/19	GAP	Revised Legal description	
Drawn By:	ND					
Field Bk / Pg.:	N/A					
Drawing No.:	SD 5128					

SEE SHEET 1 FOR THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

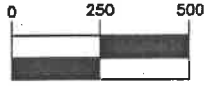
20190072-DEF-001181

D D A 3

THIS IS NOT A SURVEY



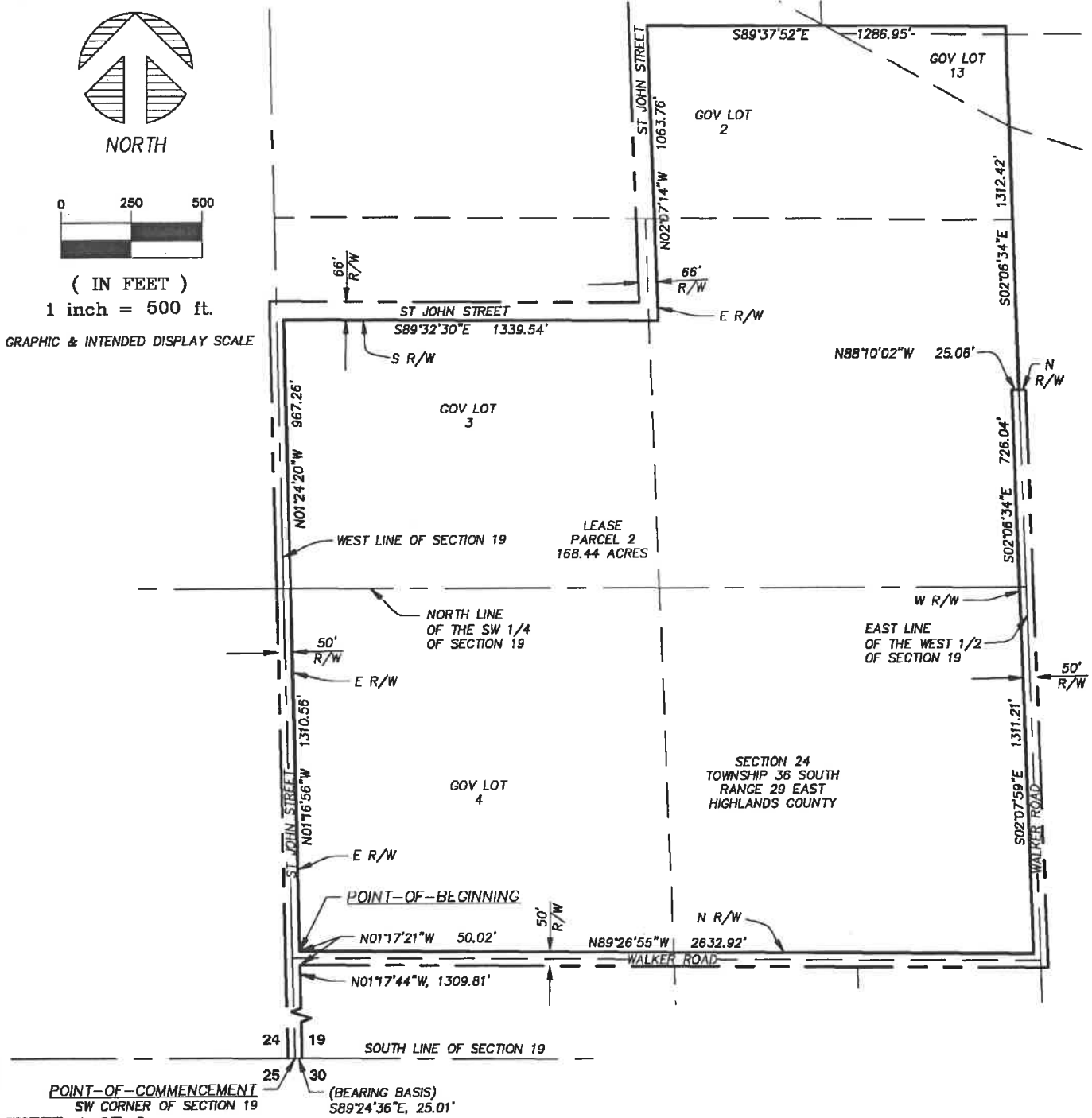
NORTH



( IN FEET )

1 inch = 500 ft.

GRAPHIC & INTENDED DISPLAY SCALE



SHEET 4 OF 6

**DESCRIPTION SKETCH**  
 IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,  
 & SECTION 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
 HIGHLANDS COUNTY, FL  
 PREPARED FOR: ECT



**PICKETT**  
 SURVEYING • ENGINEERING

PICKETT AND ASSOCIATES, INC.  
 476 SOUTH FIRST AVENUE BARTON,  
 FLORIDA 33830  
 PHONE: (883)-633-0265  
 FAX: (883)-634-1444  
 LICENSED BUSINESS No. LB384

Project No.:	18775	No.	Date	Approved	REVISION
Horiz. Scale:	1" = 500'	O.R.	2/22/19	GAP	Original Release
DWG. Name:	18775_Ease_01	1	2/26/19	GAP	Added clarifying text
Drawn By:	ND				
Field Bk / Pg.:	N/A				
Drawing No.:	SD 5128				

SEE SHEET 1 FOR THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

20190072-DEF-001182

PREPARED BY: Christopher G. King, Counsel, Duke Energy  
Mail To: Duke Energy Carolinas, LLC  
550 South Tryon Street, DEC 22A  
Charlotte, North Carolina 28202

Site: 108116  
Land Unit: 1710412  
Project No.: 108116-461393

**STATE OF FLORIDA**

**MEMORANDUM OF LEASE**

**COUNTY OF HIGHLANDS**

KNOW ALL MEN BY THESE PRESENTS, that for and in consideration of the rents and covenants set forth in a certain Ground Lease Agreement (the "Lease"), pursuant to certain Assignment and Assumption of Option Agreement to Lease Real Property, a memorandum of which was recorded in the Official Records of Highlands County, Florida on March 8, 2019 as Book 2681, page 809, by and between PRICE GROVES, LLC, a Florida limited liability company, ("Lessor"), and DUKE ENERGY FLORIDA, LLC, a Florida limited liability company d/b/a Duke Energy ("Lessee"). Lessor has leased to Lessee that property located in Highlands County, Florida, more particularly described as follows:

Those certain real properties identified on Exhibit A, attached hereto and incorporated herein by reference (the "Premises").

**TOGETHER WITH:** the right at all times to enter upon said Premises from the nearest public road or highway for the purpose of constructing, operating, inspecting and maintaining a Solar Generating Facility during the term of this Lease including the right to clear and/or trim trees and clear structures and other objects of any kind which might in any way endanger or interfere with the proper construction, maintenance and operation of said Solar Generating Facility.

This Lease shall take effect on May 1, 2019 (the "Effective Date") and continue for a period not to exceed forty (40) years including the Construction Period and any of the optional Renewal Terms.

The provisions set forth in the Lease are hereby incorporated in this Memorandum as though stated herein.

**[SIGNATURES BEGIN ON FOLLOWING PAGE]**

IN WITNESS WHEREOF, the parties hereto have duly executed this Memorandum of Lease by authority duly given, as of the day and year first above written. The signatures listed below do hereby confirm the substance and content of the original Memorandum of Lease between Price Groves, LLC and Duke Energy Florida, LLC, recorded on April 9, 2019, in Official Records Book 2686, Page 1347, and is being re-executed the same to cure the lack of witnesses.

LANDLORD:

PRICE GROVES, LLC,  
a Florida limited liability company

Witnesses:

W.K. Thompson  
Name: WILLIAM K. THOMPSON  
Sarah E. Moretto  
Name: Sarah E. Moretto

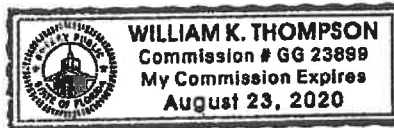
By: Bryan J. Price  
Name: Bryan J. Price  
Title: Managing Member

STATE OF FLORIDA  
COUNTY OF HOLMES

The foregoing instrument was acknowledged before me this 17<sup>th</sup> day April, 2019 by Bryan J. Price, a Managing Member of PRICE GROVES, LLC, a Florida limited liability company, on behalf of said company. He is personally known to me or has produced \_\_\_\_\_ as identification.

(Affix Seal)

W.K. Thompson  
Print Name: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_



IN WITNESS WHEREOF, the parties hereto have duly executed this Memorandum of Lease by authority duly given, as of the day and year first above written. The signatures listed below do hereby confirm the substance and content of the original Memorandum of Lease between Price Groves, LLC and Duke Energy Florida, LLC, recorded on April 9, 2019, in Official Records Book 2686, Page 1347, and is being re-executed the same to cure the lack of witnesses.

TENANT:

DUKE ENERGY FLORIDA, LLC, a Florida limited liability company d/b/a Duke Energy

By: Karen Adams

Name: Karen Adams  
Title: Manager, Land Services – Florida Region

Witnesses:

Sam Evans  
Name: Sam Evans

DM Hudson  
Name: DM Hudson

APPROVED  
By Chris King at 8:46 am, Apr 17, 2018

STATE OF FLORIDA  
COUNTY OF Seminole

The foregoing instrument was acknowledged before me this 17<sup>th</sup> day April, 2019 by Karen Adams as Manager, Land Services – Florida Region of **DUKE ENERGY FLORIDA, LLC**, a Florida limited liability d/b/a Duke Energy, on behalf of said company. She is personally known to me or has produced \_\_\_\_\_ as identification.

(Affix Seal)

Sam L. Evans, Jr  
Print Name: Sam L. Evans, Jr  
My Commission Expires: \_\_\_\_\_



**Exhibit A**  
**(Description of the Land)**

Attached.

**THIS IS NOT A SURVEY**

**LEGAL DESCRIPTION:**

*Lease Parcel 3*

*A part of the northwest 1/4 of the southeast 1/4 of the southwest 1/4 of Section 19, Township 36 South, Range 30 East, Highlands County, Florida. Being more particularly described as follows:*


*Commence at the southwest corner of Section 19, Township 36 South, Range 30 East, Highlands County, Florida; thence South 89°24'36" East, along the south line of said Section 19, a distance of 2042.73 feet to the east line of the southwest 1/4 of the southeast 1/4 of the southwest 1/4 of said Section 19 and the east line of the lands of Price Groves, LLC. as recorded in Official records Book 2265, page 678, of the public records of Highlands County, Florida; thence North 02°07'35" West, along said east line of the southwest 1/4 of the southeast 1/4 of the southwest 1/4 and said lands of Price Groves, LLC., a distance of 668.47 feet to the northeast corner of the southwest 1/4 of the southeast 1/4 of the southwest 1/4 of said Section 19; thence, North 00°17'16" East, along the east line of said lands of Price Groves, LLC., a distance of 50.00 feet to the Point-of-Beginning; thence North 89°25'45" West a distance of 660.93 feet to the west line of said lands of Price Groves, LLC.; thence North 00°33'58" West, along said west line, a distance of 592.63 feet to the south right-of-way line of Walker Road, a 50 foot wide right-of-way, thence South 89°26'55" East, along said south right-of-way line, a distance of 669.76 feet to the east line of said lands of Price Groves, LLC.; thence South 00°17'16" West, along said east line, a distance of 592.75 feet to the Point-of-Beginning.*

*Containing 9.05 acres.*

**SURVEYOR'S NOTES:**

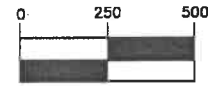
- 1.) North and the bearings shown hereon are referenced to the West Zone of the Florida State Plane Coordinate System, NAD 83, 2011 adjustment. All measurements are in U.S. Survey Feet.
- 2.) The basis of all bearings shown hereon is referenced to the grid bearing of South 89°24'36" East along the south boundary of Section 19, Township 36 South, Range 30 East, Highlands County, Florida.

**SHEET 5 OF 6**

<p><b>DESCRIPTION SKETCH</b>                  IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,                  &amp; SECTION 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,                  HIGHLANDS COUNTY, FL                  PREPARED FOR: ECT</p>					 <p><b>PICKETT</b>                  SURVEYING • ENGINEERING</p>	PICKETT AND ASSOCIATES, INC. 476 SOUTH FIRST AVENUE BARTON, FLORIDA 32830 PHONE: (863)-533-9095 FAX: (863)-534-1484 LICENSED BUSINESS No. 15384
Project No.:	18775	No.	Date	Approved	REVISION	SEE SHEET 1 FOR THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.  20190072-DEF-001187
Horiz. Scale:	N/A	O.R.	2/22/19	GAP	Original Release	
DWG. Name:	18775_Ease_01	1	2/25/19	GAP	Revised Lease Parcel 3 boundary	
Drawn By:	ND	2	2/26/19	GAP	Corrected bearing	
Field Bk / Pg.:	N/A					
Drawing No.:	SD 5128					

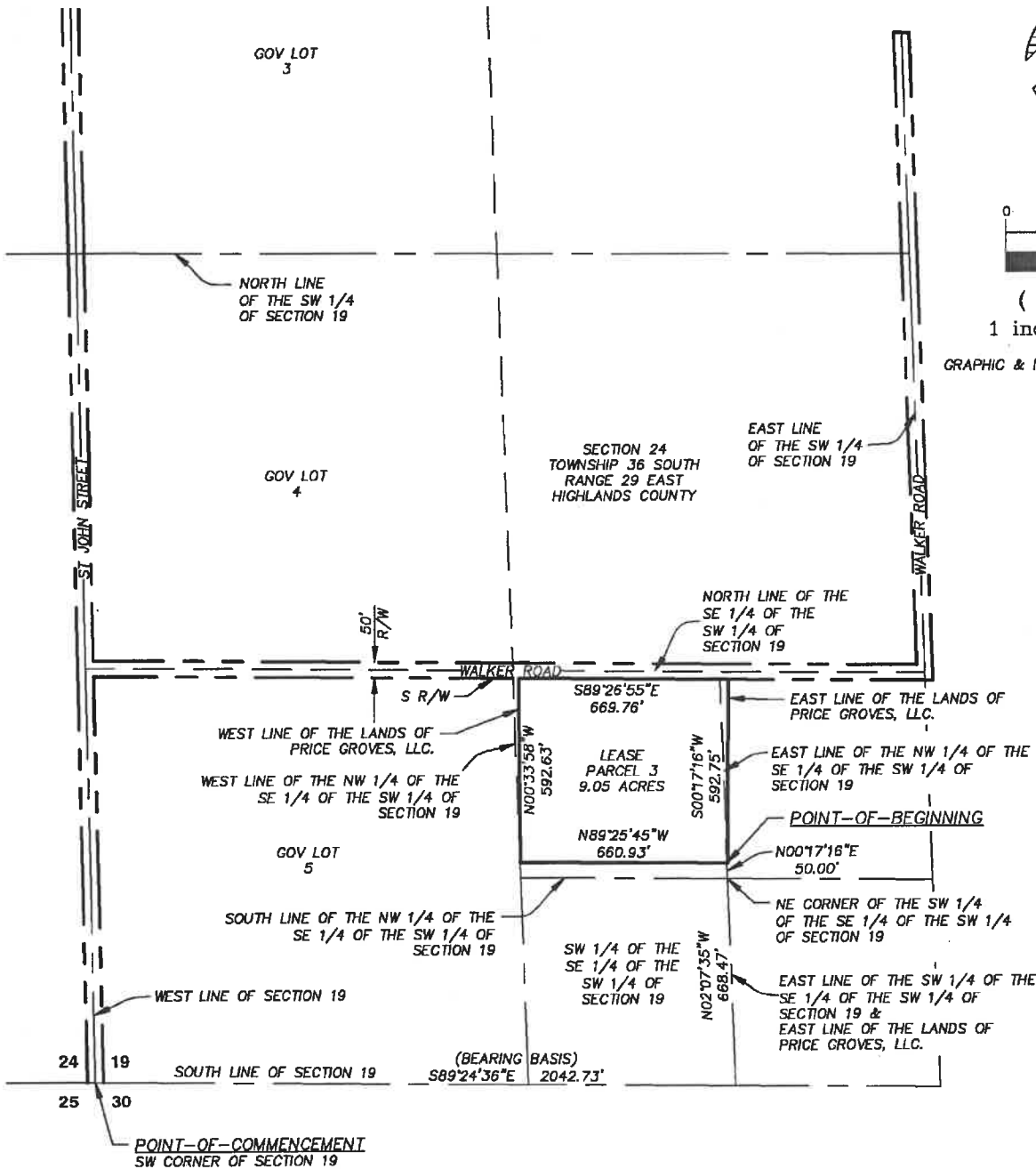
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THIS IS NOT A SURVEY



( IN FEET )  
1 inch = 500 ft.

GRAPHIC & INTENDED DISPLAY SCALE



SHEET 6 OF 6

DESCRIPTION SKETCH

IN SECTION 24, TOWNSHIP 36 SOUTH, RANGE 29 EAST,  
& SECTION 19, TOWNSHIP 36 SOUTH, RANGE 30 EAST,  
HIGHLANDS COUNTY, FL

PREPARED FOR: ECT



**PICKETT**  
SURVEYING • ENGINEERING

PICKETT AND ASSOCIATES, INC.  
476 SOUTH FIRST AVENUE BARTOW,  
FLORIDA 33800  
PHONE: (883)-633-0095  
FAX: (883)-634-1484  
LICENSED BUSINESS No. 18384

Project No.:	18775	No.	Date	Approved	REVISION
Horiz. Scale:	1" = 500'	O.R.	2/22/19	GAP	Original Release
DWG. Name:	18775_Ease_01	1	2/25/19	GAP	Revised Lease Parcel 3 boundary
Drawn By:	ND	2	2/26/19	GAP	Corrected acreage
Field Bk / Pg.:	N/A				
Drawing No.:	SD 5128				

SEE SHEET 1 FOR  
THE SIGNATURE AND  
THE ORIGINAL RAISED  
SEAL OF A FLORIDA  
LICENSED SURVEYOR  
AND MAPPER.

20190072-DEF-001188



PREPARED BY: Christopher G. King, Counsel, Duke Energy  
Mail To: Duke Energy Carolinas, LLC  
550 South Tryon Street, DEC 22A  
Charlotte, North Carolina 28202

Site:  
Land Unit:  
Project No.:

**STATE OF FLORIDA**

**MEMORANDUM OF LEASE**

**COUNTY OF GILCHRIST**

KNOW ALL MEN BY THESE PRESENTS, that for and in consideration of the rents and covenants set forth in a certain Ground Lease Agreement (the "Lease") by and between **CAROL T. HILL** and **HELEN T. JORDAN** (collectively, "Lessor"), and **DUKE ENERGY FLORIDA, LLC**, a Florida limited liability company d/b/a Duke Energy ("Lessee"). Lessor has leased to Lessee that property located in Gilchrist County, Florida, more particularly described as follows:

Those certain real properties identified on Exhibit A, attached hereto and incorporated herein by reference (the "Premises").

**TOGETHER WITH:** the right at all times to enter upon said Premises from the nearest public road or highway for the purpose of constructing, operating, inspecting and maintaining a Solar Generating Facility during the term of this Lease including the right to clear and/or trim trees and clear structures and other objects of any kind which might in any way endanger or interfere with the proper construction, maintenance and operation of said Solar Generating Facility.

This Lease shall take effect on April 4, 2019 (the "Effective Date") and continue for a period not to exceed fifty-two (52) years including the Development Term, Operating Term, and any of the optional Extensions.

The provisions set forth in the Lease are hereby incorporated in this Memorandum as though stated herein. The Lease is subordinate to the Declaration of Restrictive Covenants recorded in the County of Gilchrist, Florida, at Book 2019, Page 21002917

**[SIGNATURES BEGIN ON FOLLOWING PAGE]**

Inst: 201921002918 Date: 05/23/2019 Time: 8:48AM  
Todd Newton, Clerk of Court Gilchrist County,  
By: CC Deputy Clerk

20190072-DEF-001189

20190072.EI Staff Hearing Exhibits 00226

IN WITNESS WHEREOF, the parties hereto have duly executed this Lease by authority duly given, as of the day and year first above written.

LANDLORD:

Eryn Hall  
Witness Signature  
Name: Eryn Hall

Carol T. Hill  
Carol T. Hill FLDL H400118387540

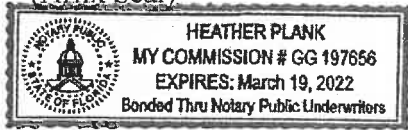
Eryn Hall  
Witness Signature  
Name: Eryn Hall

Helen T. Jordan  
Helen T. Jordan FLDS 398436380

STATE OF FLORIDA  
COUNTY OF Levy

The foregoing instrument was acknowledged before me this 28<sup>th</sup> day March, 2019 by **CAROL T. HILL** and **HELEN T. JORDAN**. Each is personally known to me or has produced FLDL & FLDL as identification.

(Affix Seal)



Heather Plank  
Print Name: Heather Plank  
My Commission Expires: MARCH 19, 2022

IN WITNESS WHEREOF, the parties hereto have duly executed this Lease by authority duly given, as of the day and year first above written.

TENANT:

DUKE ENERGY FLORIDA, LLC, a Florida limited liability company d/b/a Duke Energy

By: Karen Adams

Name: Karen Adams

Title: Manager, Land Services-Florida Region

Witnesses:

Emily F. Bower

Name: Emily F. Bower

Thomas Camden

Name: THOMAS CAMDEN

STATE OF FLORIDA  
COUNTY OF SEMINOLE

The foregoing instrument was acknowledged before me this 27<sup>th</sup> day MARCH, 2019 by Karen Adams, as Manager- Land Services, Florida Region of **DUKE ENERGY FLORIDA, LLC**, a Florida limited liability d/b/a Duke Energy, on behalf of said company. She is personally known to me or has produced \_\_\_\_\_ as identification.

(Affix Seal)

Emily Faye Bower  
Print Name: Emily Faye Bower  
My Commission Expires: AUG 06, 2021

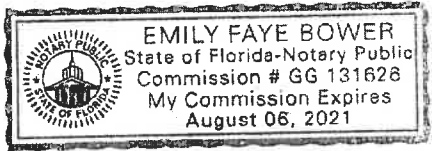


Exhibit A

Hill/Jordan

The following parcels of land lying, being and situate in Gilchrist County, Florida.

08-10-15-0000-0003-0000: ~ 76.75 acres

08-10-15-0000-0003-0000: ~ 115.05 acres

LEGAL DESCRIPTION: SW ¼ LESS road right of way on South and West side and also the SW ¼ of NW ¼ of Section 8, Township 10 South, Range 15 East, and Gilchrist County, Florida.

Total land area of approximately 192 acres

PREPARED BY: Christopher G. King, Counsel, Duke Energy  
Mail To: Duke Energy Carolinas, LLC  
550 South Tryon Street, DEC 22A  
Charlotte, North Carolina 28202

Site:  
Land Unit:  
Project No.:

**STATE OF FLORIDA**

**MEMORANDUM OF LEASE**

**COUNTY OF GILCHRIST**

KNOW ALL MEN BY THESE PRESENTS, that for and in consideration of the rents and covenants set forth in a certain Ground Lease Agreement (the "Lease") by and between **PIEDMONT FARMS, INC.**, a Florida corporation ("Lessor"), and **DUKE ENERGY FLORIDA, LLC**, a Florida limited liability company d/b/a Duke Energy ("Lessee"). Lessor has leased to Lessee that property located in Gilchrist County, Florida, more particularly described as follows:

Those certain real properties identified on Exhibit A, attached hereto and incorporated herein by reference (the "Premises").

**TOGETHER WITH:** the right at all times to enter upon said Premises from the nearest public road or highway for the purpose of constructing, operating, inspecting and maintaining a Solar Generating Facility during the term of this Lease including the right to clear and/or trim trees and clear structures and other objects of any kind which might in any way endanger or interfere with the proper construction, maintenance and operation of said Solar Generating Facility.

This Lease shall take effect on April 4, 2019 (the "Effective Date") and continue for a period not to exceed fifty (50) years including the Development Term, Operating Term, and any of the optional Extensions.

The provisions set forth in the Lease are hereby incorporated in this Memorandum as though stated herein. The Lease is subordinate to the Declaration of Restrictive Covenants recorded in the County of Gilchrist, Florida, at Book 2019, Page 21002915

**[SIGNATURES BEGIN ON FOLLOWING PAGE]**

IN WITNESS WHEREOF, the parties hereto have duly executed this Lease by authority duly given, as of the day and year first above written.

LANDLORD:

Witnesses:

Karen Mayer  
Name: Karen Mayer

Thomas L Davis  
Name: Thomas L Davis

PIEDMONT FARMS, INC.,  
a Florida corporation

By: William A. McArthur Jr

Name: William A. McArthur Jr

Title: President

STATE OF FLORIDA  
COUNTY OF Duval

The foregoing instrument was acknowledged before me this 2 day April, 2019 by \_\_\_\_\_ the \_\_\_\_\_ of PIEDMONT FARMS, INC., a Florida corporation. He is personally known to me or has produced \_\_\_\_\_ as identification.

(Affix Seal)

Karina Garrett  
Print Name: KARINA GARRETT  
My Commission Expires: 10/22/22

KARINA GARRETT  
Notary Public, State of Florida  
My Comm. Expires 10/22/2022  
Commission No. GG270090

IN WITNESS WHEREOF, the parties hereto have duly executed this Lease by authority duly given, as of the day and year first above written.

TENANT:

DUKE ENERGY FLORIDA, LLC, a Florida limited liability company d/b/a Duke Energy

Witnesses:

Catherine Mori  
Name: Catherine Mori

Krista Warren  
Name: Krista Warren

By: Karen Adams

Name: Karen Adams

Title: Manager, Land Services-Florida Region

STATE OF FLORIDA  
COUNTY OF Seminole

The foregoing instrument was acknowledged before me this 2nd day April, 2019 by Karen Adams, as Manager- Land Services, Florida Region of **DUKE ENERGY FLORIDA, LLC**, a Florida limited liability d/b/a Duke Energy, on behalf of said company. She is personally known to me or has produced \_\_\_\_\_ as identification.

(Affix Seal)

Catherine A. Mori  
Print Name: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_



CATHERINE A MORI  
MY COMMISSION # GG 083392  
EXPIRES: March 27, 2021  
Bonded Thru Budget Notary Services

**EXHIBIT A**

LEASED PROPERTY

**Tract "1" is comprised of:**

TID Nos.:  
08-10-15-0000-0001-0000,  
09-10-15-0000-0006-0030, and  
09-10-15-0000-0006-0010  
(Approximately 274 acres)

Less and except the following (the "Excluded Lands"):

(a) the lands containing the barn, outbuildings, headquarters and roads (between the fences) substantially as shown on the "Excluded Lands" shown on Attachment "C-1 " (being 14.8 acres) and (b) the water well and associated outbuildings and equipment located at or near the midpoint of the Westerly boundary of tract 09-10-15-0000-0006-0010 (the "Non-Contiguous Well"), being a parcel of land less than 1 acre, (c) Parcel No 09-10-15-000-0006-0010 (37.4 acres), and (d) Parcel No. 09-10-15-0000-0006-0030 (18.2 acres).

And reserving unto Landlord and its assigns the following easements:

(1) Easement for ingress, egress and utilities over road running almost due west from CR 129 to the Excluded Lands generally along the North boundary of tract 09-10-15-0000-0006-0010 and the westerly prolongation thereof (the "Farm Road");

(2) Easement for existing power lines serving the Non-Contiguous Well, provided that Tenant at Tenant's expense may re-locate the same.

(3) Easement to access the Non-Contiguous Well from the Farm Road along such route as Tenant may reasonably agree and subject to Tenant's reasonable security procedures.

(4) Easement for underground water pipes, controls and maintenance thereof from the Non-Contiguous Well (a) ENE to CR 129, (b) north to the Farm Road and then along the Farm Road East to CR 129 and West to the Excluded lands, and (c) adjacent running northerly and southerly along Landlord's lands adjacent to CR129. Tenant shall mark the route of such underground liens within tracts 09-10-15-0000-0006-0010 & 0030 and Landlord shall install the same within 60 days of such notification. Any ingress and egress by Landlord shall be subject to Tenant's reasonable security procedures.

The "Excluded Lands" also includes the small (< 1 acre) inked area comprising the Non-Contiguous Well area shown in the SW portion of Tract A (a/k/a Tract 1) and being located near the mid-point of the Westerly boundary of tract 09-10-15-0000-0006-0010.

Total area of land is approximately 204 acres

**Tract 3 is comprised of:**

The following parcels of land lying, being and situate in Gilchrist County, Florida and being depicted below on the sketch attached hereto:



All that portion of the SE 1/4 of Section 6, Township 10 South, Range 15 East owned by Piedmont Farms, Inc. (the same being the southeastern portion of parcel 06-10-15-0000-0002-0000 (approximately 160 acres));

All of parcel 07-10-15-0000-0002-0000 (approximately 110 acres); and

All that portion of the W 1/2 of the SW 1/4 owned by Piedmont Farms, Inc. and lying west of SW 17<sup>th</sup> Court (the same being the westerly portion of tax parcel no. 05-10-15-0000-0001-0010 lying west of SW 17<sup>th</sup> Court) (approximately 70 acres) LESS AND EXCEPT all that portion of the SE 1/4 of the SW 1/4 of the SW 1/4 of Section 5, Township 10 South, Range 15 East (approximately 10 acres).

Total land area of approximately 340 acres

