Seminole Electric
COOPERATIVE, INC.
IN PARTNERSHIP WITH THOSE WE SERVE

April 1, 2016

Moniaishi Mtenga
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Dear Ms. Mtenga:

In accordance with Section 186.801, Florida Statutes, Seminole Electric Cooperative, Inc. hereby submits our 2016 Ten Year Site Plan.

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

Sincerely,

Julia A Diazgranados

Julia A Diazgranados
Planning Manager
813-739-1538 (office)
jdiazgranados@seminole-electric.com

Enclosure

cc: M. Sherman
L. Johnson

Seminole Electric
COOPERATIVE, INC.
IN PARTNERSHIP WITH THOSE WE SERVE

Ten Year Site Plan

2016 - 2025
(Detail as of December 31, 2015)
April 1, 2016

Submitted To:
State of Florida
Public Service Commission

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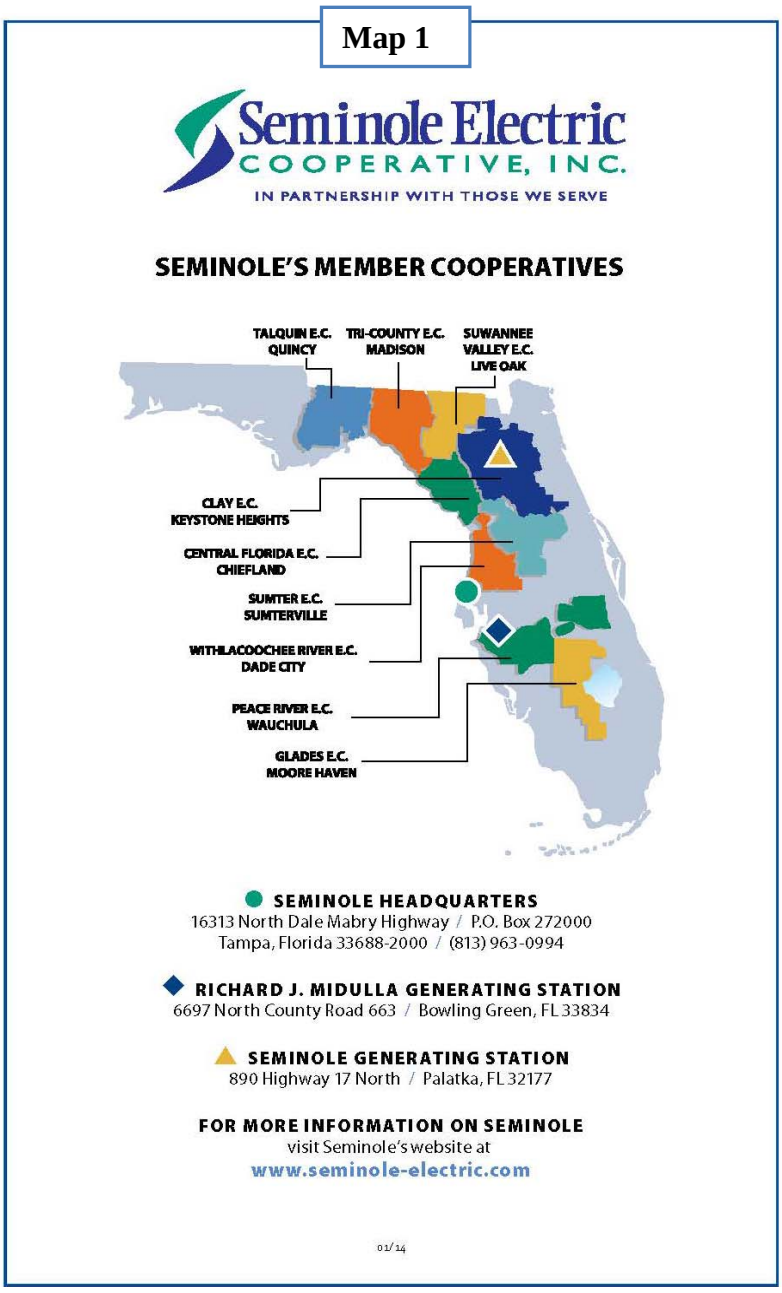
1. DESCRIPTION OF EXISTING FACILITIES

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:

Map 1



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, 2015, Seminole had total summer capacity resources of approximately 4,000 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, 2015

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		
	Unit Type ST - Steam Turbine CC - Combined Cycle CT – Combustion Turbine PV – Photovoltaic	Fuel Type BIT - Bituminous Coal NG - Natural Gas DFO – Ultra low sulfur diesel Sun – Solar Energy	Fuel Transportation PL – Pipeline RR – Railroad TK – Truck

General: Unk – Unknown; N/A – Not applicable

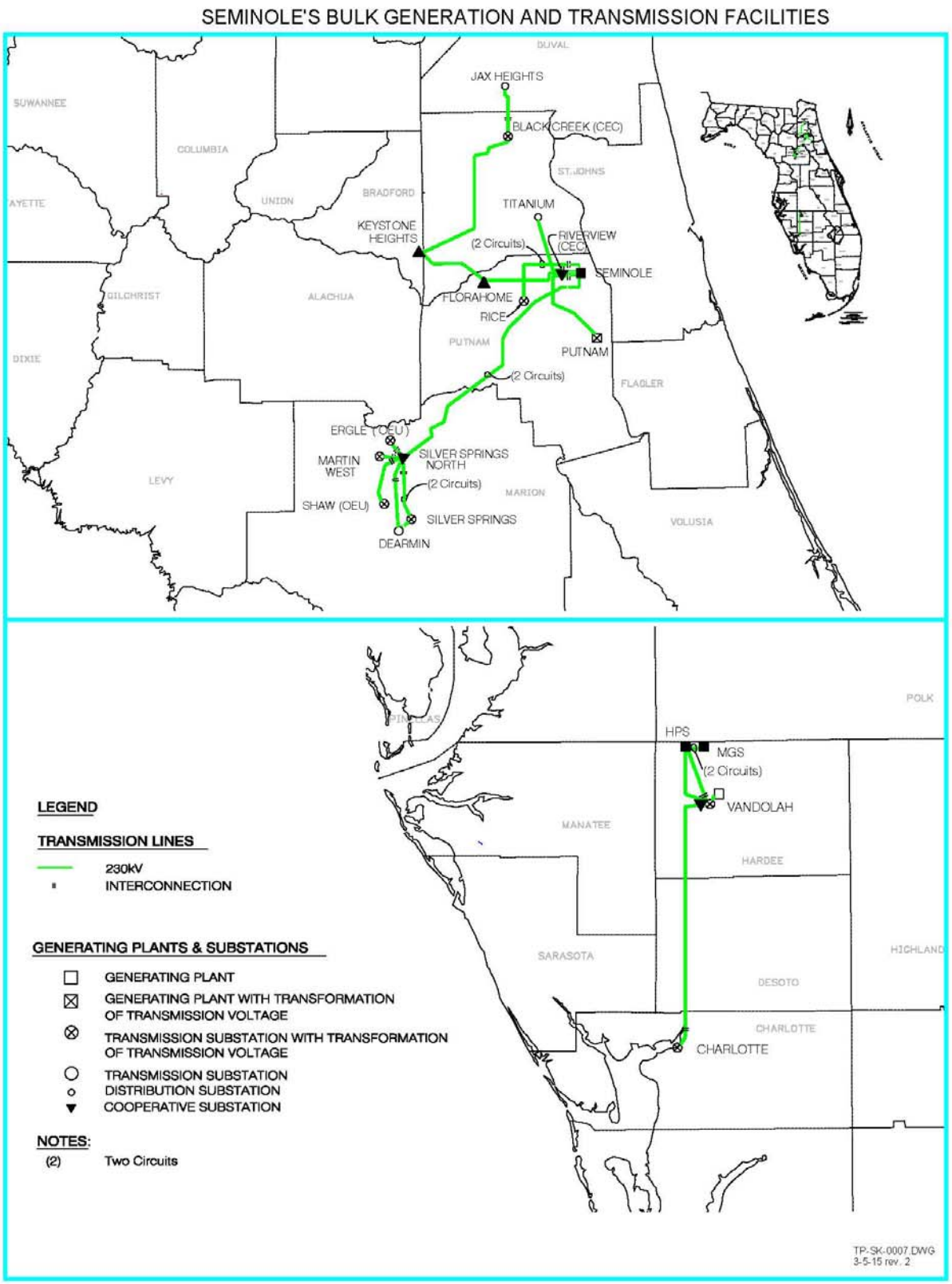
1.2.2 Transmission

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 141 circuit miles of 69 kV lines. Seminole's facilities are interconnected to the grid at twenty (20) 230 kV transmission interconnections with the utilities shown in Table 1.1.

Table 1.1 Transmission Grid Interconnections with Other Utilities		
Utility	**Voltage (kV)**	**Number of Interconnections**
Florida Power & Light	230	6
Duke Energy Florida	230	7
JEA	230	1
City of Ocala	230	2
Tampa Electric Company	230	1
Hardee Power Partners	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 Electric COOPERATIVE, INC.

1.3 Purchased Power Resources

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

Table 1.2

2015				
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	250	1/1/2014	5/31/2016
DEF	System	50	6/1/2016	12/31/2018
DEF	System	150	1/1/2014	5/31/2016
DEF	System	200-500	6/1/2016	12/31/2024
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 2016 through 2025. 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 1.7 percent, and commercial energy sales are projected to grow at an average annual rate of 1.9 percent from 2016 through 2025.

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			
		Customers Per Household	GWh	Average Number of Customers	Average Consumption Per Customer (kWh)
2006	1,667,616	2.14	11,153	780,687	14,286
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	1,677,505	2.45	8,981	683,410	13,141
2017	1,697,061	2.44	9,177	695,982	13,185
2018	1,719,281	2.42	9,379	709,589	13,218
2019	1,746,279	2.42	9,555	722,026	13,234
2020	1,772,180	2.41	9,731	734,291	13,252
2021	1,795,824	2.41	9,892	745,826	13,263
2022	1,818,008	2.40	10,040	756,799	13,266
2023	1,839,569	2.40	10,183	767,621	13,266
2024	1,860,751	2.39	10,321	778,202	13,263
2025	1,881,770	2.39	10,452	788,493	13,256

NOTE: Actual value for 2013 and prior includes Lee County Electric Cooperative.
Estimated values for 2015.

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 Consumers (GWh)[3]
	GWh	Average Number of Customers	Average Consumption Per Customer (kWh)		
2006	4,634	84,345	54,941	158	15,945
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	4,146	74,567	55,600	142	13,268
2017	4,262	75,722	56,282	140	13,579
2018	4,364	77,002	56,676	142	13,885
2019	4,478	78,212	57,249	143	14,176
2020	4,562	79,377	57,467	145	14,437
2021	4,640	80,508	57,636	146	14,679
2022	4,712	81,613	57,738	148	14,900
2023	4,781	82,694	57,816	149	15,114
2024	4,848	83,749	57,884	151	15,319
2025	4,912	84,790	57,928	152	15,516

NOTE: Actual value for 2013 and prior includes Lee County Electric Cooperative.
Estimated values for 2015

[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 Customers*
2006	0	1,288	17,233	5,101	870,133
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	5	651	13,925	5,332	763,309
2017	6	664	14,249	5,312	777,016
2018	6	675	14,566	5,335	791,927
2019	7	687	14,870	5,359	805,598
2020	9	687	15,133	5,392	819,060
2021	1	690	15,370	5,423	831,758
2022	0	702	15,602	5,455	843,868
2023	0	701	15,815	5,487	855,803
2024	0	707	16,026	5,517	867,467
2025	0	708	16,224	5,543	878,827

NOTE: Actual value for 2013 and prior includes Lee County Electric Cooperative
* Estimated values for 2015.

2.2 Annual Peak Demand and Net Energy for Load

Schedules 3.1, 3.2, and 3.3 provide Seminole's summer peak demand, winter peak demand and net energy for load, respectively. Net firm peak demand reflects the energy reduction due to controllable interruptible load used in the historical years or made available for use in the forecasted years. Since population is the primary driver for Seminole's load growth, Seminole does not create high and low forecasts based upon alternative economic conditions.

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.	
2006	3,813	3,813	0	0	51	130	N/A	N/A	N/A	3,632
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	3,207	3,207	0	32	78	73	N/A	N/A	N/A	3,024
2017	3,275	3,275	0	41	78	74	N/A	N/A	N/A	3,082
2018	3,337	3,337	0	41	78	75	N/A	N/A	N/A	3,143
2019	3,396	3,396	0	41	78	76	N/A	N/A	N/A	3,201
2020	3,445	3,445	0	32	78	77	N/A	N/A	N/A	3,257
2021	3,480	3,480	0	32	78	78	N/A	N/A	N/A	3,291
2022	3,535	3,535	0	42	78	79	N/A	N/A	N/A	3,336
2023	3,576	3,576	0	41	78	80	N/A	N/A	N/A	3,377
2024	3,619	3,619	0	41	78	81	N/A	N/A	N/A	3,419
2025	3,657	3,657	0	41	78	82	N/A	N/A	N/A	3,457

NOTE: Actual value 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 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 3.2

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.	
2005-06	4,349	4,349	0	0	47	77	N/A	N/A	N/A	4,225
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	3,696	3,696	0	36	78	101	N/A	N/A	N/A	3,481
2017-18	3,756	3,756	0	38	78	102	N/A	N/A	N/A	3,539
2018-19	3,815	3,815	0	38	78	103	N/A	N/A	N/A	3,596
2019-20	3,869	3,869	0	38	78	104	N/A	N/A	N/A	3,649
2020-21	3,919	3,919	0	38	78	106	N/A	N/A	N/A	3,698
2021-22	3,966	3,966	0	38	78	107	N/A	N/A	N/A	3,744
2022-23	4,010	4,010	0	38	78	108	N/A	N/A	N/A	3,787
2023-24	4,052	4,052	0	38	78	109	N/A	N/A	N/A	3,827
2024-25	4,091	4,091	0	38	78	110	N/A	N/A	N/A	3,866
2025-26	4,130	4,130	0	38	78	110	N/A	N/A	N/A	3,904

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*	Utility Use & Losses, less SEPA*	Net Energy for Load	Load Factor %
		Residential	Commercial					
2006	17,233	N/A	N/A	0	15,945	1,288	17,233	48.9
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	13,925	N/A	N/A	0	13,274	651	13,925	45.7
2017	14,249	N/A	N/A	0	13,585	664	14,249	46.0
2018	14,566	N/A	N/A	0	13,891	675	14,566	46.2
2019	14,870	N/A	N/A	0	14,183	687	14,870	46.5
2020	15,133	N/A	N/A	0	14,446	687	15,133	46.7
2021	15,370	N/A	N/A	0	14,680	690	15,370	46.9
2022	15,602	N/A	N/A	0	14,900	702	15,602	47.0
2023	15,815	N/A	N/A	0	15,114	701	15,815	47.2
2024	16,026	N/A	N/A	0	15,319	707	16,026	47.3
2025	16,224	N/A	N/A	0	15,516	708	16,224	47.4

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

* Estimated values for 2015

2.3 Monthly Peak Demand and Net Energy for Load

Schedule 4 shows peak demand and net energy for load by month for 2015 actuals and 2016 through 2017 forecasts.

Schedule 4

Previous Year and 2-Year Forecast of Peak Demand and Net Energy for Load by Month

Month	2015 Actual		2016 Forecast		2017 Forecast	
	Peak Demand (MW)[1]	NEL (GWh)	Peak Demand (MW)[2]	NEL (GWh)	Peak Demand (MW)	NEL (GWh)
January	2,826	1,109	3,307	1,150	3,481	1,176
February	3,593	1,051	2,900	976	2,939	1,005
March	2,069	1,009	2,438	996	2,513	1,023
April	2,362	1,083	2,319	1,005	2,375	1,032
May	2,821	1,275	2,651	1,208	2,691	1,232
June	3,021	1,375	2,816	1,317	2,850	1,340
July	2,935	1,393	2,945	1,412	2,985	1,434
August	3,021	1,406	3,024	1,415	3,082	1,445
September	2,845	1,254	2,794	1,287	2,835	1,310
October	2,470	1,079	2,508	1,089	2,573	1,124
November	2,471	1,034	2,498	978	2,567	1,004
December	2,065	1,036	2,706	1,092	2,795	1,124
ANNUAL		**14,104**		**13,925**		**14,249**

[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.

Note: Peak Demand for January 2016 is Actual.

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 2014	Actual 2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Nuclear		Trillion BTU	-	-	-	-	-	-	-	-	-	-	-	-
Coal		1000 Tons	3,231	3,048	3,072	3,272	3,284	3,167	3,320	3,154	2,902	3,045	3,070	2,982
Residual	Total	1000 BBL	-	-	-	-	-	-	-	-	-	-	-	-
	Steam	1000 BBL	-	-	-	-	-	-	-	-	-	-	-	-
	CC	1000 BBL	-	-	-	-	-	-	-	-	-	-	-	-
	CT	1000 BBL	-	-	-	-	-	-	-	-	-	-	-	-
Distillate	Total	1000 BBL	20	33	35	37	37	36	38	36	33	38	38	49
	Steam	1000 BBL	19	32	35	37	37	36	38	36	33	35	35	34
	CC	1000 BBL	1	1	-	-	-	-	-	-	-	3	3	14
	CT	1000 BBL	-	-	-	-	-	-	-	-	-	-	-	1
Natural Gas	Total	1000 MCF	19,250	18,895	26,486	27,644	27,248	28,789	28,129	38,259	48,144	49,279	50,326	56,447
	Steam	1000 MCF	-	-	-	-	-	-	-	-	-	-	-	-
	CC	1000 MCF	18,346	17,529	25,567	26,844	26,263	28,189	27,628	37,913	47,815	47,736	48,275	51,098
	CT	1000 MCF	904	1,366	919	800	985	600	501	346	329	1,543	2,051	5,349

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 2014	Actual 2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Inter-Regional Interchange		GWh	-	-	-	-	-	-	-	-	-	-	-	-
Nuclear		GWh	-	-	-	-	-	-	-	-	-	-	-	-
Coal		GWh	8,159	7,803	7,680	8,151	8,193	7,895	8,274	7,815	7,136	7,498	7,563	7,363
Residual	Total	GWh	-	-	-	-	-	-	-	-	-	-	-	-
	Steam	GWh	-	-	-	-	-	-	-	-	-	-	-	-
	CC	GWh	-	-	-	-	-	-	-	-	-	-	-	-
	CT	GWh	-	-	-	-	-	-	-	-	-	-	-	-
Distillate	Total	GWh	35	36	37	39	43	42	37	38	29	35	35	50
	Steam	GWh	23	19	21	22	22	21	22	21	19	20	20	20
	CC	GWh	12	17	15	14	18	18	15	13	10	14	15	28
	CT	GWh	-	-	1	3	3	3	0	4	0	1	0	2
Natural Gas	Total	GWh	4,737	5,333	5,211	5,413	5,764	6,395	6,291	6,987	7,912	7,767	8,000	8,625
	Steam	GWh	-	-	-	-	-	-	-	-	-	-	-	-
	CC	GWh	4,570	5,052	5,093	5,294	5,579	6,256	6,200	6,901	7,875	7,603	7,787	8,086
	CT	GWh	167	281	118	119	185	139	91	86	37	164	213	539
NUG		GWh	-	-	-	-	-	-	-	-	-	-	-	-
Renewables *		GWh	923	932	997	646	566	538	531	530	525	515	428	186
Other		GWh	-	-	-	-	-	-	-	-	-	-	-	-
Net Energy for Load		GWh	13,854	14,104	13,925	14,249	14,566	14,870	15,133	15,370	15,602	15,815	16,026	16,224

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 2014	Actual 2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
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		%	58.89%	55.32%	55.15%	57.20%	56.25%	53.09%	54.67%	50.84%	45.74%	47.41%	47.19%	45.38%
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	%	0.25%	0.26%	0.27%	0.27%	0.30%	0.28%	0.24%	0.25%	0.19%	0.22%	0.22%	0.31%
	Steam	%	0.16%	0.14%	0.15%	0.15%	0.15%	0.14%	0.15%	0.14%	0.12%	0.13%	0.12%	0.12%
	CC	%	0.09%	0.12%	0.11%	0.10%	0.12%	0.12%	0.10%	0.08%	0.06%	0.09%	0.09%	0.17%
	CT	%	0.00%	0.00%	0.01%	0.02%	0.02%	0.02%	0.00%	0.03%	0.00%	0.01%	0.00%	0.01%
Natural Gas	Total	%	34.19%	37.81%	37.42%	37.99%	39.57%	43.01%	41.57%	45.46%	50.71%	49.11%	49.92%	53.16%
	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	%	32.99%	35.82%	36.57%	37.15%	38.30%	42.07%	40.97%	44.90%	50.47%	48.08%	48.59%	49.84%
	CT	%	1.20%	1.99%	0.85%	0.84%	1.27%	0.93%	0.60%	0.56%	0.24%	1.04%	1.33%	3.32%
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		%	6.66%	6.61%	7.16%	4.53%	3.89%	3.62%	3.51%	3.45%	3.36%	3.26%	2.67%	1.15%
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 model number of consumers, energy and peak demand. Models are developed using regression and time series techniques and each Member Cooperative is modeled separately. Seminole produces monthly forecasts for each Member system and, when applicable, by multiple rate classifications. Seminole's system forecast is the aggregate of Member system forecasts.

3.1.1 Consumer Model

Numbers of consumers are modeled with regression and time-series techniques. 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). Explanatory variables analyzed in these models include population, number of households, housing stock, gross county product and employment.

Consumers are modeled by Member total and by rate classification. Rate class forecasts are reconciled to match in aggregate the total consumer forecasts by each 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

and time-series techniques. Model input data sources include Seminole's System Operations Power Billing System (PBS), RUS Form-7, Moody's ECCA, UF BEBR and AccuWeather. Explanatory variables analyzed in this model include heating and cooling degrees, population, number of households, housing stock and gross county product. The dependent variable, Member energy purchases from Seminole, is projected by aggregating hourly delivery point meter load to the monthly aggregate level.

Member rate class energy purchases from Seminole are projected by scaling RUS Form-7 energy sales to end-users by distribution loss factors. Rate class energy purchases forecasts are reconciled to match in aggregate the Member-total purchases forecasts. Historical reductions in energy consumption due to conservation and efficiency are reflected in historical sales and purchases data and are implied in forecasts.

3.1.3 Peak Demand Model

Maximum peak demand is modeled by month and by season for each Member system using regression and time-series techniques. Model input data sources include Seminole's PBS, Moody's ECCA, UF BEBR and AccuWeather. Explanatory variables analyzed in this model include heating and cooling degrees, minimum and maximum temperature, population, number of households, housing stock, gross county product and load factor.

Seasonal peak models are designed to predict winter and summer peaks based on a range of months when the highest peaks can be 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 beginning as early as May and as late as 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 is 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 monthly temperatures and daily 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. Therefore, high and low population scenarios, rather than alternative economic growth scenarios, are developed for each Member system. Seminole also forecasts load conditions given mild and severe temperatures in a Member's geographical region. Last, we show a set of alternative projections associated with the statistical error of each model at the ninety-five percent prediction interval.

3.2 Load Forecast Data

The primary resources for load forecasting are weather data, economic data, Member retail data and delivery point meter 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 are provided by government and credit rating agencies, as

well as local universities. A listing of load forecast data sources is provided below.

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:

- Moody's Analytics Economic Consumer and Credit Analytics (ECCA)
- University of Florida Bureau of Economic and Business Research (UF BEBR)

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 large, 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.

This load forecast reflects expectations that the national economy, and Florida's economy in particular, will continue to recover from the Great Recession over the next several years. In

addition, Member territories will likely benefit from consumer growth due to “baby-boomer” retiree migration into Florida from other states. Improving economic conditions and expected net migration are leading indicators for overall load growth. Despite the potential growth opportunities however, electricity usage per residential consumer trends over the last decade for electric utilities in the state of Florida are on average flat to negative and Seminole projects this trend will generally continue into the future.

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 represent the optimal simple average combination of weather station temperature observations that best project Member aggregate load by date and time, using the lowest mean absolute percent error as an indicator of statistical efficiency.

Historical weather statistics input into forecast models include monthly average, minimum and maximum temperatures, as well as monthly 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 the thirty year median of historical observations by month. Seasonal weather statistics are the thirty year median of historical observations by month in which the highest peak demand occurred in a summer and winter season. Extreme weather used for alternative-scenario forecasts include the tenth and ninetieth percentile 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 1,700 MW of capacity by 2025. 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 four 224 MW class combustion turbine units and one 741 MW combined cycle plant, none of which are currently sited. The four combustion turbine units are scheduled to enter service in December 2021, December 2022, and two units in December 2024. In addition, by June 2021, Seminole also has a need for 741 MW of combined cycle capacity. 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) to be in commercial operation on or before November 2, 2016. Seminole has incorporated a 2 MW solar photovoltaic facility into Seminole's ten year plan. 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.

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
2016	2,012	0	1,595	1,595	0	0	3,607	3,607	3,024	3,024	583	19%	0	583	19%
2017	2,012	0	1,650	1,650	0	0	3,662	3,662	3,082	3,082	580	19%	0	580	19%
2018	2,012	0	1,635	1,635	0	0	3,647	3,647	3,143	3,143	504	16%	0	504	16%
2019	2,012	0	1,885	1,885	0	0	3,897	3,897	3,201	3,201	696	22%	0	696	22%
2020	2,012	0	1,883	1,883	0	0	3,895	3,895	3,257	3,257	639	20%	0	639	20%
2021	2,661	0	1,135	1,135	0	0	3,796	3,796	3,291	3,291	505	15%	0	505	15%
2022	2,862	0	986	986	0	0	3,848	3,848	3,336	3,336	512	15%	0	512	15%
2023	3,063	0	833	833	0	0	3,896	3,896	3,377	3,377	519	15%	0	519	15%
2024	3,063	0	881	881	0	0	3,944	3,944	3,419	3,419	525	15%	0	525	15%
2025	3,465	0	522	522	0	0	3,987	3,987	3,457	3,457	530	15%	0	530	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
2016/17	2,178	0	2,322	2,322	0	0	4,500	4,500	3,481	3,481	1,019	29%	0	1,019	29%
2017/18	2,178	0	2,322	2,322	0	0	4,500	4,500	3,539	3,539	960	27%	0	960	27%
2018/19	2,178	0	2,307	2,307	0	0	4,485	4,485	3,596	3,596	889	25%	0	889	25%
2019/20	2,178	0	2,557	2,557	0	0	4,735	4,735	3,649	3,649	1,086	30%	0	1,086	30%
2020/21	2,178	0	2,086	2,086	0	0	4,264	4,264	3,698	3,698	565	15%	0	565	15%
2021/22	3,143	0	1,174	1,174	0	0	4,317	4,317	3,744	3,744	573	15%	0	573	15%
2022/23	3,368	0	999	999	0	0	4,366	4,366	3,787	3,787	579	15%	0	579	15%
2023/24	3,368	0	1,046	1,046	0	0	4,413	4,413	3,827	3,827	586	15%	0	586	15%
2024/25	3,816	0	642	642	0	0	4,458	4,458	3,866	3,866	592	15%	0	592	15%
2025/26	3,816	0	685	685	0	0	4,501	4,501	3,904	3,904	597	15%	0	597	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		TBD	11/2016	Unk	2	2	2	P
Unnamed CC	1	TBA	CC	NG		PL		(1)	5/2021	Unk	741	649	741	P
Unnamed CT	1	TBA	CT	NG		PL		(1)	12/2021	Unk	224	201	224	P
Unnamed CT	2	TBA	CT	NG		PL		(1)	12/2022	Unk	224	201	224	P
Unnamed CT	3	TBA	CT	NG		PL		(1)	12/2024	Unk	224	201	224	P
Unnamed CT	4	TBA	CT	NG		PL		(1)	12/2024	Unk	224	201	224	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 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 November 2016
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:	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):	 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	Unnamed Generating Station CC Unit 1
2	Capacity a. Summer (MW): b. Winter (MW):	 649 741
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:	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):	 4.50 2.50 93.00 50% 6684 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:	 30 808 742 66 Included in values above 12.72 1,728 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):	 201 224
3	Technology Type:	Combustion Turbine
4	Anticipated Construction Timing a. Field construction start-date: b. Commercial in-service date:	 December 2019 December 2021
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% 9915 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:	 30 602 575 27 Included in values above 8.16 0.99* N/A *Variable O&M does not include start up charge of $7,301 per start

Schedule 9 Status Report and Specifications of Proposed Generating Facilities		
1	Plant Name & Unit Number	Unnamed Generating Station CT Unit 2
2	Capacity a. Summer (MW): b. Winter (MW):	 201 224
3	Technology Type:	Combustion Turbine
4	Anticipated Construction Timing a. Field construction start-date: b. Commercial in-service date:	 December 2020 December 2022
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 95.11 5% 9915 Btu/kWh (HHV) - ISO Rating
13	Projected Unit Financial Data ($2023) 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:	 30 613 588 25 Included in values above 8.40 1.01* N/A *Variable O&M does not include start up charge of $7,456 per start

Schedule 9 Status Report and Specifications of Proposed Generating Facilities		
1	Plant Name & Unit Number	Unnamed Generating Station CT Unit 3 & 4
2	Capacity a. Summer (MW): b. Winter (MW):	 201 224
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 95.11 5% 9915 Btu/kWh (HHV) - ISO Rating
13	Projected Unit Financial Data ($2024) 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:	 30 639 612 27 Included in values above 8.64 1.05* N/A *Variable O&M does not include start up charge of $7,765 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.

Since sites for future generation have not been selected, Seminole has not yet modeled any associated transmission or evaluated constraints and/or plans for alleviating such constraints.

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, 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 federal rules and legislative changes and fuel oil markets, 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 2015, 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.

5.3.3 Natural Gas

At year-end 2015, natural gas prices were near $2.30 per mmBtu and nominal Henry Hub prices are projected to increase slowly over the next ten years nearing $4.00 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. Seminole's base fuel price forecast for this Ten Year Site Plan does not take into account potential federal carbon emission initiatives, such as the proposed Clean Power Plan, that if approved, would impact the market prices for all fuels. If legislation that penalizes carbon emissions is enacted in future years, Seminole’s costs to use all fossil fuels will rise since all fossil fuels emit carbon dioxide when burned. Further, the price of natural gas and fuel oil relative to coal may rise because of the associated carbon emissions penalty imposed on coal, the competing fuel.

5.4 Coal/Gas Price Differential

The current natural gas and coal markets continue to reflect a significant narrowing, and even inversion during some years, of the price spread that existed between the two fuels over the prior ten years primarily due to soft gas prices. This spread is expected to remain compressed throughout the study period given the projected slow rise in 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.

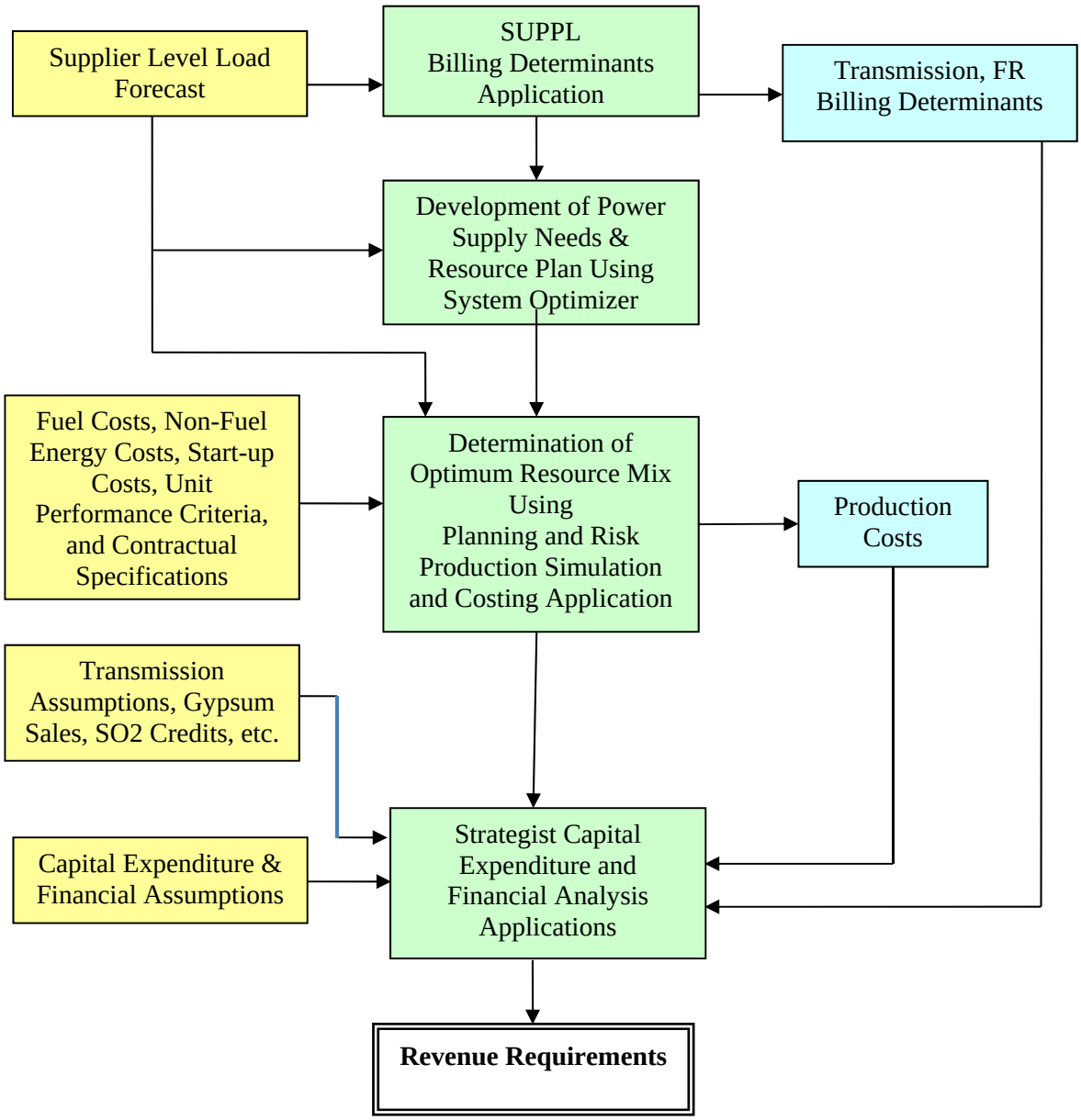
5.6 Financial Assumptions

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. 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, 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 will continue to play a companion role to economics in Seminole's power supply planning process. Seminole values resource diversity 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 new 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 counterparties. 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 assessing future generation projects and needs for new, upgraded, or reconfigured transmission facilities over the ten-year planning horizon. At this time, Seminole has no specific transmission plans for future generating unit additions.

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 thirty (530) acres in size. The site is located in the central portion of Gilchrist County, approximately eight (8) miles north of the City of Trenton and may be suitable for installation of generation or transmission resources. 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.

The initial site evaluation in 2007 included wetland occurrence information documented on National Wetland Inventory (NWI) map(s) from the U.S. Fish and Wildlife Service (USFWS), soils maps and 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. 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 approval of the site certification application.

6.1.2 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 seventy-eight (1,978) 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 area around the SGS site includes mowed and maintained grass fields and upland pine flatwoods. Areas further away from the existing units include live oak hammocks, wetland conifer forest, wetland hardwood/conifer forest, and freshwater marsh. A small land parcel

located on the St. Johns River is the site for the water intake structure, wastewater discharge structure, and pumping station to supply the facility with cooling and service water.

The primary water uses for SGS Units 1 and 2 are for cooling water, wet flue gas desulfurization makeup, steam cycle makeup, and process service water. Cooling and service water is pumped from the St. Johns River and groundwater supplied from on-site wells is for steam cycle makeup and potable use. The site is not located in an area designated as a Priority Water Resource Caution Area by the St. Johns River Water Management District.

The local government future land use for the area where the existing units are located is designated as industrial use, and the site has not been listed as a natural resource of regional significance by the regional planning council.

Water conservation measures that are incorporated into the 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.

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 by County Road 663 on the east and by The Mosaic Company on the south, north and west. 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. The proposed solar project

will be located on approximately 29-acres of land on the west side of the current plant entrance road and to the north of three onsite above ground storage tanks. A more detailed description of environmental, land use, as well as water use and supply, is available in the site certification application PA-89-25SA.

6.2.1.1 Land and Environmental Features

a. U.S. Geological Survey Map

   See Map 5

b. Proposed Facilities Layout

   The current proposed configuration of the single-axis tracking solar facility is attached. See Map 6

c. Map of Site and Adjacent Areas

   See Map 7

d. Existing Land Uses of Site and Adjacent Areas

   The existing land use for the majority of MGS is listed as utilities and zoned as industrial. There is a large reservoir and some wetlands located onsite as well. The solar PV area of the site will be located in an area that is currently 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 the MGS facilities, a 570-acre cooling reservoir, pastureland and some forested and non-forested

uplands and wetlands interspersed. The PV site is to be built completely on an area that is currently pastureland.

2. Listed Species

   A Florida Natural Areas Inventory (FNAI) database query was done for the site and indicated no documented occurrences of any state or federal listed 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 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.

g. Local Government Future Land Use Designations

   The Hardee County Future Land Use Map shows the entire site designated under the industrial category which should include solar PV.

h. Site Selection Criteria Process

   The Seminole Solar site at MGS has been 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 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 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 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.

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.

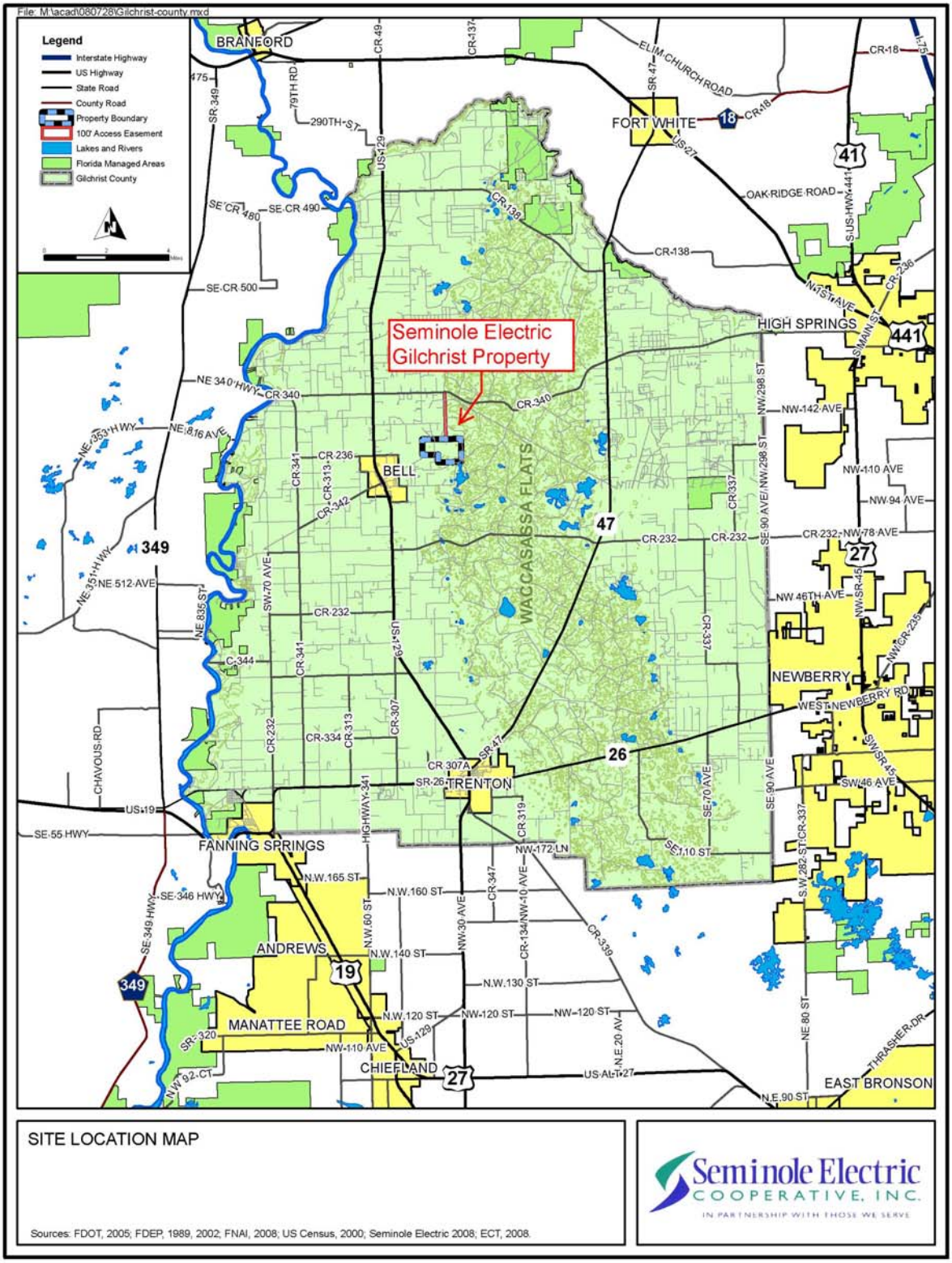
q. Noise Emissions and Control Systems

Solar PV does not generate noise.

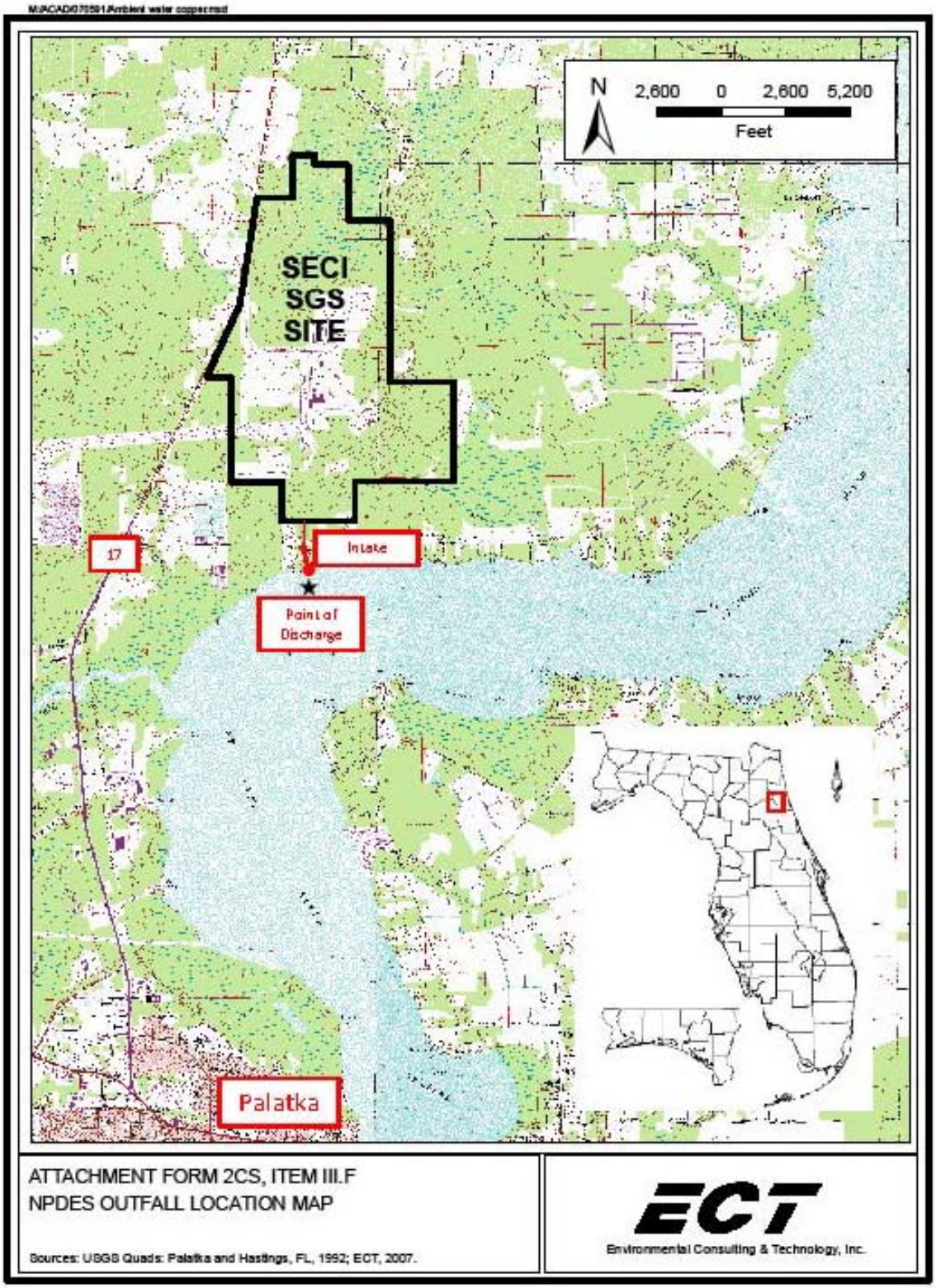
r. Status of Applications

Applications will be made to the Florida Department of Environmental Protection (FDEP) to amend the current Conditions of Certification for MGS. Hardee County will be contacted for local development approval.

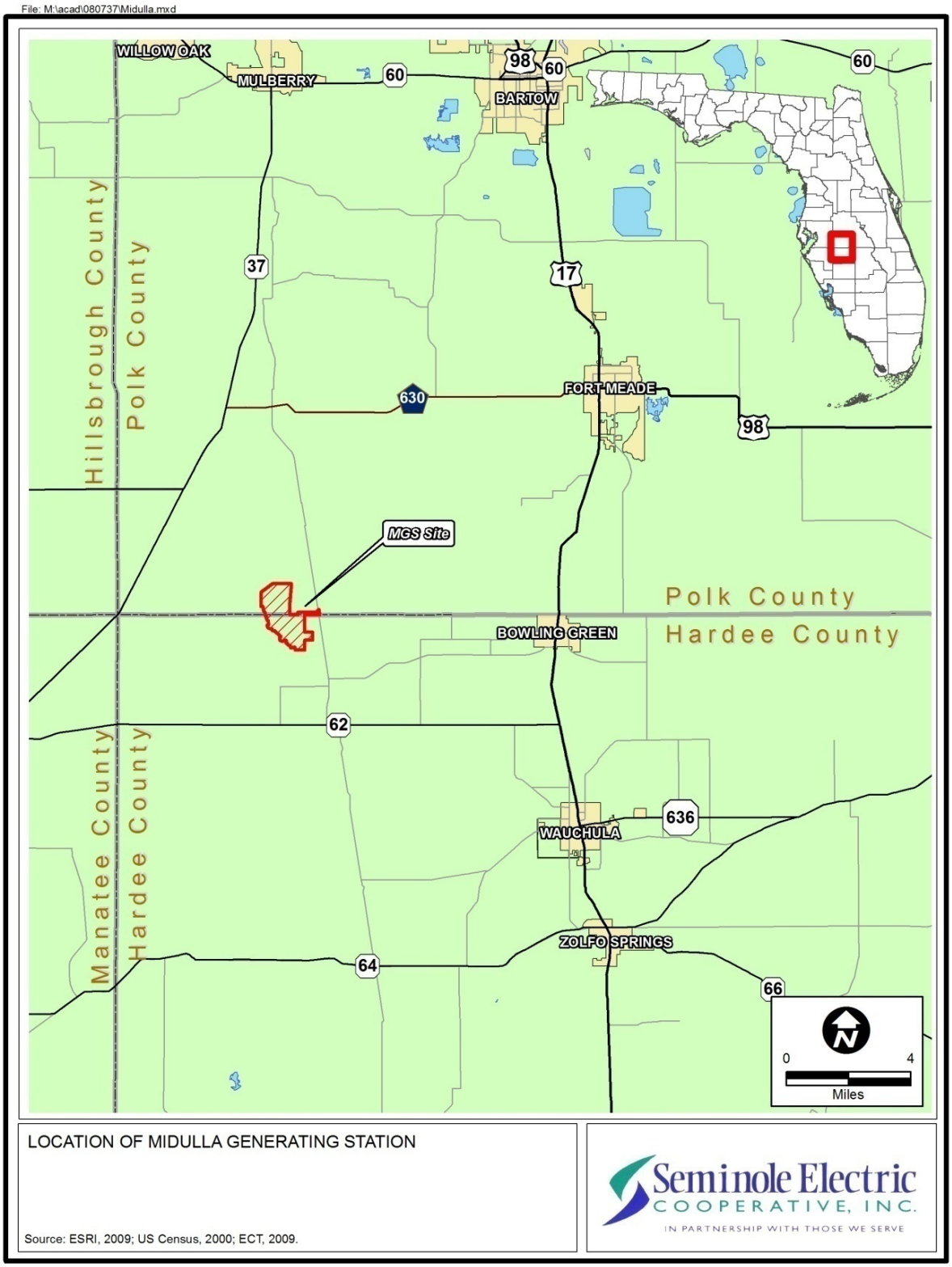
Map 3


File: M:\acad\080728\Gilchrist-county.mxd
Legend
Interstate Highway
US Highway
State Road
County Road
Property Boundary
100' Access Easement
Lakes and Rivers
Florida Managed Areas
Gilchrist County
Seminole Electric
Gilchrist Property
BRANFORD
FORT WHITE
HIGH SPRINGS
BELL
WACCASASSA FLATS
NEWBERRY
TRENTON
FANNING SPRINGS
ANDREWS
MANATTEE ROAD
CHIEFLAND
EAST BRONSON
SITE LOCATION MAP
Sources: FDOT, 2005; FDEP, 1989, 2002; FNAI, 2008; US Census, 2000; Seminole Electric 2008; ECT, 2008.
Seminole Electric
COOPERATIVE, INC.
IN PARTNERSHIP WITH THOSE WE SERVE

Map 4


N
2,600 0 2,600 5,200
Feet
SECI
SGS
SITE
17
Intake
Point of
Discharge
Palatka
ATTACHMENT FORM 2CS, ITEM III.F
NPDES OUTFALL LOCATION MAP
Sources: USGS Quads: Palatka and Hastings, FL, 1992; ECT, 2007.
ECT
Environmental Consulting & Technology, Inc.

Map 5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WILLOW OAK
MULBERRY
BARTOW
60
98
37
17
630
FORT MEADE
Hillsbrough County
Polk County
MGS Site
Polk County
Hardee County
BOWLING GREEN
62
636
WAUCHULA
Manatee County
Hardee County
ZOLFO SPRINGS
64
66
0
4
Miles
LOCATION OF MIDULLA GENERATING STATION
Source: ESRI, 2009; US Census, 2000; ECT, 2009.
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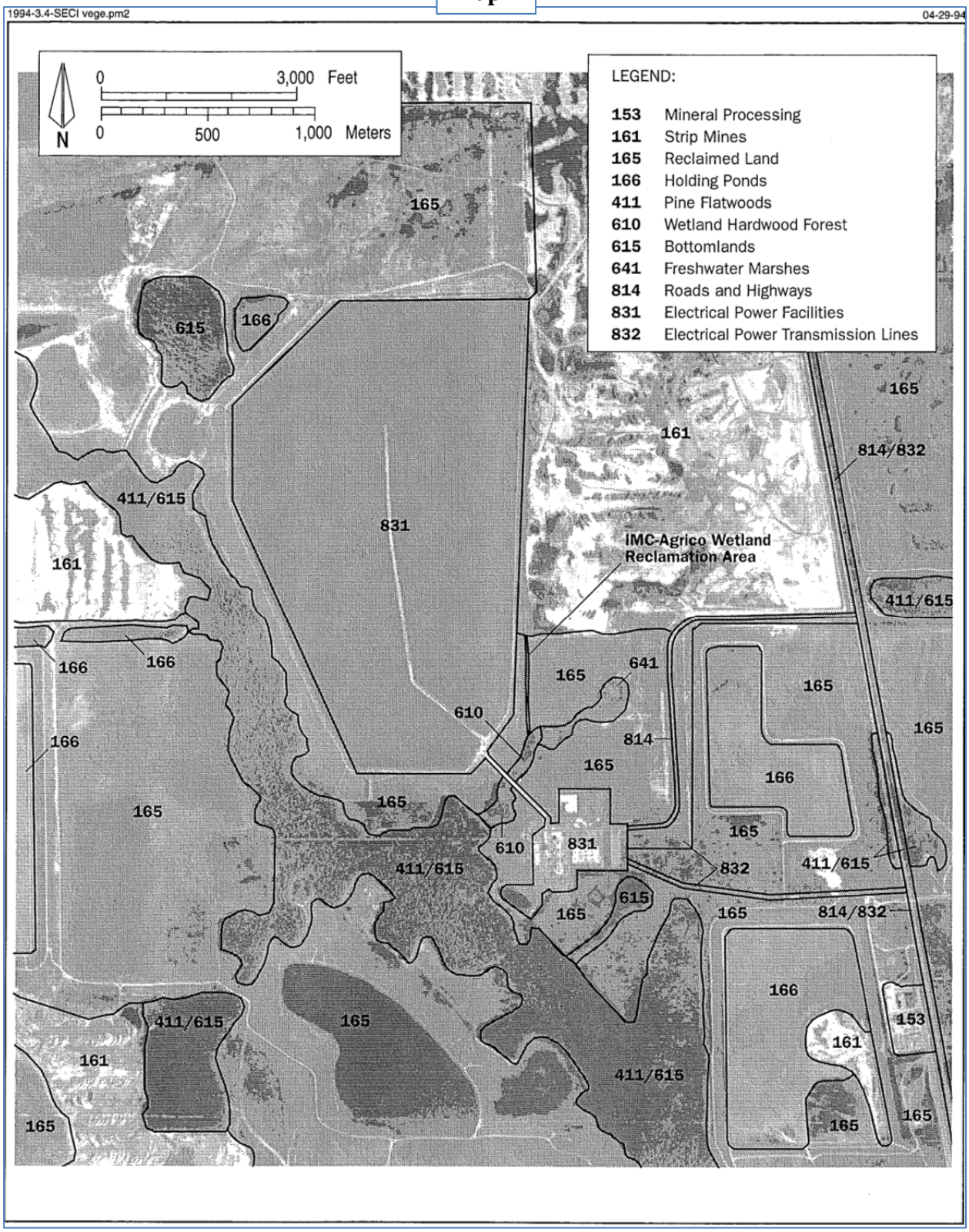
Map 6

Seminole Electric COOPERATIVE, INC.

Map 7



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