

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition to determine need for Seminole combined cycle facility, by Seminole Electric Cooperative, Inc.

DOCKET NO. 20170266-EC

In re: Joint petition for determination of need for Shady Hills combined cycle facility in Pasco County, by Seminole Electric Cooperative, Inc. and Shady Hills Energy Center, LLC.

DOCKET NO. 20170267-EC

DATED: MARCH 15, 2018

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COMMISSION
CLERK

COMMISSION STAFF'S
NOTICE OF INTENT TO SEEK OFFICIAL RECOGNITION

In accordance with Section VI.F. of the Order Establishing Procedure,¹

NOTICE IS HEREBY GIVEN by the staff of the Florida Public Service Commission (Commission) that staff intends to seek official recognition of Seminole Electric Cooperative, Inc.'s (Seminole) 2017 Ten Year Site Plan (TYSP), submitted on April 1, 2017, in accordance with Section 186.801, Florida Statutes.

The Seminole 2017 TYSP was deemed suitable by the Commission in November 2017,² and is published on the Commission website.³ Staff has conferred with the parties and neither side objects to the official recognition of Seminole's 2017 TYSP.

RESPECTFULLY SUBMITTED, this 15th day of March, 2018:

/s/ Rachael Dziechciarz

RACHAEL DZIECHCIARZ
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FLORIDA PUBLIC SERVICE COMMISSION
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¹ Order No. PSC-2018-0018-PCO-EC, issued on January 5, 2018, in Dockets Nos. 20170266-EC and 20170267-EC.

² "Review of the 2017 Ten-Year Site Plans of Florida's Electric Utilities", at page 111, published at: <http://www.psc.state.fl.us/Files/PDF/Utilities/Electricgas/TenYearSitePlans/2017/Review.pdf>.

³ The Seminole 2017 TYSP is published at:

<http://www.floridapsc.com/Files/PDF/Utilities/Electricgas/TenYearSitePlans/2017/Seminole%20Electric%20Cooperative.pdf>.

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DATED: MARCH 15, 2018

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that the COMMISSION STAFF'S NOTICE OF INTENT TO SEEK OFFICIAL RECOGNITION has been served by electronic mail to HOPPING, GREEN, & SAMS LAW FIRM, Gary V. Perko, Esquire gperko@hgslaw.com, P.O. Box 6526, Tallahassee, Florida 32314, and GARDNER, BIST, BOWDEN, BUSH, DEE, LAVIA & WRIGHT, Robert Scheffel Wright, Esquire schef@gbwlegal.com, 1300 Thomaswood Drive Tallahassee, Florida 32308 and a true copy has been furnished to the following by electronic mail, this 15th day of March, 2018:

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CERTIFICATE OF SERVICE
DOCKET NOS. 20170266-EC, 20170267-EC
PAGE 2

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/s/ Rachael Dziechciarz

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April 1, 2017

Orlando Wooten
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Dear Mr. Wooten:

In accordance with Section 186.801, Florida Statutes, Seminole Electric Cooperative, Inc. hereby submits our 2017 Ten Year Site Plan.

Please do not hesitate to call me if you have any questions or comments.

Sincerely,

A handwritten signature in cursive script that reads "Julia A. Diazgranados".

Julia A Diazgranados
Director of Planning
813-739-1538 (office)
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Enclosure

cc: J. Fuller
L. Johnson



Ten Year Site Plan
2017 – 2026
(Detail as of December 31, 2016)
April 1, 2017

Submitted To:
State of Florida
Public Service Commission

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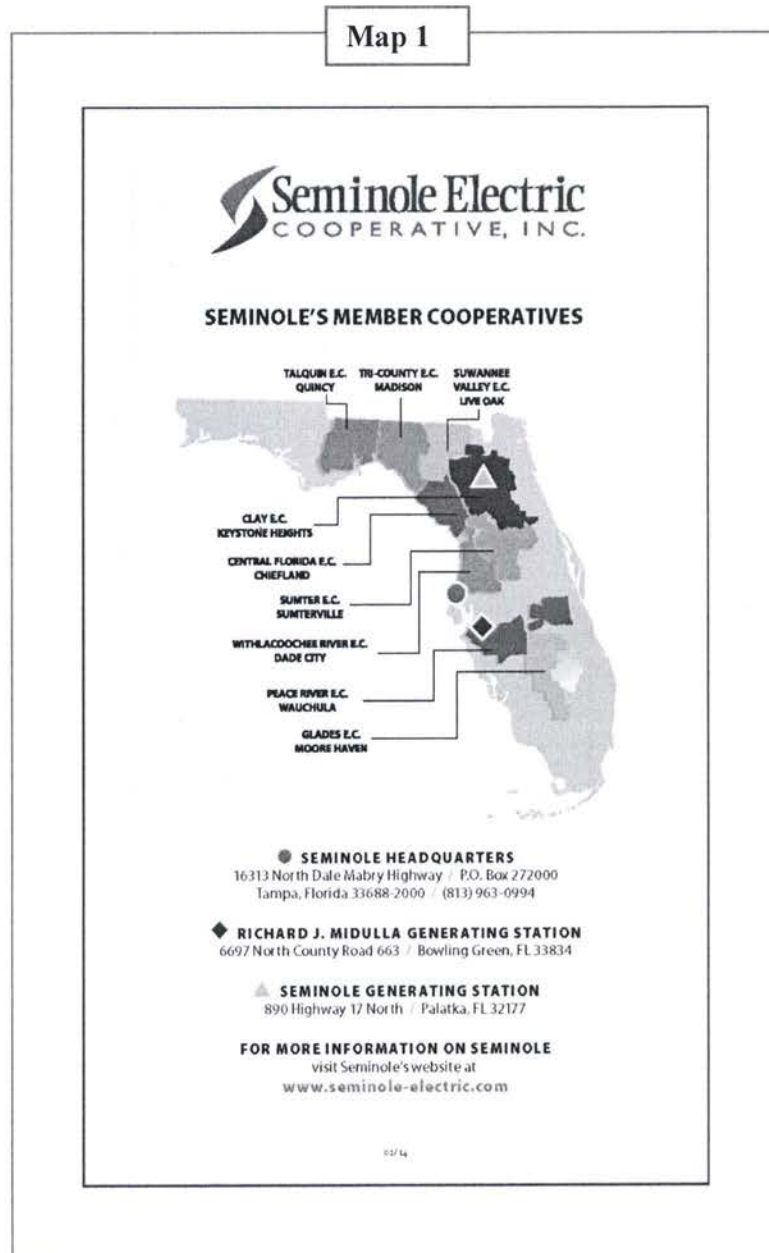
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1. DESCRIPTION OF EXISTING FACILITIES

1.1 Overview

Seminole Electric Cooperative, Inc. (Seminole) is a generation and transmission cooperative responsible for meeting the electric power and energy needs of its nine distribution cooperative members (Members). Member service areas are indicated on Map 1 below:



Seminole provides full requirements service to all of its Members with the only exception relating to contracts between four Members with the Southeastern Power Administration (SEPA), which provides 26 MW or 1% of the total energy required by all Members. Seminole serves the aggregate loads of its Members with a combination of owned and purchased power resources. As of December 31, 2016, Seminole had total summer capacity resources of approximately 3,700 MW consisting of owned, installed net capacity of 2,012 MW and the remaining capacity in firm purchased power. Additional information on Seminole's existing resources can be found in Schedule 1 and Table 1.2 below.

1.2 Existing Facilities

1.2.1 Owned Generation

Seminole's existing generating facilities include:

- 1) Seminole Generating Station (SGS) Units 1 & 2 comprise a 1472 MW nameplate coal-fired plant located in Putnam County;
- 2) Midulla Generating Station (MGS) Units 1–3 comprise a 587 MW nameplate gas-fired combined cycle plant located in Hardee County; and,
- 3) MGS Units 4–8 comprise a 310 MW nameplate peaking plant.

Schedule 1 Existing Generating Facilities as of December 31, 2016													
Plant	Unit No.	Location	Unit Type	Fuel		Fuel Transportation		Alt Fuel Days Use	Com In-Svc Date (Mo/Yr)	Expected Retirement (Mo/Yr)	Gen. Max Nameplate (MW)	Net Capability (MW)	
				Pri	Alt	Pri	Alt					Summer	Winter
SGS	1	Putnam County	ST	BIT	N/A	RR	N/A	N/A	02/84	Unk	736	626	664
SGS	2	Putnam County	ST	BIT	N/A	RR	N/A	N/A	12/84	Unk	736	634	665
MGS	1-3	Hardee County	CC	NG	DFO	PL	TK	Unk	01/02	Unk	587	482	539
MGS	4-8	Hardee County	CT	NG	DFO	PL	TK	Unk	12/06	Unk	310	270	310
Schedule Abbreviations:	General Unk – Unknown N/A – Not applicable												
	<u>Unit Type</u> ST – Steam Turbine CC – Combined Cycle CT – Combustion Turbine PV – Photovoltaic			<u>Fuel Type</u> BIT – Bituminous Coal NG – Natural Gas DFO – Ultra low sulfur diesel Sun – Solar Energy					<u>Fuel Transportation</u> PL – Pipeline RR – Railroad TK – Truck				

1.2.2 Transmission

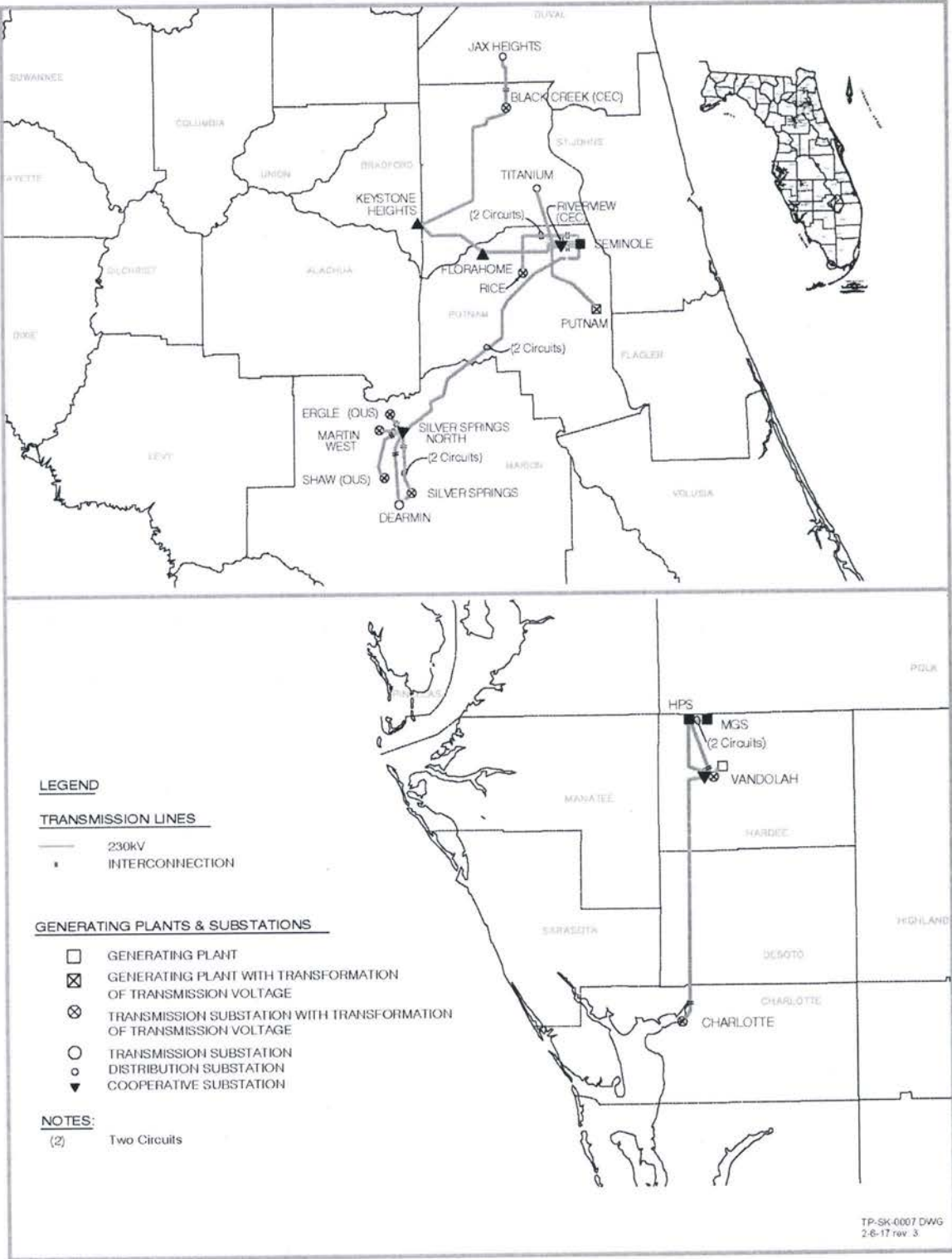
Seminole serves its Members' load primarily in three transmission areas: Seminole Direct Serve (SDS) system, Duke Energy Florida (DEF) system, and Florida Power & Light (FPL) system. Seminole's existing transmission facilities consist of 254 circuit miles of 230 kV and 127 circuit miles of 69 kV lines. Seminole's facilities are interconnected to the grid at nineteen (19) 230 kV transmission interconnections with the entities shown in Table 1.1.

Table 1.1		
Transmission Grid Interconnections with Other Entities		
Entity	Voltage (kV)	Number of Interconnections
Florida Power & Light	230	5
Duke Energy Florida	230	7
JEA	230	1
City of Ocala (OUS)	230	2
Tampa Electric Company	230	1
Invenergy, LLC	230	3
Note: This table describes physical facility interconnections, which do not necessarily constitute contractual interconnections for purposes of transmission service or interconnections between balancing areas.		

Seminole contracts with other utilities for firm transmission service and interchange when required to serve loads. Map 2 below depicts Seminole's 230 kV transmission lines, including its interconnections with those entities identified in Table 1.1 above.

Map 2

SEMINOLE'S BULK GENERATION AND TRANSMISSION FACILITIES



1.3 Purchased Power Resources

Table 1.2 below sets forth Seminole’s purchased power resources.

Table 1.2

2016				
SUPPLIER	FUEL	MW (WINTER RATINGS)	IN SERVICE DATE	END DATE
Hardee Power Partners	Gas/Oil	445	1/1/2013	12/31/2032
Oleander Power Project	Gas/Oil	546	1/1/2010	5/31/2021
FPL	System	200	6/1/2014	5/31/2021
DEF	System	<1	6/1/1987	-
DEF	System	600	1/1/2014	12/31/2020
DEF	System	150	1/1/2014	12/31/2020
DEF	System	50	6/1/2016	12/31/2018
DEF	System	200-500	6/1/2016	12/31/2024
DEF	System	50-600	1/1/2021	3/31/2027
Lee County Florida	Waste Landfill	55	1/1/2009	12/31/2016
Telogia Power	Biomass	13	7/1/2009	11/30/2023
Seminole Energy, LLC	Landfill Gas	6.2	10/1/2007	3/31/2018
Brevard Energy, LLC	Landfill Gas	9	4/1/2008	3/31/2018
Timberline Energy, LLC	Landfill Gas	1.6	2/1/2008	3/31/2020
Hillsborough County	Waste Landfill	38	3/1/2010	2/28/2025
City of Tampa	Waste Landfill	20	8/1/2011	7/31/2026
Note: Seminole Electric Cooperative may sell a portion of the renewable energy credits associated with its renewable generation to third parties. The third parties can use the credits to meet mandatory or voluntary renewable requirements.				

2. FORECAST OF ELECTRIC DEMAND AND ENERGY CONSUMPTION

2.1 Energy Consumption and Number of Customers

Residential consumer growth is projected to increase at an average annual rate of 1.6 percent from 2017 through 2026. Similarly, commercial consumer growth is projected to increase at an average annual rate of 1.4 percent during the same period. Residential energy sales are projected to grow at an average annual rate of 1.6 percent, and commercial energy sales are projected to grow at an average annual rate of 2.0 percent from 2017 through 2026. Schedules 2.1, 2.2, and 2.3 below show the aggregate number of customers and energy consumption by customer classification of Seminole's nine Members, including other sales and purchases.

Schedule 2.1
History and Forecast of Energy Consumption and
Number of Customers by Customer Class

Year	Estimated Population Served by Members	Residential			
		People per Household	GWh	Average Number of Customers	Average Consumption Per Customer (kWh)
2007	1,716,841	2.14	11,444	803,957	14,235
2008	1,740,705	2.15	11,104	808,926	13,727
2009	1,748,408	2.15	11,293	811,767	13,912
2010	1,692,257	2.22	11,369	761,993	14,920
2011	1,716,516	2.24	10,412	765,279	13,605
2012	1,723,920	2.24	9,979	769,591	12,967
2013	1,749,359	2.25	10,018	777,493	12,885
2014	1,643,174	2.48	8,808	662,626	13,293
2015	1,666,850	2.48	9,068	673,215	13,470
2016	1,638,985	2.40	9,101	683,648	13,312
2017	1,644,922	2.38	9,124	691,082	13,202
2018	1,655,886	2.36	9,369	701,498	13,356
2019	1,677,848	2.35	9,560	713,238	13,404
2020	1,703,402	2.35	9,671	726,091	13,320
2021	1,729,353	2.34	9,822	738,768	13,295
2022	1,754,297	2.33	9,955	751,387	13,249
2023	1,778,469	2.33	10,104	763,924	13,227
2024	1,802,279	2.32	10,254	776,173	13,211
2025	1,825,251	2.32	10,406	788,118	13,203
2026	1,847,474	2.31	10,539	799,658	13,180

NOTE: Actual value for 2013 and prior includes Lee County Electric Cooperative.

Estimated-actual values for 2016.

Schedule 2.2
History and Forecast of Energy Consumption and
Number of Customers by Customer Class

Year	Commercial ¹			Other Sales (GWh) ²	Total Member Sales to Ultimate Customers (GWh) ³
	GWh	Average Number of Customers	Average Consumption Per Customer (kWh)		
2007	4,839	88,306	54,798	165	16,448
2008	4,894	86,121	56,827	163	16,161
2009	4,776	84,318	56,643	167	16,236
2010	4,525	78,788	57,433	158	16,052
2011	4,366	78,828	55,386	160	14,938
2012	4,456	80,598	55,287	164	14,599
2013	4,482	82,302	54,458	166	14,666
2014	4,001	72,632	55,086	151	12,960
2015	4,155	73,290	56,689	151	13,374
2016	4,201	74,399	56,464	133	13,435
2017	4,256	75,257	56,553	132	13,512
2018	4,336	76,299	56,830	133	13,838
2019	4,450	77,357	57,527	134	14,144
2020	4,546	78,424	57,966	134	14,351
2021	4,634	79,495	58,294	135	14,590
2022	4,719	80,609	58,536	136	14,809
2023	4,804	81,742	58,774	137	15,045
2024	4,890	82,830	59,036	138	15,282
2025	4,978	83,888	59,340	139	15,523
2026	5,066	84,920	59,658	140	15,746

NOTE: Actual value for 2013 and prior includes Lee County Electric Cooperative.
 Estimated-actual values for 2016.

¹ Includes industrial and interruptible customers.

² Includes lighting customers.

³ Excludes sales for resale and includes SEPA.

Schedule 2.3

**History and Forecast of Energy Consumption and
Number of Customers by Customer Class**

Year	Sales for Resale (GWh)	Utility Use & Losses, Less SEPA (GWh)*	Net Energy for Load (GWh)	Other Customers*	Total Number of Customers¹
2007	0	1,221	17,669	5,150	897,413
2008	0	1,171	17,332	5,075	900,122
2009	0	1,217	17,453	5,036	901,121
2010	0	1,294	17,346	4,956	845,737
2011	157	942	16,037	4,954	849,061
2012	134	1,036	15,769	4,818	855,007
2013	137	1,009	15,812	5,185	864,980
2014	170	724	13,854	5,308	740,566
2015	16	714	14,104	5,343	751,848
2016	56	980	14,471	5,389	763,436
2017	24	639	14,175	5,310	771,648
2018	20	689	14,548	5,310	783,106
2019	23	704	14,871	5,320	795,915
2020	26	709	15,087	5,345	809,860
2021	7	718	15,316	5,372	823,634
2022	0	722	15,531	5,404	837,399
2023	0	728	15,773	5,438	851,104
2024	0	734	16,016	5,468	864,470
2025	0	741	16,264	5,494	877,500
2026	0	744	16,490	5,519	890,097

NOTE: Actual value for 2013 and prior includes Lee County Electric Cooperative
¹ Estimated-actual values for 2016.

2.2 Annual Peak Demand and Net Energy for Load

Both summer and winter net firm demands are projected to increase at an average annual rate of 1.5 percent from 2017 through 2026. Net Energy for Load is projected to grow at an average annual rate of 1.6 percent from 2017 through 2026. Schedules 3.1, 3.2, and 3.3 provide Seminole's summer peak demand, winter peak demand, and net energy for load, respectively.

Schedule 3.1

History and Forecast of Summer Peak Demand (MW)

Year	Total	Wholesale	Retail	Interruptible Load ¹	Distributed Generation ²	Residential		Commercial ⁵		Net Firm Demand ⁴
						Load Mgmt. ³	Cons.	Load Mgmt. ³	Cons.	
2007	4,006	4,006	0	0	62	105	N/A	N/A	N/A	3,839
2008	3,778	3,778	0	0	48	100	N/A	N/A	N/A	3,630
2009	3,987	3,987	0	0	62	101	N/A	N/A	N/A	3,824
2010	3,714	3,714	0	0	67	99	N/A	N/A	N/A	3,548
2011	3,829	3,829	0	0	79	97	N/A	N/A	N/A	3,653
2012	3,525	3,525	0	0	0	97	N/A	N/A	N/A	3,428
2013	3,665	3,665	0	0	0	99	N/A	N/A	N/A	3,566
2014	3,155	3,155	0	0	0	67	N/A	N/A	N/A	3,088
2015	3,092	3,092	0	0	0	71	N/A	N/A	N/A	3,021
2016	3,318	3,318	0	0	0	75	N/A	N/A	N/A	3,243
2017	3,223	3,223	0	33	71	73	N/A	N/A	N/A	3,045
2018	3,284	3,284	0	34	71	75	N/A	N/A	N/A	3,104
2019	3,344	3,344	0	34	71	76	N/A	N/A	N/A	3,163
2020	3,389	3,389	0	34	71	77	N/A	N/A	N/A	3,207
2021	3,425	3,425	0	34	71	78	N/A	N/A	N/A	3,241
2022	3,479	3,479	0	39	71	79	N/A	N/A	N/A	3,290
2023	3,526	3,526	0	33	71	80	N/A	N/A	N/A	3,341
2024	3,578	3,578	0	34	71	81	N/A	N/A	N/A	3,391
2025	3,629	3,629	0	34	71	82	N/A	N/A	N/A	3,441
2026	3,676	3,676	0	34	71	83	N/A	N/A	N/A	3,487

NOTE: Actual values for 2013 and prior includes Lee County Electric Cooperative.

¹ Excludes wholesale interruptible purchases

² Distributed generation reflects customer-owned self-service generation.

³ Historical load management data is estimated amount exercised at the time of the seasonal peak demand.

⁴ Excludes SEPA allocations.

⁵ Reduced demands associated with Member Cooperative coincident demand billing are not reflected, although reductions are reflected in "Total" & "Net Firm Demand"

Schedule 3.2

History and Forecast of Winter Peak Demand (MW)

Year	Total	Wholesale	Retail	Interruptible Load ¹	Distributed Generation ²	Residential		Commercial		Net Firm Demand ⁴
						Load Mgmt. ³	Cons.	Load Mgmt. ³	Cons.	
2006-07	4,178	4,178	0	0	43	109	N/A	N/A	N/A	4,026
2007-08	4,410	4,410	0	0	56	133	N/A	N/A	N/A	4,221
2008-09	4,946	4,946	0	0	58	150	N/A	N/A	N/A	4,738
2009-10	5,263	5,263	0	0	64	152	N/A	N/A	N/A	5,047
2010-11	4,476	4,476	0	0	55	106	N/A	N/A	N/A	4,315
2011-12	4,118	4,118	0	0	66	134	N/A	N/A	N/A	3,918
2012-13	3,839	3,839	0	0	0	132	N/A	N/A	N/A	3,707
2013-14	3,333	3,333	0	0	0	93	N/A	N/A	N/A	3,240
2014-15	3,696	3,696	0	0	0	103	N/A	N/A	N/A	3,593
2015-16 ⁵	3,403	3,403	0	0	0	96	N/A	N/A	N/A	3,307
2016-17	3,106	3,106	0	0	0	88	N/A	N/A	N/A	3,018
2017-18	3,727	3,727	0	31	71	102	N/A	N/A	N/A	3,523
2018-19	3,799	3,799	0	31	71	104	N/A	N/A	N/A	3,593
2019-20	3,853	3,853	0	31	71	105	N/A	N/A	N/A	3,646
2020-21	3,911	3,911	0	32	71	106	N/A	N/A	N/A	3,701
2021-22	3,961	3,961	0	32	71	107	N/A	N/A	N/A	3,750
2022-23	4,014	4,014	0	31	71	109	N/A	N/A	N/A	3,803
2023-24	4,070	4,070	0	31	71	110	N/A	N/A	N/A	3,857
2024-25	4,125	4,125	0	31	71	111	N/A	N/A	N/A	3,911
2025-26	4,177	4,177	0	31	71	113	N/A	N/A	N/A	3,962
2026-27	4,231	4,231	0	32	71	114	N/A	N/A	N/A	4,013

NOTE: Actual value for 2013-14 and prior includes Lee County Electric Cooperative.

¹ Excludes wholesale interruptible purchases

² Distributed generation reflects customer-owned self-service generation.

³ Historical load management data is actual amount exercised at the time of the seasonal peak demand.

⁴ Excludes SEPA allocations.

⁵ Reduced demands associated with Member Cooperative coincident demand billing are not reflected, although reductions are reflected in "Total" & "Net Firm Demand."

Schedule 3.3

History and Forecast of Annual Net Energy for Load (GWh)

Year	Total	Conservation		Retail	Total Sales Including Sales for Resale ¹	Utility Use & Losses, less SEPA ¹	Net Energy for Load	Load Factor %
		Residential	Commercial					
2007	17,669	N/A	N/A	0	16,448	1,221	17,669	50.1
2008	17,332	N/A	N/A	0	16,161	1,171	17,332	46.7
2009	17,453	N/A	N/A	0	16,236	1,217	17,453	42.1
2010	17,346	N/A	N/A	0	16,052	1,294	17,346	39.2
2011	16,037	N/A	N/A	0	15,095	942	16,037	46.7
2012	15,769	N/A	N/A	0	14,733	1,036	15,769	45.8
2013	15,812	N/A	N/A	0	14,803	1,009	15,812	45.7
2014	13,854	N/A	N/A	0	13,130	724	13,854	44.3
2015	14,104	N/A	N/A	0	13,390	714	14,104	48.7
2016	14,471	N/A	N/A	0	13,491	980	14,471	54.7
2017	14,175	N/A	N/A	0	13,536	639	14,175	45.9
2018	14,548	N/A	N/A	0	13,858	689	14,548	46.2
2019	14,871	N/A	N/A	0	14,167	704	14,871	46.6
2020	15,087	N/A	N/A	0	14,377	709	15,087	46.5
2021	15,316	N/A	N/A	0	14,597	718	15,316	46.6
2022	15,531	N/A	N/A	0	14,809	722	15,531	46.6
2023	15,773	N/A	N/A	0	15,045	728	15,773	46.7
2024	16,016	N/A	N/A	0	15,282	734	16,016	46.7
2025	16,264	N/A	N/A	0	15,523	741	16,264	46.9
2026	16,490	N/A	N/A	0	15,746	744	16,490	46.9

NOTE: Actual value for 2013 and prior includes Lee County Electric Cooperative.

¹ Estimated-actual values for 2016.

2.3 Monthly Peak Demand and Net Energy for Load

Schedule 4 shows peak demand and net energy actuals for load by month for 2016 and January 2017 and forecasts thereafter.

Schedule 4						
Previous Year and 2-Year Forecast of Peak Demand and Net Energy for Load by Month						
Month	2016 Actual		2017 Forecast		2018 Forecast	
	Peak Demand (MW) ¹	NEL (GWh)	Peak Demand (MW) ²	NEL (GWh)	Peak Demand (MW)	NEL (GWh)
January	3,307	1,179	3,018	1,059	3,523	1,189
February	3,107	1,041	3,065	1,024	3,126	1,048
March	2,211	1,020	2,471	1,026	2,535	1,050
April	2,701	1,036	2,441	1,039	2,502	1,059
May	2,803	1,253	2,809	1,242	2,871	1,264
June	3,137	1,434	2,944	1,336	2,995	1,358
July	3,243	1,574	3,016	1,442	3,087	1,463
August	3,164	1,479	3,045	1,449	3,104	1,468
September	2,997	1,338	2,875	1,311	2,929	1,333
October	2,690	1,129	2,577	1,118	2,630	1,140
November	2,238	952	2,489	993	2,548	1,017
December	2,410	1,035	2,766	1,136	2,823	1,158
ANNUAL		14,471		14,175		14,548

NOTE: Peak demand for January 2017 is actual.

¹ Peak demand includes interruptible load; Excludes distributed generation, load management and SEPA allocations.

² Peak demand excludes Interruptible load, distributed generation, load management and SEPA allocations.

2.4 Fuel Requirements

Seminole's coal, oil, and natural gas requirements for owned and future generating units are shown on Schedule 5 below.

Schedule 5 Fuel Requirements For Seminole Generating Resources														
Fuel Requirements		Units	Actual		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
			2015	2016										
Nuclear		Trillion BTU	-	-	-	-	-	-	-	-	-	-	-	-
Coal		1000 Tons	3,048	2,997	3,290	3,039	3,021	2,934	2,727	2,611	2,397	2,431	2,447	2,481
Residual	Total	1000 BBL	-	-	-	-	-	-	-	-	-	-	-	-
	Steam	1000 BBL	-	-	-	-	-	-	-	-	-	-	-	-
	CC	1000 BBL	-	-	-	-	-	-	-	-	-	-	-	-
	CT	1000 BBL	-	-	-	-	-	-	-	-	-	-	-	-
Distillate	Total	1000 BBL	33	32	37	34	34	33	31	30	27	28	29	28
	Steam	1000 BBL	32	32	37	34	34	33	31	30	27	28	28	28
	CC	1000 BBL	1	0	-	-	-	-	-	-	-	-	-	-
	CT	1000 BBL	-	0	-	-	-	-	-	-	-	-	1	-
Natural Gas	Total	1000 MCF	18,895	24,856	24,403	28,321	28,200	29,312	41,445	50,048	61,392	62,745	66,287	67,931
	Steam	1000 MCF	-	-	-	-	-	-	-	-	-	-	-	-
	CC	1000 MCF	17,529	23,177	23,631	27,477	27,455	28,658	40,997	49,678	61,176	62,457	65,445	66,875
	CT	1000 MCF	1,366	1,679	772	844	745	654	448	370	216	288	842	1,056

NOTE: Above fuel is for existing and future owned generating resources (excludes purchased power contracts).
Totals may not add due to rounding.

2.5 Energy Sources by Fuel Type

Seminole's total system energy sources in GWh and percent for each fuel type are shown on Schedules 6.1 and 6.2, respectively, on the following pages. Generation listed under renewable reflects the renewable units output but Seminole may sell a portion of the renewable energy credits associated with its renewable generation to third parties. The third parties can use the credits to meet mandatory or voluntary renewable requirements. Seminole's additional requirements for capacity beyond 2021 are assumed to be from gas/oil resources. Due to concerns over proposed environmental regulations that would impact coal units negatively, future coal generation was not currently considered as a viable resource option.

**Schedule 6.1
Energy Sources (GWh)**

Energy Sources		Units	Actual		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
			2015	2016										
Inter-Regional Interchange		GWh	-	-	-	-	-	-	-	-	-	-	-	-
Nuclear		GWh	-	-	-	-	-	-	-	-	-	-	-	-
Coal		GWh	7,803	7,488	8,173	7,418	7,379	7,124	6,545	6,215	5,612	5,701	5,756	5,844
Residual	Total	GWh	-	-	-	-	-	-	-	-	-	-	-	-
	Steam	GWh	-	-	-	-	-	-	-	-	-	-	-	-
	CC	GWh	-	-	-	-	-	-	-	-	-	-	-	-
	CT	GWh	-	-	-	-	-	-	-	-	-	-	-	-
Distillate	Total	GWh	36	37	34	43	41	37	38	27	21	22	25	23
	Steam	GWh	19	18	22	20	20	19	18	17	15	15	16	16
	CC	GWh	17	17	10	17	13	17	13	9	6	6	6	7
	CT	GWh	-	2	2	6	8	1	7	1	-	1	3	-
Natural Gas	Total	GWh	5,333	6,015	5,322	6,523	6,913	7,394	8,206	8,763	9,623	9,865	10,297	10,533
	Steam	GWh	-	-	-	-	-	-	-	-	-	-	-	-
	CC	GWh	5,052	5,737	5,187	6,337	6,761	7,278	8,146	8,715	9,598	9,830	10,194	10,413
	CT	GWh	281	278	135	186	152	116	60	48	25	35	103	120
NUG		GWh	-	-	-	-	-	-	-	-	-	-	-	-
Renewables *		GWh	932	931	646	564	538	532	527	526	517	428	186	90
Other		GWh	-	-	-	-	-	-	-	-	-	-	-	-
Net Energy for Load		GWh	14,104	14,471	14,175	14,548	14,871	15,087	15,316	15,531	15,773	16,016	16,264	16,490

NOTE: Net interchange, unit power purchases and DEF and FPL system purchases are included under source fuel categories.

Totals may not add due to rounding.

* Seminole Electric Cooperative may sell a portion of the renewable energy credits associated with its renewable generation to third parties. The third parties can use the credits to meet mandatory or voluntary renewable requirements.

**Schedule 6.2
Energy Sources (Percent)**

Energy Sources		Units	Actual		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
			2015	2016										
Inter-Regional Interchange		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Nuclear		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Coal		%	55.32%	51.75%	57.65%	50.99%	49.62%	47.22%	42.74%	40.02%	35.58%	35.60%	35.39%	35.44%
Residual	Total	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Steam	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	CC	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	CT	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Distillate	Total	%	0.26%	0.26%	0.24%	0.30%	0.28%	0.25%	0.25%	0.17%	0.13%	0.14%	0.15%	0.14%
	Steam	%	0.14%	0.12%	0.15%	0.14%	0.13%	0.13%	0.12%	0.11%	0.10%	0.09%	0.10%	0.10%
	CC	%	0.12%	0.13%	0.08%	0.12%	0.10%	0.11%	0.08%	0.05%	0.03%	0.04%	0.03%	0.04%
	CT	%	0.00%	0.01%	0.01%	0.04%	0.05%	0.01%	0.05%	0.01%	0.00%	0.01%	0.02%	0.00%
Natural Gas	Total	%	37.81%	41.57%	37.55%	44.84%	46.49%	49.01%	53.58%	56.42%	61.01%	61.59%	63.31%	63.88%
	Steam	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	CC	%	35.82%	39.64%	36.60%	43.56%	45.47%	48.24%	53.18%	56.11%	60.85%	61.38%	62.68%	63.15%
	CT	%	1.99%	1.92%	0.95%	1.28%	1.02%	0.77%	0.39%	0.31%	0.16%	0.21%	0.63%	0.73%
NUG		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Renewables *		%	6.61%	6.43%	4.56%	3.88%	3.62%	3.53%	3.44%	3.39%	3.28%	2.67%	1.14%	0.55%
Other		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net Energy for Load		%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

NOTE: Net interchange, unit power purchases and DEF and FPL system purchases are included under source fuel categories.
Totals may not add due to rounding.

* Seminole Electric Cooperative may sell a portion of the renewable energy credits associated with its renewable generation to third parties. The third parties can use the credits to meet mandatory or voluntary renewable requirements

3. FORECASTING METHODS AND PROCEDURES

3.1 Forecasting Methodology

Seminole adheres to generally accepted methodology and procedures currently employed in the electric utility industry to forecast number of consumers, energy, and peak demand. Forecast models are developed using regression analysis. Each Member Cooperative is modeled separately based on the unique growth characteristics in that service territory. Seminole produces monthly forecasts for each Member system, and when applicable, by rate classification. Seminole's system forecast is the aggregate of Member system forecasts. Model input data sources include Member Rural Utilities Services Form-7 Financial and Statistical Reports (RUS Form-7), Moody's Economic Consumer and Credit Analytics (ECCA), and University of Florida's Bureau of Economic and Business Research (UF BEBR), Seminole's System Operations Power Billing System (PBS), Itron, Bureau of Labor Statistics (BLS) and AccuWeather.

3.1.1 Consumer Model

Numbers of consumers are modeled by month with regression analysis. Explanatory variables analyzed in these models include population, housing statistics, and economic indicators. Consumer models are specified by Member total and by rate classification. Rate class forecasts are reconciled to match, in aggregate, the total consumer forecasts by Member. Territorial agreements and information provided directly from Member representatives regarding anticipated changes in service territories are incorporated in forecast projections. The "other" consumer class represents a small portion of Member energy sales, including irrigation, street and highway lighting, public buildings, and sales for resale.

3.1.2 Energy Model

Forecasts of Member energy purchases from Seminole are developed using regression analysis on hourly delivery point meter data aggregated to monthly values. Models are developed by Member total and by rate classification. Explanatory variables analyzed in these models include temperature and precipitation statistics, population and housing statistics, economic indicators, and price projections developed internally. Parameters explaining the reduction in load due to energy efficiency are also included. Member rate class energy purchases from Seminole are derived by scaling-up RUS Form-7 monthly energy sales to end-users by distribution loss factors. Rate class forecasts are reconciled bottom-up to match total level forecasts.

3.1.3 Peak Demand Model

Maximum peak demand is modeled by month and by season for each Member system using regression analysis. Explanatory variables analyzed in these models include temperature and precipitation statistics, population and housing statistics, gross product, internal electricity price data, load factor and energy efficiency.

Seasonal peak models are designed to predict winter and summer peaks based on a range of months where the highest peaks are expected to occur in each season. Winter seasonal peak models regress the highest peak during November through March of each year against contemporaneous explanatory variables. Summer seasonal peak models regress the highest peak from April through September of each year against contemporaneous explanatory variables. Seasonal peak forecasts replace monthly model forecast results for the month each seasonal peak is most likely to occur.

Seminole's maximum demand is the aggregate of the one-hour simultaneous demands of

all Members that maximizes the peak of the system in a single month. Forecasts of Seminole maximum demand are derived by applying coincident factors to Member-maximum demand forecasts. Future peak demands coincident with Seminole may be equal to or less than Member non-coincident maximum peaks, if the Member peak is normally not coincident with Seminole.

Load factor forecasts are derived through regression analysis of daily and monthly temperatures leading up to the peak day. These models are also developed by month and by season.

3.1.4 Alternative-Scenario Models

In addition to the base forecasts, Seminole produces high and low forecasts based on population growth alternatives provided by UF BEBR. Seminole's system is primarily residential and population growth is the primary driver for load growth. Seminole also forecasts load conditions given mild and severe temperatures in a Member's geographical region. We show a set of alternative projections associated with the statistical error of each model at the 95 percent prediction interval.

3.2 Load Forecast Data

The primary resources for load forecasting are weather data, economic data, Member retail data, delivery point meter data, and energy efficiency data. Number of consumers and sales by consumer class are provided by Members through the Form-7 financial report. Hourly delivery point load data is provided monthly by Seminole's System Operations department. Independent source data for economic and demographic statistics as well as energy efficiency are provided by government and credit rating agencies, independent vendors, and local universities.

Energy efficiency data for load forecast models are derived by combining Itron

Statistically Adjusted End-Use (SAE) spreadsheets and Member residential appliance saturation surveys. Itron's spreadsheets provide appliance energy consumption and equipment stock historical data and projections from the U.S. Energy Information Administration's (EIA) Annual Energy Outlook (AEO) for the South Atlantic census region. Seminole also uses electric appliance saturation statistics captured in Member residential surveys to better reflect Member territory equipment adoption trends. These data are analyzed by utilizing Itron's Statistically SAE indexing methodology interacted with temperature statistics to produce "heat-use index", "cool-use index", and "base-use index" time-series at the usage-per-consumer level. These statistics are scaled to fit Seminole's total-energy requirement models by rate class and are aggregated to a Member-system total using weighted combinations. The SAE theory for calculating commercial energy efficiency variables is optimized by incorporating County-level employment by industry data from the BLS to approximate weighted shares and intensities of industrial equipment within each Member Cooperative's service territory as opposed to the broader South Atlantic census region. Last, the "other" rate class efficiency assumptions include lighting efficiencies for Member Cooperatives that account for public street and highway lighting in this classification.

3.2.1 Materials Reviewed and/or Employed

Load Data by Delivery Point:

- Seminole's System Operations' Power Billing System (PBS)

Retail Number of Consumers, Energy Sales by Rate Class:

- Rural Utilities Services Form-7 Financial and Statistical Reports (RUS Form-7)

Individual Large Consumer Loads Over 1000 kVA:

- Member provided

Demographic and Economic Indicators:

- DataBuffet, Moody's Analytics Economic Consumer and Credit Analytics (ECCA)
- Projections of Florida Population by County, Volume 49, Bulletin 174, University of Florida Bureau of Economic and Business Research (UF BEBR)
- Employment by Industry, Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics (BLS)

Energy Efficiency:

- 2015 Annual Energy Outlook (AEO), U.S. Energy Information Administration (EIA)
- Residential and Commercial Statistically Adjusted End-Use Spreadsheets, Itron

Weather Data:

- AccuWeather

3.3 Significant Load Forecast Assumptions

3.3.1 Economic Assumptions

Seminole Members serve electricity to primarily-rural areas within 42 counties in the north, central, and south regions of Florida, which differ uniquely in geography, weather, and natural resources. These broad, low-density land areas are largely undeveloped. Population growth in Seminole's territory is sensitive to national economic and demographic factors that influence population migration from other states and metropolitan areas within Florida.

The Seminole system is expected to reach its highest growth potential over the next five years. The leading indicators for load growth are Florida's expanding economy and net migration prospects into the state, especially from "baby boomer" retirees. Consumer growth and business

activity will drive system growth, while downward pressure will come from flattening and declining residential end-use due to growth in efficient technologies, renewable generation, and alternative resources.

3.3.2 Weather Assumptions

Hourly temperature data for 25 weather stations in the proximity of Member service territories are provided by AccuWeather. Weather statistics for each Member's geographical area are derived from a set of weather stations that are found to best predict Member load over recent years.

Historical weather statistics input into forecast models include precipitation and relative humidity, minimum and maximum temperatures, and heating and cooling degree days. Monthly heating degree days represent the sum of degrees each daily average temperatures falls below 61° Fahrenheit, which is an approximate temperature when consumers turn on heating devices. Alternatively, monthly cooling degree days represent the sum of degrees each daily average temperatures exceeds 72° Fahrenheit, which is an approximate temperature when consumers turn on A/C units.

Normal weather statistics are based on a 30-year horizon of historical monthly observations. The two seasonal peak demand months for each year across the 30-year horizon are used to generate seasonal weather statistics. Extreme weather used for alternative-scenario forecasts include the 10th and 90th percentiles of historical temperatures, representing mild, and severe events, respectively.

4. FORECAST OF FACILITIES REQUIREMENTS

Seminole's forecasts of capacity and demand for the projected summer and winter peaks are in the following Schedules 7.1 and 7.2, respectively. The forecasts include the addition of approximately 1,650 MW of capacity by 2026. Such capacity is needed to replace expiring purchased power contracts and to serve increased Member load requirements while maintaining Seminole's reliability criteria.

Seminole's capacity expansion plan includes the need for three 244 MW class combustion turbine units and two 592 MW combined cycle plants, none of which are currently sited. The first combined cycle plant is scheduled to be in service May 2021 and the second combined cycle plant in December 2022. In addition, one combustion turbine unit is scheduled to enter service in December 2024 and the remaining two combustion turbines are scheduled to enter service in December 2027. A final decision as to whether Seminole will construct and own these additional facilities will be based upon future economic studies. The inclusion of these units in Seminole's capacity expansion plan does not represent at this time a commitment for construction by Seminole.

In March of 2015 Seminole issued a request for proposals for 2 MW of solar photovoltaic (PV) energy either through an Engineer, Procure, and Construct (EPC) contract or through a Purchase Power Agreement (PPA). On March 21 2016 Seminole finalized agreements for a 2.2 MW solar facility to be constructed at Seminole's MGS site in Hardee County. Seminole has incorporated a 2 MW solar photovoltaic facility into Seminole's ten year plan to be in service April 2017.

**Schedule 7.1
Forecast of Capacity, Demand and Scheduled Maintenance at Time of Summer Peak**

Year	Total Installed Capacity (MW)	Firm Capacity Import (MW)			Firm Capacity Export (MW)	QFs (MW)	Capacity Available (MW)		System Firm Summer Peak Demand (MW)		Reserve Margin Before Maintenance		Scheduled Maintenance (MW)	Reserve Margin After Maintenance	
		PR and FR	Other Purchases	Total			Total	Less PR and FR	Total	Obligation	MW	% of Pk		MW	% of Pk
2017	2,012	0	1,657	1,657	0	0	3,669	3,669	3,045	3,045	624	20%	0	624	20%
2018	2,012	0	1,642	1,642	0	0	3,654	3,654	3,104	3,104	550	18%	0	550	18%
2019	2,012	0	1,892	1,892	0	0	3,904	3,904	3,163	3,163	741	23%	0	741	23%
2020	2,012	0	1,891	1,891	0	0	3,903	3,903	3,207	3,207	696	22%	0	696	22%
2021	2,605	0	1,133	1,133	0	0	3,738	3,738	3,241	3,241	498	15%	0	498	15%
2022	2,605	0	1,190	1,190	0	0	3,794	3,794	3,290	3,290	504	15%	0	504	15%
2023	3,198	0	682	682	0	0	3,879	3,879	3,341	3,341	538	16%	0	538	16%
2024	3,198	0	713	713	0	0	3,911	3,911	3,391	3,391	520	15%	0	520	15%
2025	3,413	0	555	555	0	0	3,968	3,968	3,441	3,441	527	15%	0	527	15%
2026	3,413	0	608	608	0	0	4,021	4,021	3,487	3,487	534	15%	0	534	15%

- NOTES: 1. Total installed capacity and the associated reserve margins are based on Seminole's current base case plan and are based on a 15% reserve margin criterion.
2. Total Installed Capacity does not include SEPA or Solar.
3. Percent reserves are calculated at 15% of Seminole's obligation and include any surplus capacity.

Schedule 7.2
Forecast of Capacity, Demand and Scheduled Maintenance at Time of Winter Peak

Year	Total Installed Capacity (MW)	Firm Capacity Import (MW)			Firm Capacity Export (MW)	QFs (MW)	Capacity Available (MW)		System Firm Winter Peak Demand (MW)		Reserve Margin Before Maintenance		Scheduled Maintenance (MW)	Reserve Margin After Maintenance	
		PR and FR	Other Purchases	Total			Total	Less PR and FR	Total	Obligation	MW	% of Pk		MW	% of Pk
2017/18	2,178	0	2,329	2,329	0	0	4,507	4,507	3,523	3,523	985	28%	0	985	28%
2018/19	2,178	0	2,314	2,314	0	0	4,492	4,492	3,593	3,593	898	25%	0	898	25%
2019/20	2,178	0	2,564	2,564	0	0	4,742	4,742	3,646	3,646	1,096	30%	0	1,096	30%
2020/21	2,178	0	2,089	2,089	0	0	4,267	4,267	3,701	3,701	566	15%	0	566	15%
2021/22	2,770	0	1,553	1,553	0	0	4,323	4,323	3,750	3,750	572	15%	0	572	15%
2022/23	3,362	0	1,022	1,022	0	0	4,384	4,384	3,803	3,803	581	15%	0	581	15%
2023/24	3,362	0	1,084	1,084	0	0	4,446	4,446	3,857	3,857	588	15%	0	588	15%
2024/25	3,606	0	904	904	0	0	4,510	4,510	3,911	3,911	599	15%	0	599	15%
2025/26	3,606	0	961	961	0	0	4,567	4,567	3,962	3,962	605	15%	0	605	15%
2026/27	3,606	0	1,019	1,019	0	0	4,626	4,626	4,013	4,013	613	15%	0	613	15%

- NOTES: 1. Total installed capacity and the associated reserve margins are based on Seminole's current base case plan and are based on a 15% reserve margin criterion.
2. Total Installed Capacity does not include SEPA or Solar.
3. Percent reserves are calculated at 15% of Seminole's obligation and include any surplus capacity.

4.1 Planned and Prospective Generating Facility Additions and Changes

Schedule 8 below shows Seminole’s planned and prospective generating facility additions and changes.

Schedule 8 Planned and Prospective Generating Facility Additions and Changes														
Plant Name	Unit No	Location	Unit Type	Fuel		Transportation		Const. Start Date	Comm. In-Service Date	Expected Retirement Date	Max Nameplate	Summer MW	Winter MW	Status
				Pri	Alt	Pri	Alt							
MGS Solar	1	Hardee County	PV	Sun		N/A		5/2016	4/2017	Unk	2	0	0	P
SGS CC	1	Putnam County	CC	NG		PL		(1)	5/2021	Unk	592	593	592	P
Unnamed CC	2	TBA	CC	NG		PL		(1)	12/2022	Unk	592	593	592	P
Unnamed CT	1	TBA	CT	NG		PL		(1)	12/2024	Unk	244	215	244	P
Unnamed CT	2	TBA	CT	NG		PL		(1)	12/2027	Unk	244	215	244	P
Unnamed CT	3	TBA	CT	NG		PL		(1)	12/2027	Unk	244	215	244	P
NOTES:	(1) Future resource which may be existing or new as determined by future Request for Proposal results. (2) Abbreviations – See Schedule 1 (3) MGS Solar facility is planned to be a leased facility													

4.2 Proposed Generating Facilities

Schedule 9 below reports status and specifications of Seminole's proposed generating facilities.

Schedule 9 Status Report and Specifications of Proposed Generating Facilities		
1	Plant Name & Unit Number	MGS Solar Unit 1
2	Capacity a. Nameplate - AC (MW) b. Summer Firm - AC (MW): c. Winter Firm - AC (MW):	2 0 0
3	Technology Type:	Photovoltaic
4	Anticipated Construction Timing a. Field construction start-date: b. Commercial in-service date:	May 2016 April 2017
5	Fuel a. Primary fuel: b. Alternate fuel:	Sun
6	Air Pollution Control Strategy	N/A
7	Cooling Method:	N/A
8	Total Site Area:	TBD
9	Construction Status:	In Progress
10	Certification Status:	Planned
11	Status With Federal Agencies	N/A
12	Projected Unit Performance Data Planned Outage Factor (POF): Forced Outage Factor (FOF): Equivalent Availability Factor (EAF): Resulting Capacity Factor (%): Average Net Operating Heat Rate (ANOHR):	N/A N/A N/A 26.8% N/A
13	Projected Unit Financial Data (\$2021) Book Life (Years): Total Installed Cost (In-Service Year \$/kW): Direct Construction Cost (\$/kW): AFUDC Amount (\$/kW): Escalation (\$/kW): Fixed O&M (\$/kW-Yr): Variable O&M (\$/Run Hour): Variable O&M (\$/MWH): K Factor:	25 2,212 2,212 N/A N/A 0.02 N/A N/A N/A NOTE: MGS Solar is planned to be a leased facility

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

1	Plant Name & Unit Number	SGS CC Unit 1
2	Capacity a. Summer (MW): b. Winter (MW):	593 592
3	Technology Type:	Combined Cycle
4	Anticipated Construction Timing a. Field construction start-date: b. Commercial in-service date:	May 2018 May 2021
5	Fuel a. Primary fuel: b. Alternate fuel:	Natural Gas
6	Air Pollution Control Strategy	SCR
7	Cooling Method:	Wet Cooling Tower with Forced Air Draft Fans
8	Total Site Area:	SGS
9	Construction Status:	Planned
10	Certification Status:	Planned
11	Status With Federal Agencies	N/A
12	Projected Unit Performance Data Planned Outage Factor (POF): Forced Outage Factor (FOF): Equivalent Availability Factor (EAF): Resulting Capacity Factor (%): Average Net Operating Heat Rate (ANOHR):	4.50 2.50 93.00 50% 6550 Btu/kWh (HHV) - ISO Rating
13	Projected Unit Financial Data (\$2021) Book Life (Years): Total Installed Cost (In-Service Year \$/kW): Direct Construction Cost (\$/kW): AFUDC Amount (\$/kW): Escalation (\$/kW): Fixed O&M (\$/kW-Yr): Variable O&M (\$/Run Hour): Variable O&M (\$/MWH): K Factor:	30 942 884 57 Included in values above 8.28 - 0.08 N/A

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

1	Plant Name & Unit Number	Unnamed Generating Station CC Unit 2
2	Capacity a. Summer (MW): b. Winter (MW):	593 592
3	Technology Type:	Combined Cycle
4	Anticipated Construction Timing a. Field construction start-date: b. Commercial in-service date:	December 2019 December 2022
5	Fuel a. Primary fuel: b. Alternate fuel:	Natural Gas
6	Air Pollution Control Strategy	SCR
7	Cooling Method:	Wet Cooling Tower with Forced Air Draft Fans
8	Total Site Area:	SGS
9	Construction Status:	Planned
10	Certification Status:	Planned
11	Status With Federal Agencies	N/A
12	Projected Unit Performance Data Planned Outage Factor (POF): Forced Outage Factor (FOF): Equivalent Availability Factor (EAF): Resulting Capacity Factor (%): Average Net Operating Heat Rate (ANOHR):	4.50 2.50 93.00 50% 6550 Btu/kWh (HHV) - ISO Rating
13	Projected Unit Financial Data (\$2021) Book Life (Years): Total Installed Cost (In-Service Year \$/kW): Direct Construction Cost (\$/kW): AFUDC Amount (\$/kW): Escalation (\$/kW): Fixed O&M (\$/kW-Yr): Variable O&M (\$/Run Hour): Variable O&M (\$/MWH): K Factor:	30 980 904 76 Included in values above 8.40 - 0.08 N/A

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

1	Plant Name & Unit Number	Unnamed Generating Station CT Unit 1
2	Capacity a. Summer (MW): b. Winter (MW):	215 244
3	Technology Type:	Combustion Turbine
4	Anticipated Construction Timing a. Field construction start-date: b. Commercial in-service date:	December 2022 December 2024
5	Fuel a. Primary fuel: b. Alternate fuel:	Natural Gas
6	Air Pollution Control Strategy	Dry Low NOx Burner
7	Cooling Method:	Air
8	Total Site Area:	TBD
9	Construction Status:	Planned
10	Certification Status:	Planned
11	Status With Federal Agencies	N/A
12	Projected Unit Performance Data Planned Outage Factor (POF): Forced Outage Factor (FOF): Equivalent Availability Factor (EAF): Resulting Capacity Factor (%): Average Net Operating Heat Rate (ANOHR):	1.4 3.5 95.1 5% 9807 Btu/kWh (HHV) - ISO Rating
13	Projected Unit Financial Data (\$2022) Book Life (Years): Total Installed Cost (In-Service Year \$/kW): Direct Construction Cost (\$/kW): AFUDC Amount (\$/kW): Escalation (\$/kW): Fixed O&M (\$/kW-Yr): Variable O&M (\$/MWH): K Factor:	30 566 547 19 Included in values above 7.20 0.25* N/A *Variable O&M does not include start up charge of \$5,970 per start

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

1	Plant Name & Unit Number	Unnamed Generating Station CT Unit 2&3
2	Capacity a. Summer (MW): b. Winter (MW):	215 244
3	Technology Type:	Combustion Turbine
4	Anticipated Construction Timing a. Field construction start-date: b. Commercial in-service date:	December 2025 December 2027
5	Fuel a. Primary fuel: b. Alternate fuel:	Natural Gas
6	Air Pollution Control Strategy	Dry Low NOx Burner
7	Cooling Method:	Air
8	Total Site Area:	TBD
9	Construction Status:	Planned
10	Certification Status:	Planned
11	Status With Federal Agencies	N/A
12	Projected Unit Performance Data Planned Outage Factor (POF): Forced Outage Factor (FOF): Equivalent Availability Factor (EAF): Resulting Capacity Factor (%): Average Net Operating Heat Rate (ANOHR):	1.4 3.5 95.1 5% 9807 Btu/kWh (HHV) - ISO Rating
13	Projected Unit Financial Data (\$2022) Book Life (Years): Total Installed Cost (In-Service Year \$/kW): Direct Construction Cost (\$/kW): AFUDC Amount (\$/kW): Escalation (\$/kW): Fixed O&M (\$/kW-Yr): Variable O&M (\$/MWH): K Factor:	30 607 584 23 Included in values above 7.72 0.27* N/A *Variable O&M does not include start up charge of \$6,382 per start

4.3 Proposed Transmission Lines

Schedule 10 below reports status and specifications of Seminole's proposed directly associated transmission lines corresponding with proposed generating facilities.

Schedule 10 Status Report and Specifications of Proposed Associated Transmission Lines		
1	Point of Origin and Termination:	Unknown
2	Number of Lines:	To be determined
3	Right-of-Way	To be determined
4	Line Length:	To be determined
5	Voltage:	To be determined
6	Anticipated Construction Timing:	To be determined
7	Anticipated Capital Investment:	To be determined
8	Substation:	To be determined
9	Participation with Other Utilities:	N/A

5. OTHER PLANNING ASSUMPTIONS AND INFORMATION

5.1 Transmission Reliability

In general, Seminole models its transmission planning criteria after the Florida Reliability Coordinating Council's ("FRCC") planning guidelines. The FRCC has modeled its planning guidelines consistent with the North American Electric Reliability Corporation's ("NERC") Reliability Standards. In addition, Seminole uses the following voltage and thermal criteria as guidelines for all stations:

1. No station voltages generally above 1.05 per unit or below 0.90 per unit under normal or contingency conditions.
2. Transmission facilities shall not exceed their applicable facility rating under normal or contingency conditions.

5.2 Plan Economics

Power supply alternatives are compared against a base case scenario which is developed using the most recent load forecast, fuel forecast, operational cost assumptions, and financial assumptions. Various power supply options are evaluated to determine the overall effect on the present worth of revenue requirements (PWRR). All other things being equal, the option with the lowest long-term PWRR is normally selected. Sensitivity analyses are done to test how robust the selected generation option is when various parameters change from the base study assumptions (e.g., load forecast, fuel price, and capital costs of new generation).

5.3 Fuel Price Forecast

5.3.1 Coal

Spot and long-term market commodity prices for coal (at the mine) and transportation rates have shown increased volatility in recent years. This condition is expected to continue into the future, as environmental rules/standards, coal generating station retirements, coal supply/demand imbalances, coal transportation availability/pricing, and world energy markets all combine to affect U.S. coal prices. The underlying value of coal at the mine will continue to be driven by changing domestic demand, reductions to the number of available coal suppliers, planned coal unit retirements, export opportunities for U.S. coal, and federal/state mine safety rules/legislation affecting the direct mining costs. Additional coal delivered price increases and volatility will come from the cost of transportation equipment (railcars), handling service contracts and freight transportation impacts. Railroads are also affected by reduced coal deliveries, federal rules and legislative changes and fuel oil markets, all of which are impacting the volatility of the cost of rail service in the U.S. As long-term rail transportation contracts come up for renewals, the railroads have placed upward pressure on delivered coal costs to increase revenues to overcome operating cost increases and reduced demand. However, since 2012, lower natural gas prices have created an opportunity for electric utilities to swap natural gas for coal-fired generation and this price arbitrage may have reduced the railroads' near-term ability to apply upward pricing pressure during contract renewals. CSX Transportation, Inc. is Seminole's sole coal transport provider and the parties are operating under a confidential multi-year rail transportation contract. Seminole also has a confidential multi-year coal contract with Alliance Coal, LLC providing a majority of our coal requirements from the Illinois Basin. Both of these existing relationships reduce Seminole's coal price volatility risk for the near term.

5.3.2 Fuel Oil

The domestic price for fuel oils will continue to reflect the price volatility of the world energy market for crude oil and refined products. In late 2014 and through 2016, the price for fuel oil moved down significantly across the globe. Seminole is currently only purchasing ultra-low sulfur fuel oil for its generating stations. As Seminole uses limited quantities of fuel oil to provide for the energy requirements of its members, fuel oil volatility is not a major driver in regards to system energy costs.

5.3.3 Natural Gas

At year-end 2016, natural gas prices had increased to nearly \$4.00 per mmBtu in response to relatively high gas demand and large storage withdrawals in the early part of the 2016/2017 winter heating season. Henry Hub gas prices for 2017 were \$3.60 per mmBtu. Beyond 2017, nominal gas prices are projected to remain near \$3.00 per mmBtu through 2024 before increasing to almost \$3.50 per mmBtu at the end of the ten-year study period.

5.3.4 Modeling of Fuel Sensitivity

Given the uncertainty of future fuel prices, the historical volatility of natural gas prices, and Seminole's reliance on gas as a significant component of its fuel portfolio, it is prudent to evaluate the impact of various gas prices on its alternative resources for meeting future needs. For this, Seminole incorporates both a high and low natural gas price forecast as a complement to its base case price forecast to support resource planning. Calculated with available market information (e.g. projected volatility of gas prices), Seminole's high/low gas price curves form a statistical confidence interval around its base case price forecast.

5.4 Coal/Gas Price Differential

The 2017 and 2018 market prices for natural gas and coal delivered to Seminole's generating units continue to reflect a significant narrowing of the price spread that existed between the two fuels over the prior ten years primarily due to soft gas prices. This spread is projected to invert, with natural gas prices below that of coal, beginning in 2019 and remain that way throughout the study period given the market's projection of depressed gas prices.

5.5 Modeling of Generation Unit Performance

Existing units are modeled with forced outage rates and heat rates for the near term based on recent historical data. The long-term rates are based on a weighting of industry average data or manufacturers' design performance data.

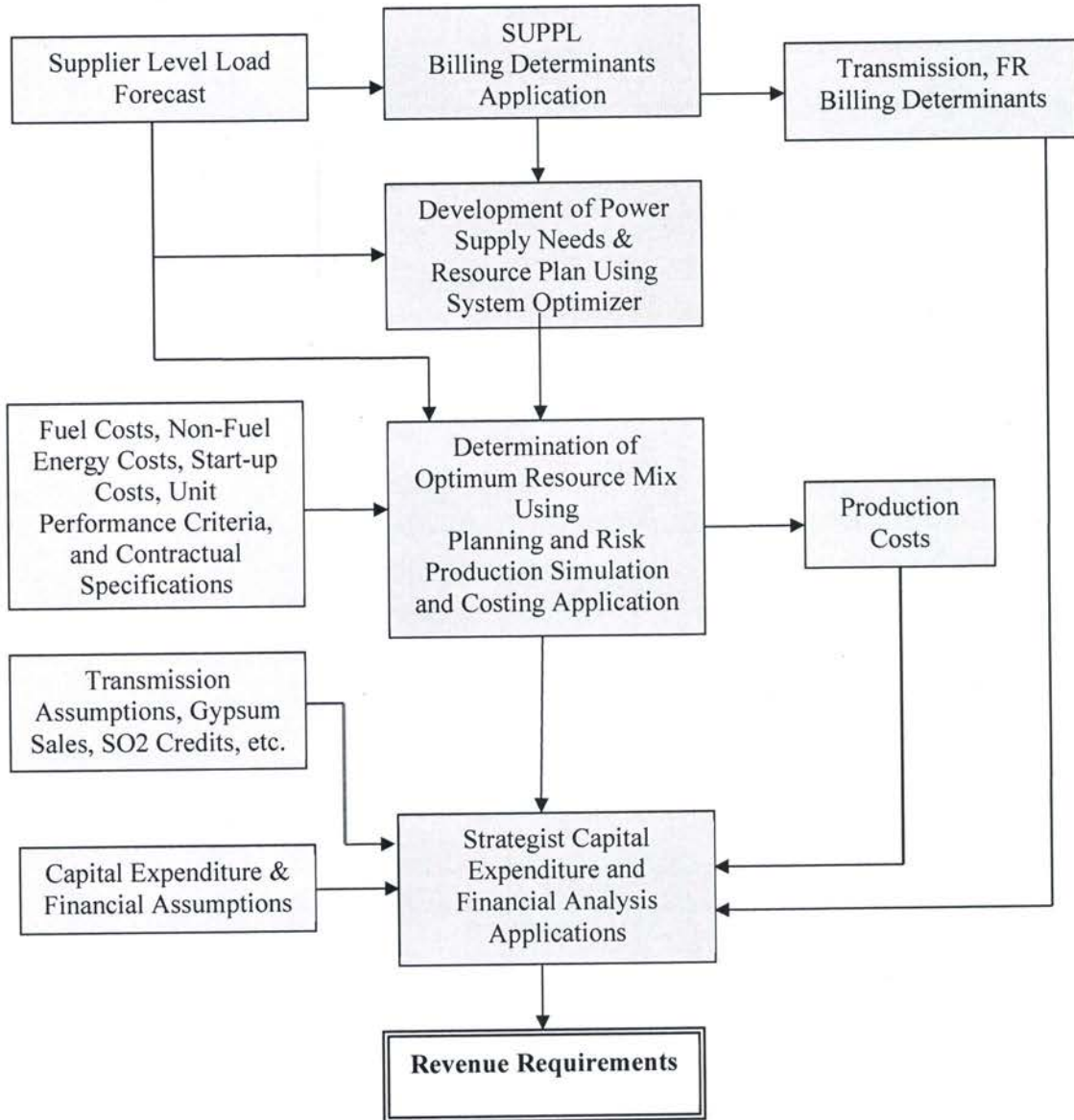
5.6 Financial Assumptions

Expansion plans are evaluated based on Seminole's forecast of market-based loan fund rates.

5.7 Resource Planning Process

Seminole's primary long-range planning goal is to develop the most cost-effective way to meet its Members' load requirements while maintaining high system reliability and managing risk. Seminole's optimization process for resource selection is based primarily on total revenue requirements. As a not-for-profit cooperative, revenue requirements translate directly into rates to our Members. The plan with the lowest revenue requirements is generally selected, assuming that other factors such as reliability impact, initial rate impact, risk, and strategic considerations are neutral. Seminole also recognizes that planning assumptions change over time, so planning decisions must be robust and are, therefore, tested over a variety of sensitivities. A flow chart of Seminole's planning process is shown below in Figure 5.1.

Figure 5.1
Resource Planning Process



5.8 Reliability Criteria

The total amount of generating capacity and reserves required by Seminole is affected by Seminole's load forecast and its reliability criteria. Reserves serve two primary purposes: to provide replacement power during generator outages; and to account for load forecast uncertainty. Seminole's primary reliability criteria is a minimum reserve margin of 15% during the peak season which ensures that Seminole has adequate generating capacity to provide reliable service to its Members and to limit Seminole's emergency purchases from interconnected, neighboring systems.

5.9 DSM Programs

Seminole promotes Member involvement in demand side management (DSM) through coincident peak billing and time-of-use energy rates as well as substation level conservation voltage reduction (CVR). The majority of Seminole's Members are active in managing their peak demand via one or more of these programs and several Members offer a time of use rate and a curtailable service rate to their commercial consumers for shifting energy usage from on-peak to off-peak periods.

Seminole's load management generation programs utilize standby generation on commercial consumer loads to lower demands at the time of the Seminole system peak demand. This program allows Seminole's Members to install distributed peaking generation resources on their system and/or to partner with their retail end-users to install "behind the meter" customer-based distributed generation (DG) to operate as dispatchable load management resources for Seminole's system, while providing load-center based generation to improve system reliability.

Seminole's load forecast accounts for reductions in peak demand resulting from DSM programs. Energy efficiency and energy conservation programs implemented by Seminole

Members have not been specifically quantified or estimated, but are both reflected in Seminole's load history and extrapolated into the future.

5.10 Strategic Concerns

In the rapidly changing utility industry, strategic and risk related issues are becoming increasingly important and play a companion role to economics in Seminole's power supply planning process. Seminole values resource diversity, flexibility and optionality as a hedge against a variety of risks, as evidenced by our current generation portfolio. Long-term resources contribute stability while shorter term arrangements add flexibility. Seminole considers both system and unit-specific capacity when determining our reserve requirements. Resource location and transmission interconnection is also a consideration for Seminole in constructing its portfolio. Flexibility in fuel supply is another significant strategic concern. A portfolio that relies on a diverse number of fuel types is better protected against extreme price fluctuations, supply interruptions, and transportation constraints/instability. Seminole believes that the existing and future diversity in its power supply plan has significant strategic value, leaving Seminole in a good position to respond to both market and industry changes while remaining competitive.

The ongoing debate over the further need to regulate carbon emissions, mercury emissions and/or whether to establish renewable resource mandates has introduced increased risks for electric utilities – among them is the risk of the most cost-effective fuels and associated technologies under current environmental regulations could change via new federal or state emissions rules. Using the best available information, Seminole is addressing these risks through its evaluation of a range of scenarios to assess what constitutes the best generation plan to ensure

adequate and competitively priced electric service to its Members. Given the current regulatory environment, Seminole has assumed that all future large generation additions will be primarily fueled with natural gas. Seminole is also reviewing the possibility of renewable generation additions, including solar.

5.11 Procurement of Supply-Side Resources

In making decisions on future procurement of power supply, Seminole compares self-build, acquisition, and purchased power alternatives. Seminole solicits proposals from reliable, creditworthy counterparties in the wholesale market. Seminole's evaluation of its options includes an assessment of economic life cycle cost, reliability, operational flexibility, strategic concerns, and risk elements.

5.12 Transmission Construction and Upgrade Plans

Seminole is in the process of assessing future combined cycle generation at Seminole's existing Seminole Generation Station Switchyard to identify any transmission upgrades or new transmission infrastructure required to support the additional generation,

6. ENVIRONMENTAL AND LAND USE INFORMATION

6.1 Potential Sites

6.1.1 Gilchrist Site – Gilchrist County, Florida

Seminole owns land in Gilchrist County but has not made a final determination if or when the site will be used for any of Seminole's future resource requirements. The Gilchrist site is approximately five-hundred twenty (520) acres in size. The site is located in the central portion of Gilchrist County, approximately two (2) miles east-northeast of Bell, Florida, and about thirty (30) miles west of Gainesville and may be suitable for installation of generation or transmission resources.

Following initial site evaluation in 2007, an additional site evaluation in 2015 included ecological surveys to identify current vegetation/land use types, listed plant or animal species, and location of any wetlands. Prior to the field surveys, available maps and other pertinent information were gathered and reviewed, including: wetland occurrence information documented on National Wetland Inventory (NWI) map(s) from the U.S. Fish and Wildlife Service (USFWS), soils maps information from the National Resource Conservation Service (NRCS), records of any listed plants or animals known from Gilchrist County that are available from online data and records maintained by the Florida Natural Areas Inventory (FNAI) and the Atlas of Florida Vascular Plants maintained by the University of South Florida Herbarium, lists of federally listed plants and animals maintained by USFWS, and records of eagle nest locations and wading bird rookeries that might occur within the site available on the Florida Fish and Wildlife Conservation Commission (FWC) website.

Much of the site has been used for silviculture (pine plantation) and consists of large tracts of planted longleaf and slash pine communities. Few natural upland communities remain. Most of these large tracts have been harvested, leaving xeric oak, and pine remnants. A few wetland communities remain on the east side of the site with relatively minor disturbances due to adjacent silvicultural activities. Evidence of listed species included the Sherman's fox squirrel (state species of special concern) and gopher tortoise (state threatened) burrows.

At such time as Seminole has determined the Gilchrist site should be considered a preferred site for the construction of generation or transmission facilities, Seminole will update the site evaluation and will obtain necessary approvals.

6.2 Preferred Sites

6.2.1 Midulla Generating Station (MGS) – Hardee County, Florida

MGS is located in Hardee and Polk Counties about nine (9) miles northwest of Wauchula. The site is bordered on the east by Old Castle, Inc., County Road 663, and a CSX railroad line. The remaining portions of the site are surrounded by The Mosaic Company property. Payne Creek flows along the site's south and southwestern borders. The site was originally strip-mined for phosphate and was reclaimed as pine flatwoods, improved pasture, and a cooling reservoir with a marsh littoral zone. Seminole's photovoltaic (PV) solar station will be operated on approximately 29-acres of land in Hardee County on the west side of the current plant entrance road and to the north of three onsite above ground storage tanks.

The PV solar station project boundary is located on land owned by Seminole, but is leased by Hardee Power Partners, therefore, the project was done as an amendment to the Hardee Power Station Conditions of Certification (COC). The MGS COC only includes the plant itself and directly related facilities.

6.2.1.1 Land and Environmental Features

a. U.S. Geological Survey Map

See Map 4

b. Proposed Facilities Layout

The current proposed configuration of the single-axis tracking solar facility is attached. See Map 5

c. Map of Site and Adjacent Areas

See Map 6

d. Existing Land Uses of Site and Adjacent Areas

The location upon which Seminole is constructing the solar station was previously found to be consistent with the land use plans and zoning ordinances of Hardee County as part of the 1990 site certification proceeding. The area is designated Industrial on the Hardee County Future Land Use Map and is zoned I-1, Industrial. The solar PV area of the site will be operated in an area that was most recently active cattle pasture. The adjacent areas include reclaimed mine lands with both forested and non-forested uplands and wetlands interspersed, as well as industrial land use designations.

e. General Environmental Features On and In the Site Vicinity

1. Natural Environment

The majority of the site is currently made up of MGS facilities, a 570-acre cooling reservoir, pastureland, and some forested and non-forested uplands and wetlands interspersed. The PV solar station is being constructed on an area that was formerly pastureland, and will not have

any wetland impacts.

2. Listed Species

A FNAI database query was done for the PV solar station and indicated no documented occurrences of any state or federal listed plant or animal species within 1-mile. Wildlife field surveys were performed on August 26 and 27, as well as December 8, 2015, and no listed species or signs of their presence were observed. Based on this information, no negative impacts to threatened or endangered species are anticipated as a result of the PV project.

3. Natural Resources of Regional Significance Status

There are no natural resources of regional significance on or adjacent to the PV solar station site.

4. Other Significant Features

Seminole is not aware of any other significant site features.

f. Design Features and Mitigation Options

The design includes construction of a single-axis tracking solar PV facility with approximately 2.2 MW of power generation. Because Seminole does not anticipate on-site wetland impacts, no mitigation is expected.

g. Local Government Future Land Use Designations

The solar station site is designated Industrial on the Hardee County Future Land Use Map.

h. Site Selection Criteria Process

The Seminole Solar site at MGS was selected as the location of the PV facility

based on various factors including system load, interconnection availability, and proximity to existing Seminole operations, and maintenance personnel, as well as economics.

i. Water Resources

Minimal amounts of water, if any, would be required for cleaning the PV panels. The intent is for the panels to be washed naturally from rainfall. If needed, additional water would be provided by water trucks or obtained from existing onsite permitted water resources.

j. Geological Features of Site and Adjacent Areas

The soil types found on and adjacent to the site include Smyrna fine sand, Myakka fine sand, Basinger fine sand, Floridana muck fine sand (depressional), Ona fine sand, and Bradenton-Felda-Chobee Association (frequently flooded). The soils are disturbed in most areas since the site is on reclaimed mine lands.

k. Projected Water Quantities for Various Uses

The PV solar station site requires minimal water, if any, for the cleaning of the panels in the absence of sufficient rainfall.

l. Water Supply Sources by Type

A water supply source is not required for this site. Any needed water may be brought to the site by water truck or obtained from existing onsite permitted water resources.

m. Water conservation Strategies Under Consideration

The PV solar station site does not require a permanent water source. Water conservation strategies include minimizing water use by cleaning the panels with

water only in the absence of sufficient rainfall and leaving the vegetation in and around the site as is with no required watering.

n. Water Discharges and Pollution Control

Although no discharges of water are planned at the PV site, the facility will implement Best Management Practices (BMP) to prevent, and control the inadvertent release of pollutants. No improvements or additions to the existing stormwater system are required for construction of the PV solar generating station as areas of impervious surface have been minimized and runoff will be allowed to percolate naturally into the underlying grassy area. Stormwater during construction and operation will be managed in accordance with the Florida Department of Environmental Protection's (FDEP) BMPs for stormwater, and in compliance with all applicable requirements.

o. Fuel Delivery, Storage, Waste Disposal, and Pollution Control

No traditional fuel sources are required and no waste products will be generated at the site.

p. Air Emissions and Control Systems

Solar PV does not generate air emissions.

q. Noise Emissions and Control Systems

Solar PV does not generate noise.

r. Status of Applications

FDEP issued a final order amending HPS certification to allow construction of a 2.2 MW AC / 2.68 MW DC PV solar generating station on April 8, 2016. The facility is currently under construction.

6.2.2 Seminole Generating Station (SGS) - Putnam County, Florida

SGS is located in a rural unincorporated area of Putnam County approximately five (5) miles north of the City of Palatka. The site is one thousand nine-hundred ninety-six (1,996) acres bordered by U.S. 17 on the west, and is primarily undeveloped land on the other sides. The site was certified in 1979 (PA78-10) for two 650 MW class coal-fired electric generating units, SGS Units 1 & 2. The SGS Site is the preferred location for potential construction and operation of a new natural gas-fired combined cycle (CC) unit of up to 1130 MW (maximum) with a nominal generating capacity of 1050 MW (net) to meet a need for additional capacity beginning in 2021.

6.2.2.1 Land and Environmental Features

a. U.S. Geological Survey Map

See map 7

b. Proposed Facilities Layout

See map 8

c. Map of Site and Adjacent Areas

See map 9

d. Existing Land Uses of Site and Adjacent Areas

Subject to future land use map amendments scheduled to conclude in April 2017 [see subparagraphs (g) and (r)], the existing land use for the majority of the SGS site is Industrial (IN), with smaller portions designated Agricultural II (A2) and Rural Residential (RR). The SGS site zoning is Planned Unit Development (PUD) and Agriculture (AG). Upon finalization of zoning modifications in April

2017 [see subparagraph (r)], the entire SGS site will be zoned PUD. The SGS site is currently utilized as a power generation facility. The portion of the SGS site on which potential new generation would be located is undeveloped woodland. The potential new CC unit would be located south of an existing substation, southwest of existing hyperbolic cooling towers, north of an SGS recreational area, and east of the existing SGS waste treatment area. When complete, the new CC unit would be surrounded by existing SGS facilities and wooded land. The northern, northwestern, western, northeastern, eastern and southern adjacent properties to SGS are designated A2. The RR land use designation abuts the portion of the property located south of CR 209.

e. General Environmental Features On and In the Site Vicinity

1. Natural Environment

The SGS site is currently used for electrical generation. Units 1 and 2 are located in the central portion of the site. The site is undeveloped except for Units 1 and 2 and ancillary facilities. Undeveloped portions of the site are primarily forested wetlands and uplands. The potential new CC unit would be located on an upland portion of the property, and Seminole does not anticipate any on-site impacts to wetlands.

2. Listed Species

Ecological surveys of the potential location for new generation revealed the presence of gopher tortoises, and one Sherman's fox squirrel was also observed. No listed plant species have been identified in the areas to be impacted. Gopher tortoises are a state-designated threatened species, and the

Sherman's fox squirrel is a state species of special concern. Neither species is federally listed. Seminole will comply with current (FWC) gopher tortoise permitting and relocation rules prior to commencing construction of the new CC unit. With regard to the Sherman's fox squirrel, suitable habitat exists outside of the potential area to be impacted. In addition, Seminole will conduct pre-clearing surveys to avoid adverse impacts to any listed species. For these reasons, no adverse impacts to threatened or endangered species are anticipated as a result of the potential new CC unit.

3. Natural Resources of Regional Significance Status

The site appears to be located partially within or near a recharge area identified on Figure 6, "Natural Resources of Regional Significance—Recharge Areas," of the Natural Resources of Regional Significance section of the Northeast Florida Regional Planning Council Strategic Regional Policy Plan.¹ However, as shown on map 10, much of the site is actually located in a discharge area, and none of the site is located in a high recharge area (defined as 8 inches or more per year in the Putnam County Comprehensive Plan, Conservation Element, Policy E.1.2.13, E.1.2.14; Putnam County Land Development Code, Section 6.07.02). Therefore, construction of the CC unit is not anticipated to impact recharge in the area.

4. Other Significant Features

Seminole is not aware of any other significant site features.

f. Design Features and Mitigation Options

The design includes a new up to 1050 MW (net nominal) CC unit, consisting of two combustion turbine generators, two heat recovery steam generators, and a steam turbine generator. Because Seminole does not anticipate on-site wetland impacts, no mitigation is anticipated.

g. Local Government Future Land Use Designations

As shown on map 9, most of the site (1,804 acres) is currently designated IN on the Putnam County Future Land Use Map. The remaining portions of the site (approximately 187 and 4.5 acres, respectively) are designated A2 and RR. On September 7, 2016, Seminole filed an application to amend the Putnam County Comprehensive Plan to consolidate the entire site under the Public Facilities (PF) land use category which allows Community Facilities and Services Type 4, of which power generating plants and facilities are one. Related Putnam County approvals have been subsequently obtained, and the Amendments are expected to be finalized in April 2017.

h. Site Selection Criteria Process

The SGS site has been selected as the location of a potential new CC unit based on various factors including land use/ownership, site development, electrical transmission, fuel supply, water supply, wastewater, environmental assessment, transportation, technology, schedule, and economics.

i. Water Resources

Water Resources include surface water from the St. Johns River and groundwater from the Upper Floridan Aquifer.

j. Geologic Features of Site and Adjacent Areas

Rock units ranging in age from Paleocene to recent underlay the SGS site. Formations and groups include (from oldest to youngest): the Cedar Keys Formation of Paleocene age; Avon Park Formation of middle Eocene Age; Ocala Limestone of late Eocene age; Hawthorn Group of Miocene age; and undifferentiated sediments of Pliocene and Holocene Age.

With the exception of the northern lowland of the site, the site is underlain by poorly graded sand with little or no fines to approximately 40 feet below ground surface (bgs). The northern lowland is organic silt to a depth of 4 bgs. The sand is underlain by a mixture of sandy silts and clays, silts, and clays to a depth of approximately 200 ft bgs. After 200 ft bgs, limestone is encountered.

k. Projected Water Quantities for Various Uses

Cooling water make-up: 8.261 million gallons per day (MGD)

Process water: 0.412 MGD

Potable water: 0.001 MGD

l. Water Supply Sources by Type

Cooling water make-up: Surface Water

Process water: Floridan Aquifer System

Potable water: Floridan Aquifer System

m. Water Conservation Strategies Under Consideration

Water conservation measures that are incorporated into the current operation of SGS include the collection, treatment, and recycling of plant process wastewater streams. This wastewater reuse minimizes groundwater and service water uses.

A portion of recirculated condenser cooling water (cooling tower blowdown) is withdrawn from the closed cycle cooling tower and discharged to the St. Johns River. Site stormwater is reused to the maximum extent possible and any not reused is treated in wet detention ponds and released to onsite wetlands.

The potential new CC unit will likewise utilize a closed cooling system that will cycle cooling water approximately three times prior to disposal. In addition, like the existing SGS units, the source of cooling water make-up is tidally-influenced surface water. Water conservation measures will include collection, treatment, and recycling of plant process wastewater streams to minimize groundwater and service water uses. The new CC unit will not require any additional surface water allocation and will require less than 0.5 MGD of additional ground water.

n. Water Discharges and Pollution Control

The potential new CC unit will utilize a closed cycle cooling system with cooling towers for heat dissipation, minimizing water discharges. Heat recovery steam generator blowdown and evaporative cooler blowdown will also be reused in the cooling tower. Cooling tower blowdown will be combined with treated sanitary waste and other wastewaters for discharge via existing infrastructure. Discharge from the existing SGS units is to the St. Johns River, and the potential new CC unit will utilize the same discharge location. The current discharge meets, and any future discharge will meet, all applicable requirements. Stormwater management and treatment will be provided via an on-site stormwater management system designed based on, at a minimum, the 25-year, 24-hour storm and in accordance with all applicable federal, state, and local requirements.

o. Fuel Delivery, Storage, Waste Disposal, and Pollution Control

Natural gas will be delivered to SGS via a new pipeline lateral from existing regional gas lines. At this time, Seminole has not determined what entity will supply gas for the new CC unit or will own and operate the natural gas pipeline lateral. Solid waste will be disposed of at an appropriate off-site landfill. All hazardous waste generated during operation of the new CC unit will be managed in accordance with applicable requirements. Seminole will implement BMPs to prevent and control the inadvertent release of pollutants.

p. Air Emissions and Control Systems

Air emissions will be minimized through the use of clean natural gas as the fuel source for the new CC unit, efficient CC technology, internal combustion controls, and air pollution control equipment. The combustor design will minimize the formation of nitrogen oxides (NO_x), carbon monoxide (CO) and volatile organic compounds (VOCs). Selective catalytic reduction (SCR) will further control NO_x emissions.

q. Noise Emissions and Control Systems

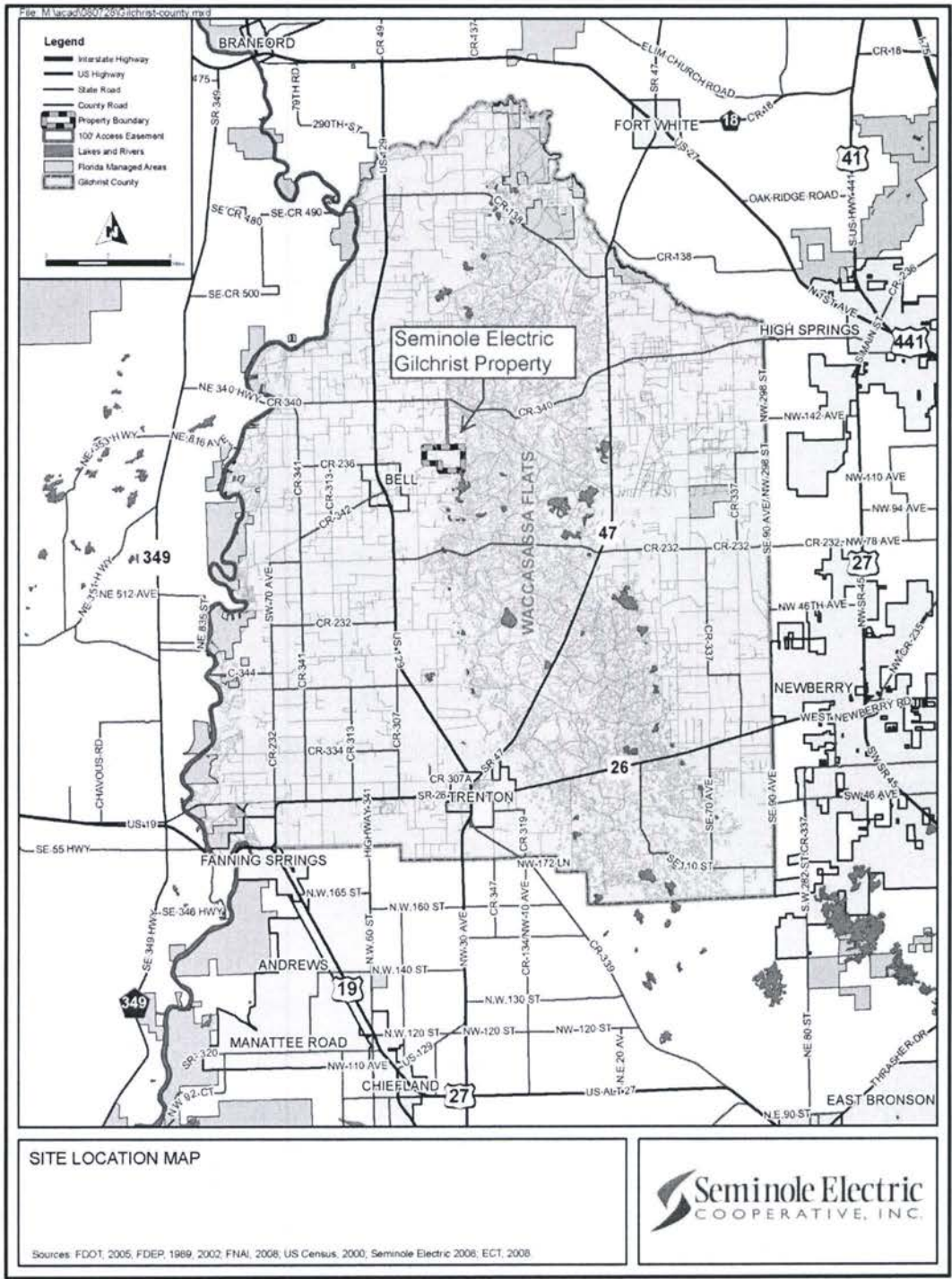
Off-site noise impacts from the new CC unit are expected to be minimal given that the site has been in operation for electrical generation for decades. Further, the area to be impacted on-site is more than 1,300 feet from the site boundary and over 2,000 feet from the nearest residence. Any noise generated by the new CC unit will comply with or be below permissible Putnam County sound levels.

r. Status of Applications

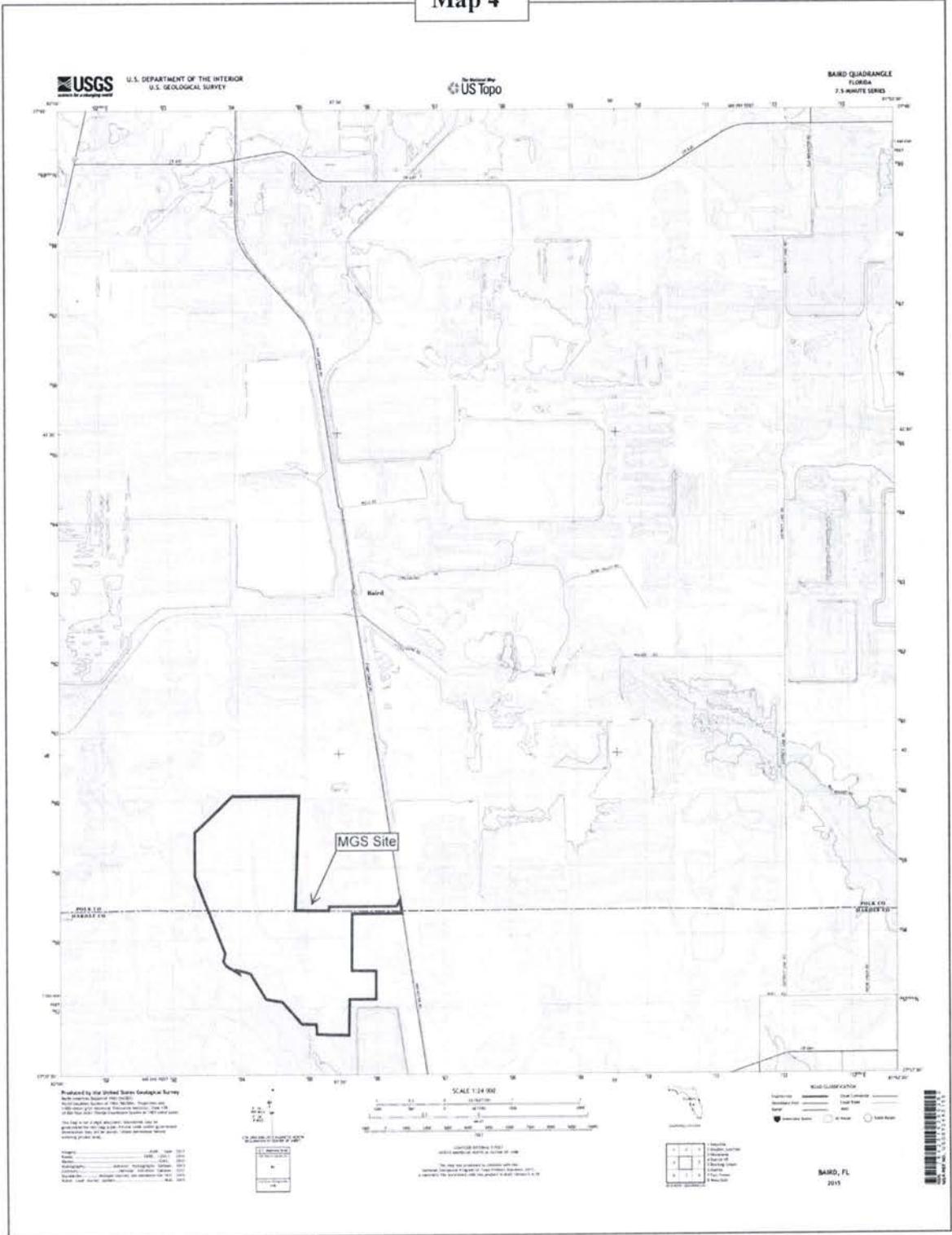
Applications will be made to the Florida Department of Environmental Protection

(FDEP) to certify the new CC unit under the PPSA, revise the existing National Pollutant Discharge Elimination System (NPDES) permit, and modify the existing Prevention of Significant Deterioration (PSD) air construction permit. Final Putnam County Future Land Use Amendments and Zoning Modifications were approved on March 14, 2017 and will be effective in April 2017.

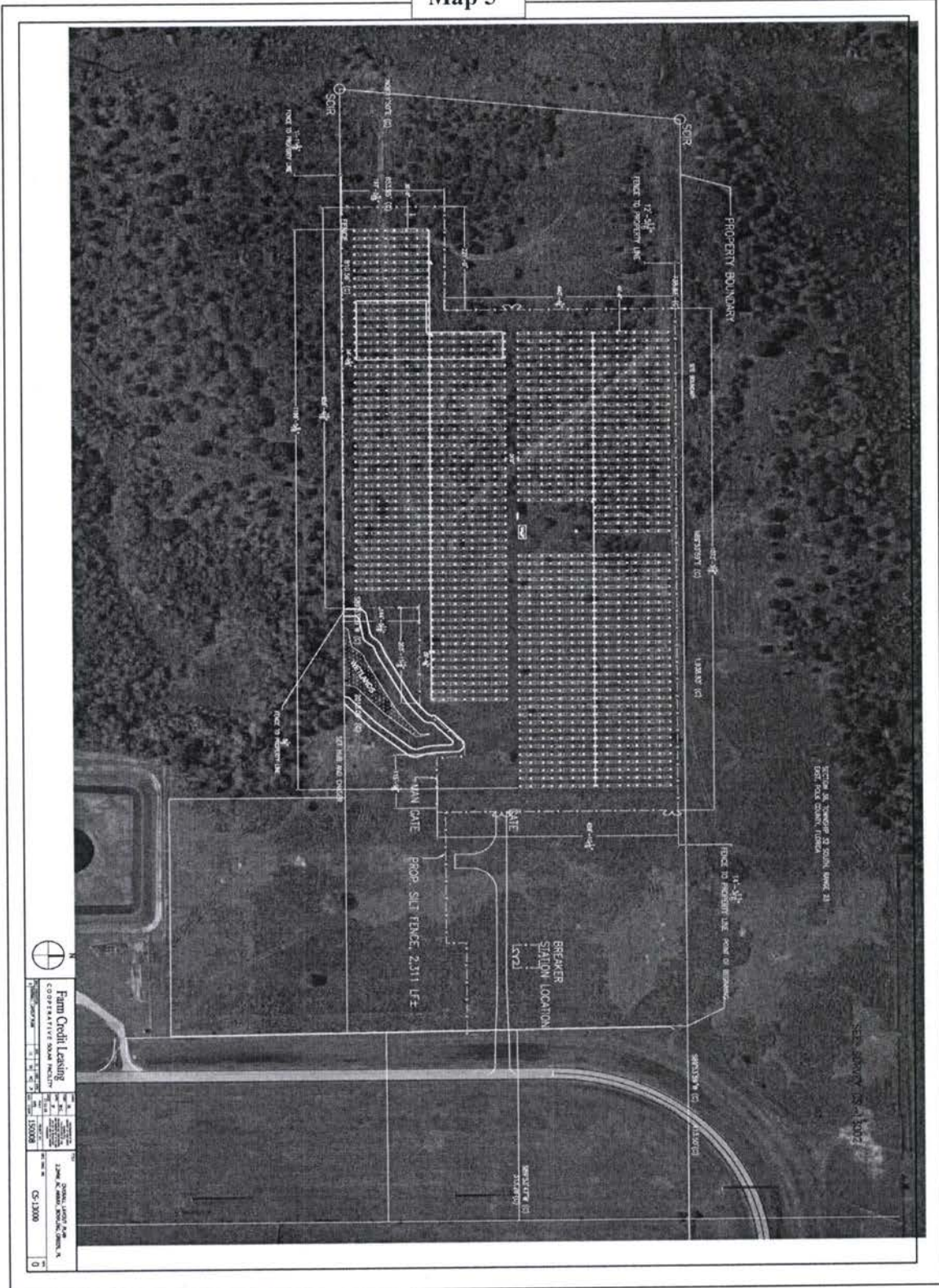
Map 3



Map 4



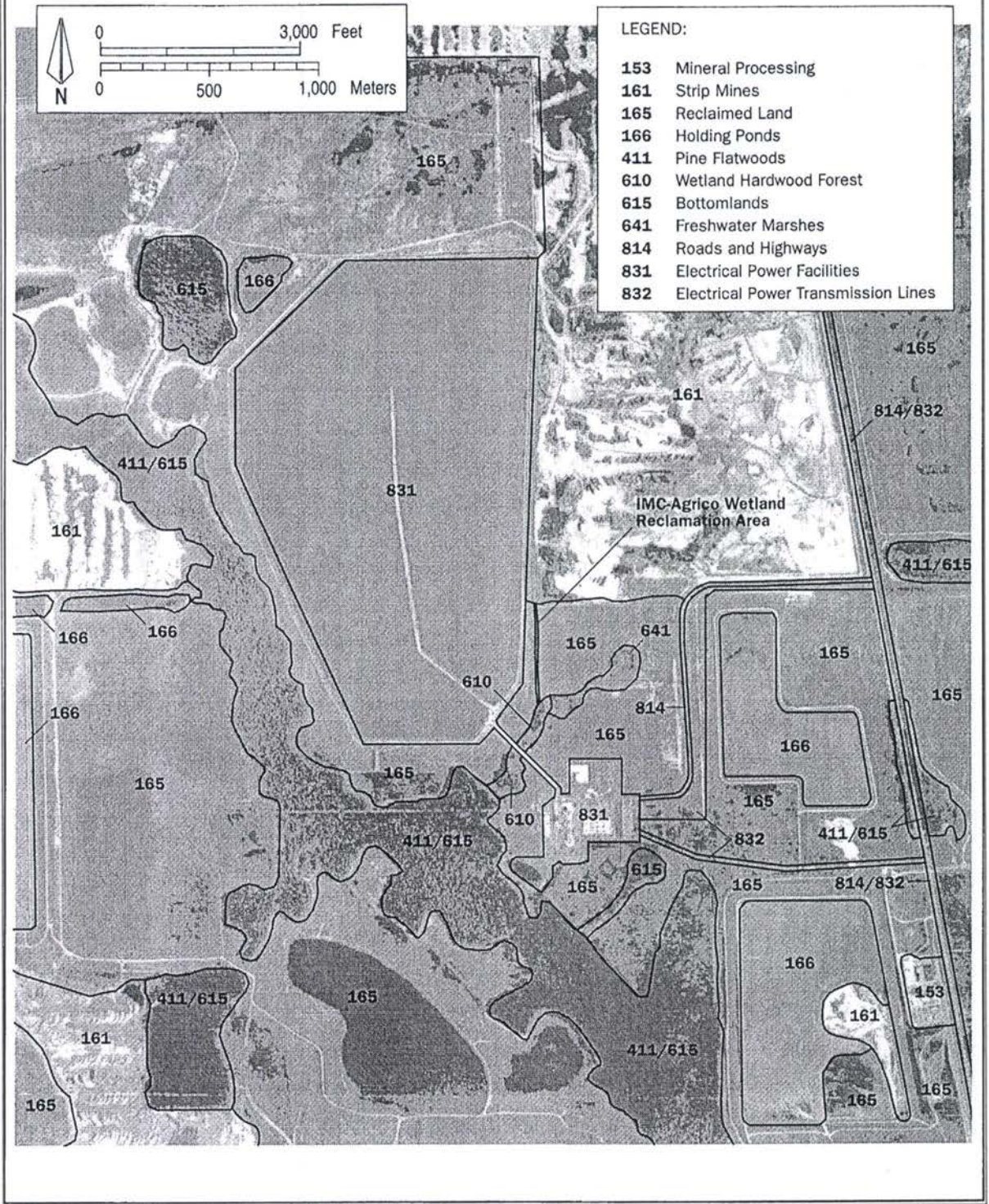
Map 5



Map 6

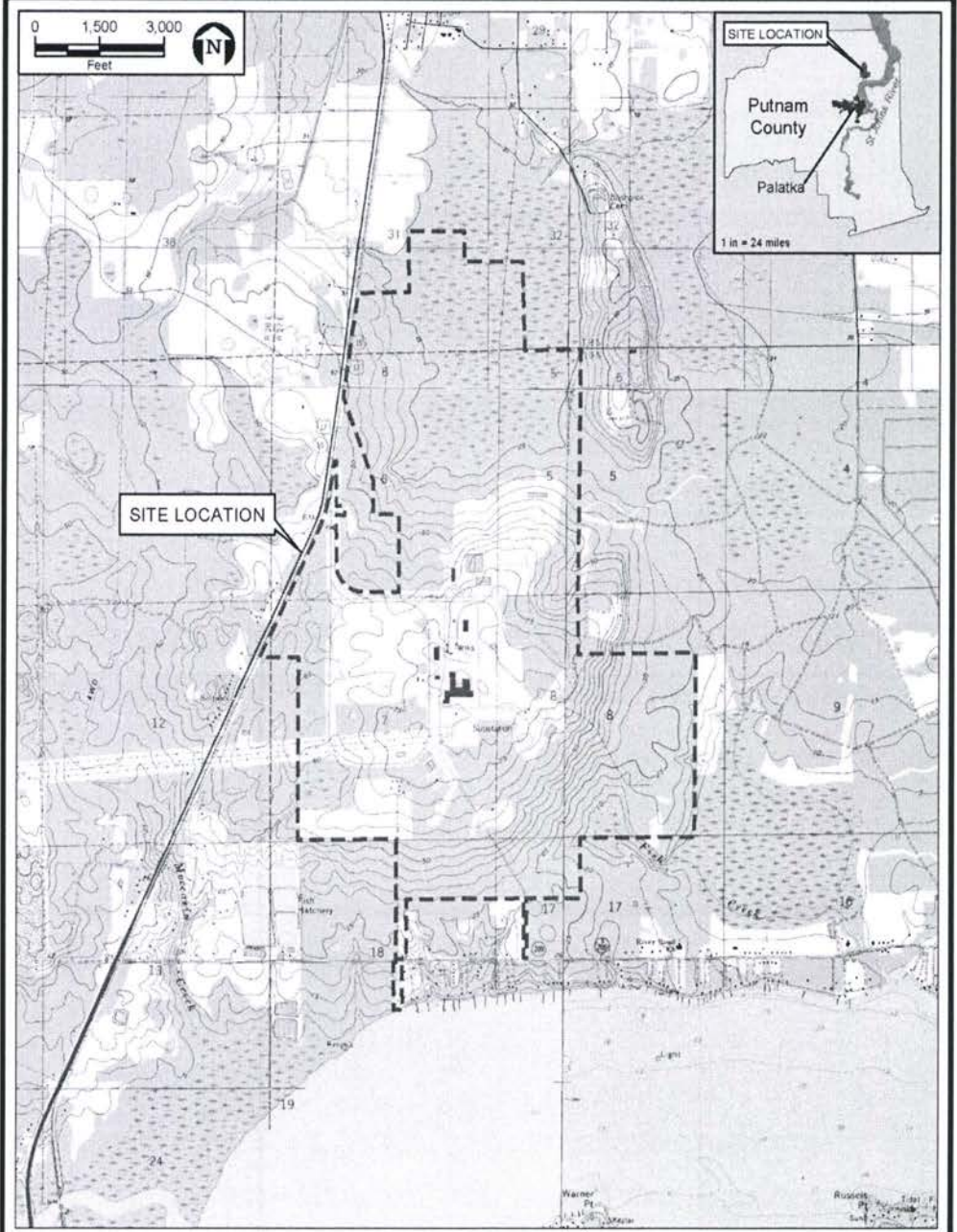
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Map 7

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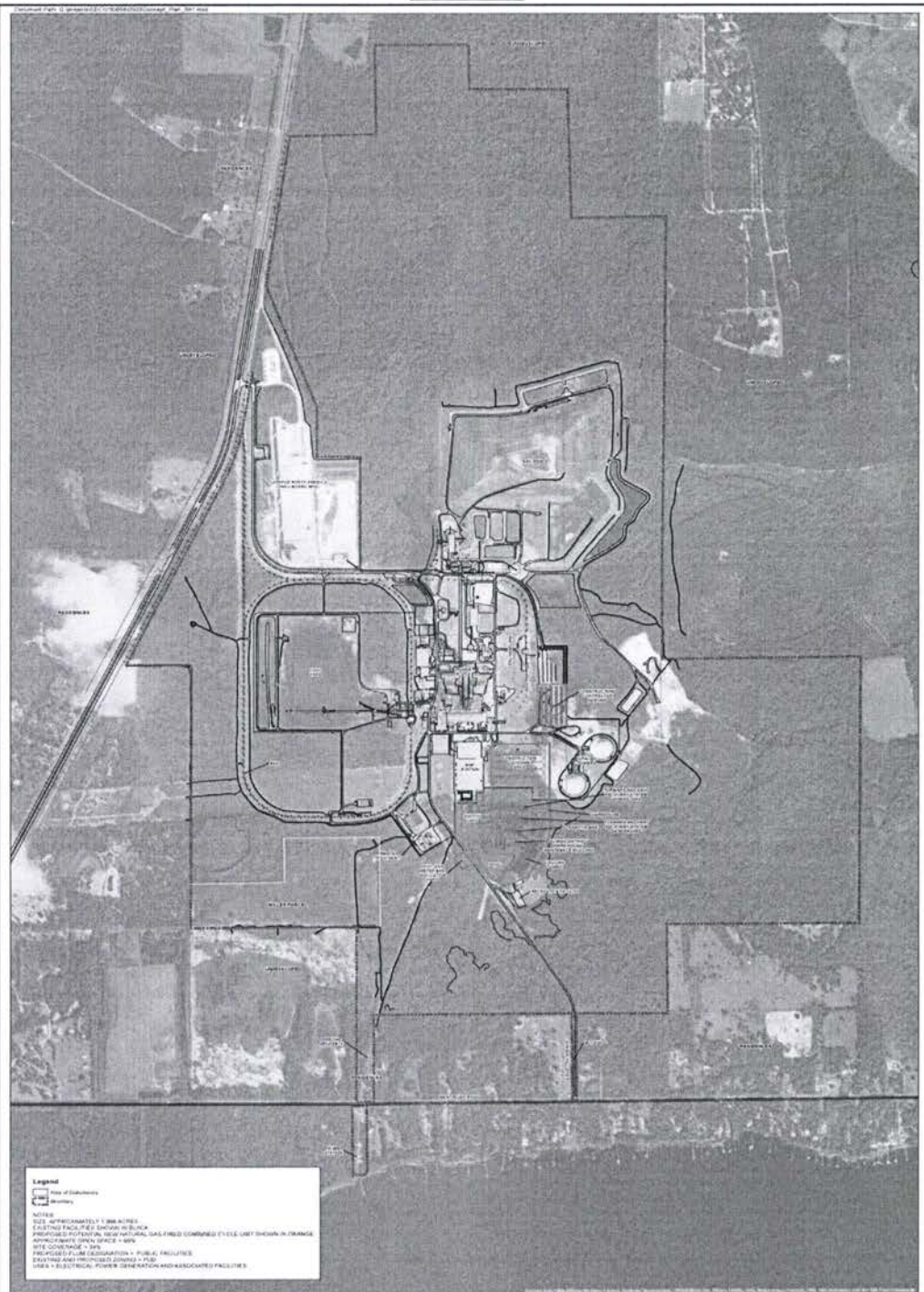


SITE LOCATION MAP
SEMINOLE ELECTRIC COOPERATIVE
PUTNAM COUNTY, FLORIDA

ECT Environmental Consulting & Technology, Inc.

Sources: Labins USGS Quad Map of Bostwick, & Riverdale, FL, 1991 & Palatka & Hastings, FL, 1992; ECT, 2016

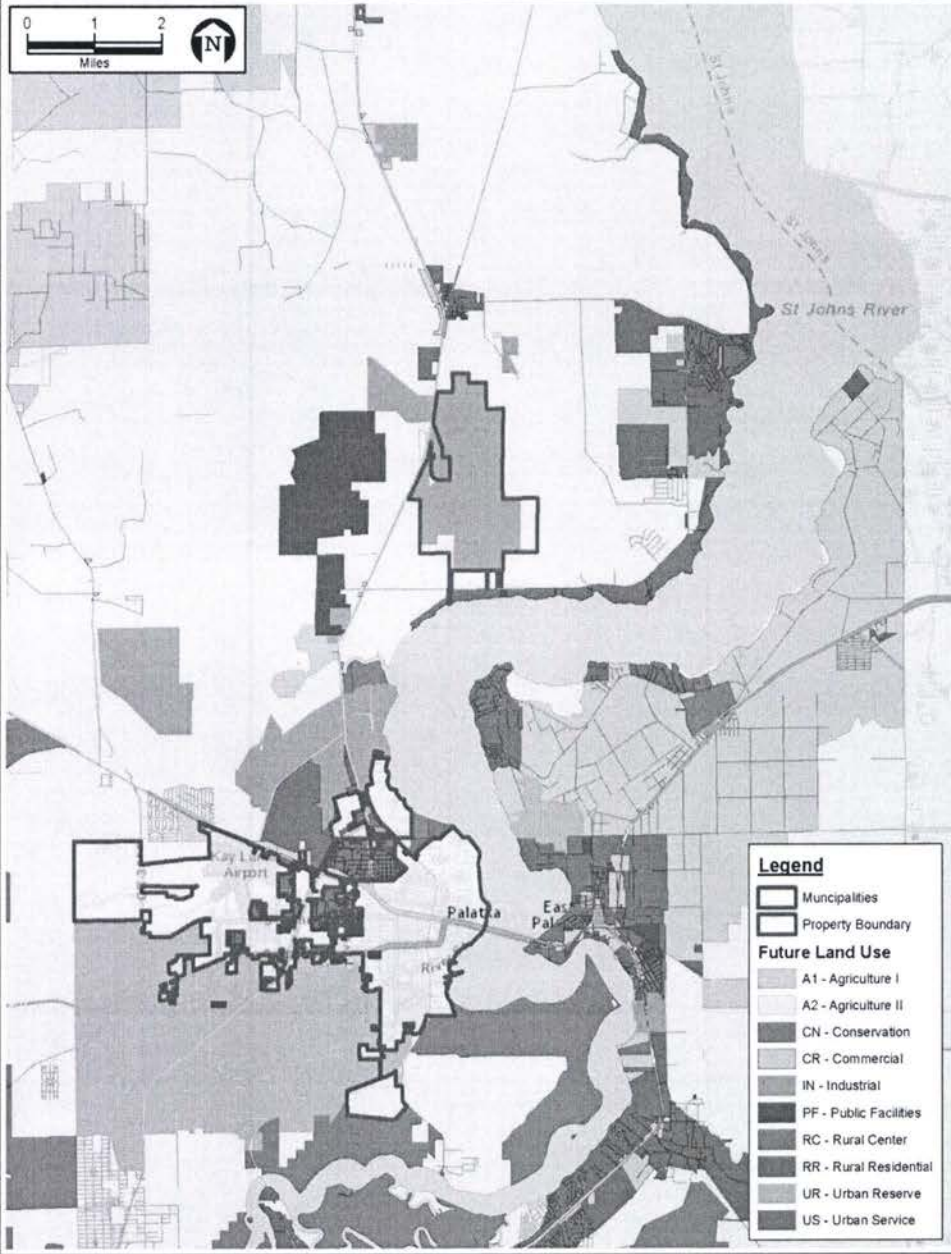
Map 8



<p>SEMINOLE GENERATING STATION 890 NORTH HIGHWAY 17 PUTNUM COUNTY, FLORIDA</p>	<p>CONCEPT SITE PLAN SGS PUD</p>	<table border="1"> <thead> <tr> <th colspan="4">CONCEPT SITE PLAN</th> </tr> <tr> <th>Drawn By:</th> <th>Rev:</th> <th>Revision:</th> <th></th> </tr> </thead> <tbody> <tr> <td>Checked by:</td> <td>SLB</td> <td>Project No.:</td> <td>1000000000</td> </tr> <tr> <td>Date:</td> <td>10/10/16</td> <td>Scale:</td> <td>1 inch = 500 feet</td> </tr> </tbody> </table>	CONCEPT SITE PLAN				Drawn By:	Rev:	Revision:		Checked by:	SLB	Project No.:	1000000000	Date:	10/10/16	Scale:	1 inch = 500 feet
CONCEPT SITE PLAN																		
Drawn By:	Rev:	Revision:																
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Date:	10/10/16	Scale:	1 inch = 500 feet															

Map 9

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SGS Land Use Map

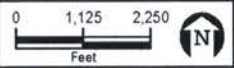
SEMINOLE ELECTRIC COOPERATIVE
PUTNAM COUNTY, FLORIDA

Sources: Putnam County 2016; ECT, 2016

ECT Environmental
Consulting &
Technology, Inc.

Map 10

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Legend

- Property Boundary
- Recharge Areas**
 - Discharge
 - High
 - Low
 - Medium

RECHARGE AREA MAP
SEMINOLE ELECTRIC COOPERATIVE
PUTNAM COUNTY, FLORIDA

Sources: Putnam County, 2015; ECT, 2016

