



April 1, 2014

Phillip Ellis
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Dear Mr. Ellis:

In accordance with Section 186.801, Florida Statutes, Seminole Electric Cooperative, Inc. hereby submits our 2014 Ten Year Site Plan.

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

Sincerely,

A handwritten signature in blue ink that reads "Trudy S. Novak".

Trudy S. Novak
Vice President, Planning & Regulatory Affairs

Enclosure

cc: L. Johnson



Ten Year Site Plan
2014 - 2023
(Detail as of December 31, 2013)
April 1, 2014

Submitted To:
State of Florida
Public Service Commission

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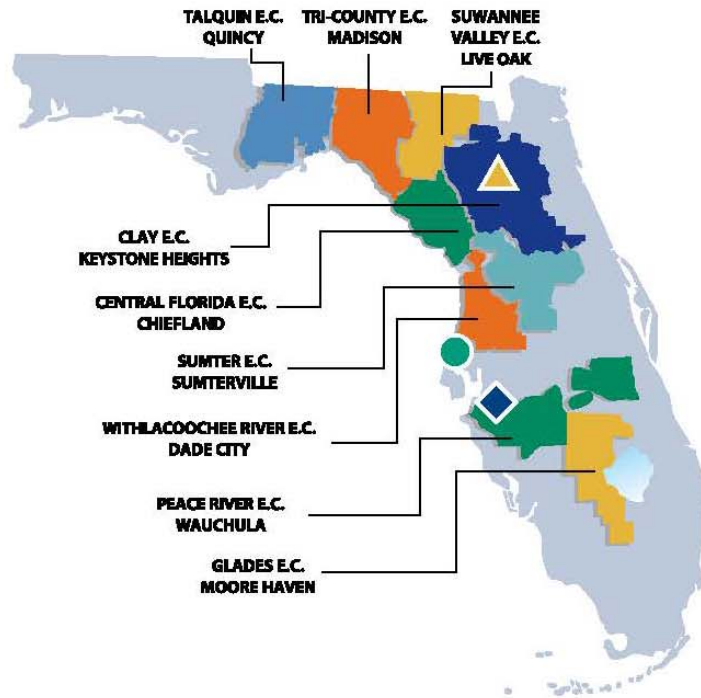
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SEMINOLE'S MEMBER COOPERATIVES



● SEMINOLE HEADQUARTERS

16313 North Dale Mabry Highway / P.O. Box 272000
Tampa, Florida 33688-2000 / (813) 963-0994

◆ RICHARD J. MIDULLA GENERATING STATION

6697 North County Road 663 / Bowling Green, FL 33834

▲ SEMINOLE GENERATING STATION

890 Highway 17 North / Palatka, FL 32177

FOR MORE INFORMATION ON SEMINOLE

visit Seminole's website at

www.seminole-electric.com

1. DESCRIPTION OF EXISTING FACILITIES

1.1 Overview

Seminole Electric Cooperative, Inc. (Seminole) is a corporation organized and existing under the laws of the State of Florida for the purpose of providing reliable electric power at the lowest feasible cost to its nine Member Cooperatives (Members) distribution systems. Seminole generates, transmits, purchases, and sells electric power and energy to its Members , which are listed below¹:

- Central Florida Electric Cooperative, Inc.
Chiefland, Florida
- Clay Electric Cooperative, Inc.
Keystone Heights, Florida
- Glades Electric Cooperative, Inc.
Moore Haven, Florida
- Peace River Electric Cooperative, Inc.
Wauchula, Florida
- Sumter Electric Cooperative, Inc.
Sumterville, Florida
- Suwannee Valley Electric Cooperative, Inc.
Live Oak, Florida
- Talquin Electric Cooperative, Inc.
Quincy, Florida
- Tri-County Electric Cooperative, Inc.
Madison, Florida
- Withlacoochee River Electric Cooperative, Inc.
Dade City, Florida

¹ Lee County Electric Cooperative, Inc. (LCEC) as of January 1, 2014 is no longer a Seminole Member.

Each of Seminole's Members is engaged primarily in the distribution of retail electric power. Seminole supplies requirements power to each of its Members under the terms of long-term wholesale power contracts.² The map at the beginning of this section indicates the counties in which each Member of Seminole provides service.

1.2 Owned Resources

1.2.1 Owned Generation

Seminole serves its aggregate Member loads with a combination of owned and purchased power resources. Seminole Generating Station (SGS) Units 1 & 2, 650 MW coal-fired units located in Putnam County, began commercial operation in February 1984 and December 1984, respectively. Midulla Generating Station (MGS) Units 1 – 3 comprise a 500 MW gas-fired combined cycle plant located in Hardee County, which began commercial operation in January 2002. Also at the MGS site are Units 4 – 8 which comprise a 300 MW peaking plant which began commercial operation in December 2006. Seminole's owned generating facilities are shown on Schedule 1.1

1.2.2 Transmission

In 2013, Seminole served its Members' load primarily in three transmission areas: 4% directly through its own system (Seminole Direct Serve, or SDS), 70% through the Duke Energy Florida (DEF) system, and 26% through the Florida Power & Light (FPL) system³. Seminole's owned transmission facilities consist of 254 circuit miles of 230 kV and 141 circuit miles of 69

² Seminole provided full requirements service to all of its Members through the end of 2009 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. In 2010, Seminole began serving only a portion (approximately 70%) of the load requirements of Lee County Electric Cooperative, Inc. (LCEC) and as of January 1, 2014 Seminole no longer serves any of LCEC's load.

³ Less than 1% of Members' load is served through the Gainesville Regional Utilities (GRU) system and the City of Tallahassee Utilities system.

kV lines. Seminole's owned generating facilities are interconnected to the grid at twenty 230 kV transmission interconnections with the following utilities: FPL, JEA, City of Ocala, DEF, Hardee Power Partners, and Tampa Electric Company. Seminole's interconnections, all of which are at 230 kV, are shown in Schedule 1.2. Seminole contracts with FPL and DEF for firm network transmission service for its Member loads which connect to their respective transmission areas. In addition to its network transmission rights, Seminole has acquired firm point-to-point transmission service from Tampa Electric Company to transmit a total of 58 MW from two waste-to-energy facilities located within Tampa Electric Company's balancing area and has also acquired firm point-to-point transmission service from FPL to export energy from its resources in the FPL balancing area to loads located in the DEF and SDS balancing areas.

1.3 Purchased Power Resources

1.3.1 Renewable Energy Purchases

Seminole is among the leaders in Florida in regards to the amount of energy purchased from renewable energy facilities. In 2014, Seminole will receive energy output of 143 MW from renewable capacity under contract from the following sources:

- Lee County Resource Recovery - 55 MW of firm waste-to-energy capacity through December 2016. Seminole has an obligation to purchase energy from the facility through 2028.
- Hillsborough County Waste to Energy Facility - 38 MW of firm waste-to-energy capacity through February 2025.
- Telogia Power, LLC – 13 MW of firm capacity, through November 2023, from a biomass (wood and paper waste) facility located in Liberty County.

- Landfill Energy Systems – 15 MW (total) of firm capacity from landfill gas-to-energy facilities in Seminole and Brevard Counties. These contracts extend through March 2018.
- Timberline Energy LLC – 1.6 MW of firm capacity from a landfill gas-to-energy facility in Hernando County, Florida. The contract extends through March 2020.
- City of Tampa McKay Bay Waste to Energy Facility - 20 MW of firm waste-to-energy capacity through July 2026.

1.3.2 Purchases from Unit or System Generating Resources

In addition to the renewable resources described above, Seminole's capacity portfolio currently includes power acquired under firm purchased power agreements with the following electric utilities and independent power producers (all ratings are for winter unless otherwise noted):

- Duke Energy Florida (DEF)
 - DEF System Intermediate – 150 MW from January 2014 through December 2020.
 - DEF System Base – 250 MW from January 2014 through May 2016, and 50 MW from June 2016 through December 2018.
 - DEF Seasonal Peaking – Up to 600 MW of firm summer/winter seasonal system peaking capacity from January 2014 through December 2020.
 - DEF System Average – 150 MW of firm system average capacity from January 2014 through May 2016.
 - DEF System Combined Cycle – Up to 500 MW of firm system intermediate

capacity from June 2016 through December 2024.

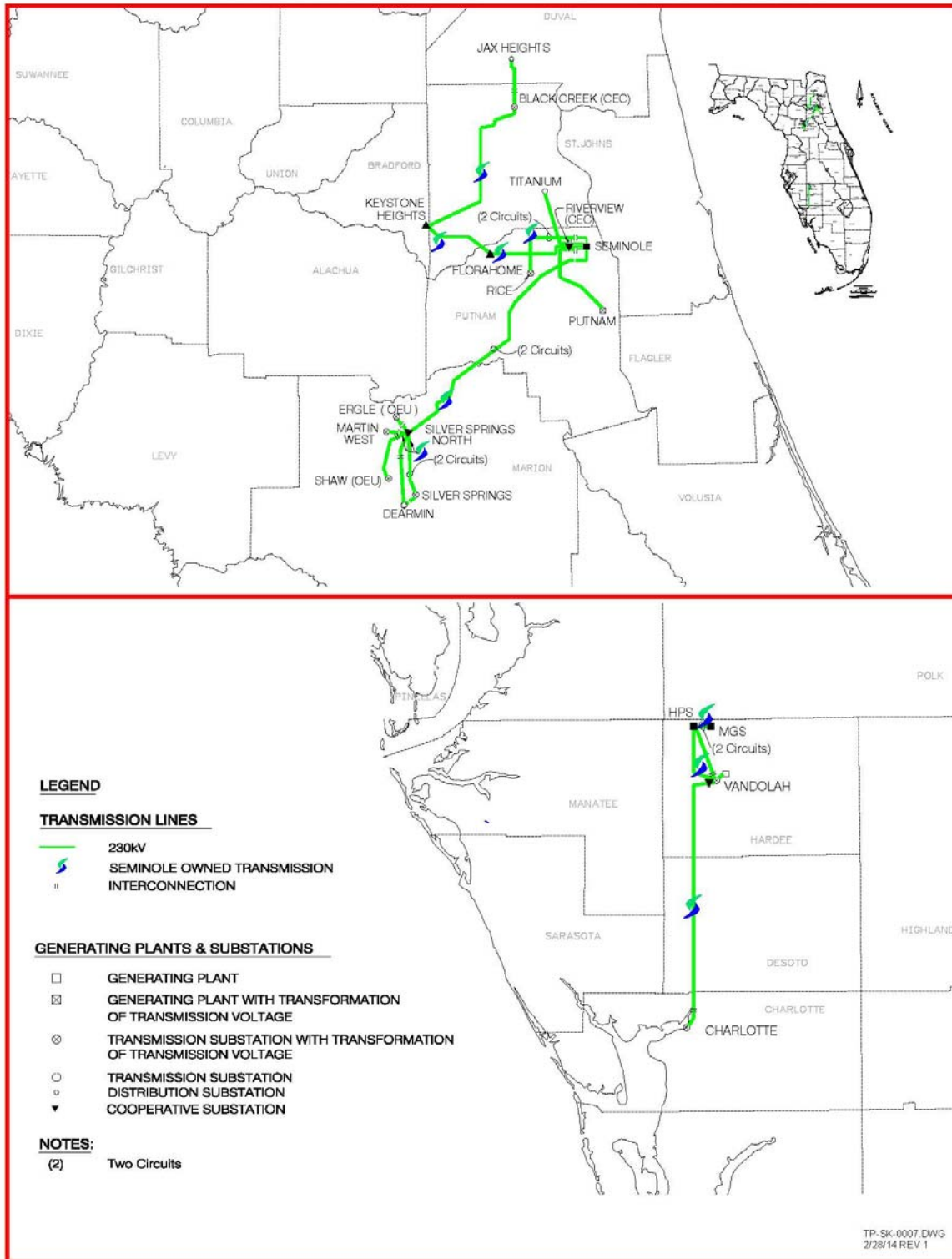
- GenOn Florida, L.P. (GenOn), (formerly RRI Energy Florida, LLC) – 546 MW of firm peaking capacity through May 2014, from GenOn’s three combustion turbine units in Osceola County.
- Oleander Power Project, L.P. (a subsidiary of Southern Power Company) – 546 MW of firm peaking capacity, through May 2021, from three combustion turbine units in Brevard County.
- Calpine Construction Finance Company, L.P. (Calpine) – up to 360 MW of firm intermediate capacity, through May 2014, from Calpine’s gas-fired combined cycle plant in Polk County.
- Hardee Power Partners, Limited (a subsidiary of Invenergy LLC) –Up to 445 MW of firm capacity from the Hardee Power Station (HPS), of which 267 MW is combined cycle and/or intermediate capacity and 178 MW of peaking capacity. This agreement began in January 2013 and extends through December 2032.
- Florida Power and Light Company (FPL) System Combined Cycle – 200 MW of firm system intermediate capacity from June 2014 to May 2021.

**Schedule 1.1
Existing Generating Facilities as of December 31, 2013**

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/PC	N/A	RR	N/A	N/A	02/84	Unk	736	652	664	
SGS	2	Putnam County	ST	BIT/PC	N/A	RR	N/A	N/A	12/84	Unk	736	657	665	
MGS	1-3	Hardee County	CC	NG	DFO	PL	TK	Unk	01/02	Unk	587	481	539	
MGS	4-8	Hardee County	CT	NG	DFO	PL	TK	Unk	12/06	Unk	312	270	310	
Abbreviations:	<u>Unit Type</u> Unk – Unknown N/A – Not applicable ST - Steam Turbine, including nuclear CC - Combined Cycle CT – Combustion Turbine			<u>Fuel Type</u> BIT - Bituminous Coal NG - Natural Gas PC – Petroleum Coke DFO - No. 2 Diesel Fuel Oil					<u>Fuel Transportation</u> PL – Pipeline RR – Railroad TK – Truck					

Schedule 1.2		
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 control areas.		

SEMINOLE'S BULK GENERATION AND TRANSMISSION FACILITIES



1.4 Demand Side Management (DSM) and Energy Conservation

As a generation and transmission rural electric cooperative that serves only wholesale customers, Seminole cannot offer conservation or DSM programs directly to retail consumers. However, Seminole promotes Member involvement in DSM and energy efficiency through its wholesale rates (including its coincident peak billing and time-of-use energy rates) and in conjunction with its Load Management Distributed Generation Program (DG Program) and its Coordinated Direct Control Load Management Program (Load Management Program). The majority of Seminole's Members are active in managing their peak demand via one or more of these programs. These programs are coordinated by Seminole and are designed to lower demands at the time of the Seminole system peak demand, or provide dispatchable peaking generation for Seminole's system.

In 2008, Seminole and its Members took steps to further promote the use and expansion of demand-side resources, energy efficiency and demand-side management through the formation of the Energy Efficiency Working Group. The function of this group is to promote expansion of DSM and conservation programs through sharing of information, consumer education, training of Member staff by nationally certified trainers, and joint assessment of specific energy efficiency and DSM programs to mitigate growth in consumer usage.

Seminole's Members routinely evaluate the economic feasibility of maintaining, or enhancing, their current programs into the future. During each load forecast study Seminole evaluates the Members' DSM and energy conservation programs for anticipated future changes.

1.4.1 Seminole's Member Programs

The demand management programs offered by Seminole's Members include residential load control, load management distributed generation, distribution system voltage reduction, and

alternative rate options for interruptible and curtailable service, and time of use. These programs provide an aggregate demand management capability of approximately 180 MW.

All Members promote energy conservation and energy efficiency. Most Members offer in-home energy audits at no cost, and all Members have promoted lighting efficiency by distributing compact fluorescent light bulbs at no cost. Member websites are focused on educating consumers on the benefits of energy conservation and energy efficiency. Most websites offer energy saving tips, offer on-site energy audits, provide tools for consumers to perform on-line energy audits, and provide links to Touchstone Energy's Home Energy Library. One Member offers consumer rebates for energy efficiency and improvements including ceiling insulation, HVAC efficiency upgrades, and solar hot water systems. As a part of Seminole's consumer-owned renewable generation program, Seminole's Members have over 577 photovoltaic systems and an agricultural waste digester connected to their distribution systems. Seminole's Members provide net metering service to their Member consumers associated with most of the output from these renewable generators. Over the past 15 years, Seminole's Members have significantly reduced their energy purchases from Seminole by upgrading their distribution system by moving to higher line voltages and improved equipment efficiency specifications. This has resulted in lowering their distribution system line losses. Over the past 15 years, Seminole's Members have achieved, in aggregate, a 3% reduction in their total energy requirements due to loss reduction alone.

1.4.2 Seminole's DSM Programs

Seminole's DG Program allows its Members to install distributed peaking generation resources on their system and/or to partner with their retail customers 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 and customer reliability. Under Seminole's Load Management Program, Seminole coordinates the Members' residential load control and conservation voltage reduction programs. Seminole coordinates both of these programs in order to reduce Seminole's peak demand. Seminole's load and energy forecast takes into account reductions of peak demands due to the Load Management and DG Programs.

None of Seminole's Members have finalized plans to change their load management programs at this time although several are evaluating the feasibility of both expanding and/or contracting these programs. In addition, at this time Seminole expects most if not all Members will modify their diesel generators to be compliant with the RICE rule that took effect May 3, 2013. As a result, Seminole has not projected any further growth or decrease in either of these programs over the forecast period. However, Seminole will reassess projected growth in both programs each year when updating the load forecast.

1.4.3 Conservation

Seminole's Members have implemented a range of energy efficiency and energy conservation programs which have reduced Seminole's total requirements for electric energy. Except as described specifically below, these reductions have not been specifically quantified or estimated but are reflected in Seminole's load history. As such, Seminole's load forecast effectively extrapolates the growth of past programs into the future.

Additionally, the current load forecast has been adjusted to estimate the impact of two expected influences on consumer energy use: (1) an estimate of the effects of the 2005 Energy Policy Act and (2) the Energy Independence and Security Act of 2007. An evaluation of these acts revealed that improved efficiency standards for new HVAC systems and improved lighting

efficiency would have the most significant impact on future energy sales of Seminole's Members.

2. FORECAST OF ELECTRIC DEMAND AND ENERGY CONSUMPTION

2.1 Consumer Base and Related Trends

2.1.1 Service Area Economy

Seminole Members provide electric services to portions of 42 counties in Florida. The service area includes north, central and south regions of Florida, a length approximately 400 miles long. Florida's geography, weather and natural resources differ uniquely in each region and promote year round economic activity.

2.1.2 Population and Consumers

Population growth in Florida is significantly influenced by migration from northern states. Therefore, national economic factors influencing migration have a large impact on population growth in areas served by Seminole's Members. Residential consumer growth in Seminole's territory normally exceeds Florida's growth as a whole. During the last ten years, consumer growth in Seminole's territory and in Florida statewide has been 1.3 percent and 1.2 percent, respectively.

2.1.3 Income

Nearly half of the income generated in Florida derives from non-wage payments on dividends, interest, rent, and government transfers. Non-wage payments in Florida account for a higher percentage of income than the national average, due partially to Florida's higher-than-average population percentage of retired workers.

2.2 Forecast Results

2.2.1 Overview

The load forecast reflects improved economic conditions in Florida and a continuous recovery from the impacts of the recent recession. Although consumer spending remains low, the state's unique resources continue to attract economic growth. Florida is still a premier place to live, visit and do business. According to Moody's Analytics' "State Growth Rankings" from 2011 through 2016, Florida is projected to be 22nd in gross state product, 6th in non-farm employment and 3rd in population compared to the rest of the nation. This would be a major improvement from Florida's actual performance in 2006 through 2011, when it ranked last in gross state product, last in non-farm employment, and 25th in population.

In 2010, Seminole began serving only a portion of the load requirements of Lee County Electric Cooperative (LCEC) and as of January 1, 2014 Seminole no longer serves any of LCEC's load. This has the effect of lowering Seminole's long-term energy and demand growth rates.

2.2.2 Population and Consumers

Historical and forecasted population for Seminole Members' service area is shown on Schedules 2.1 through 2.3. Seminole's Members serve significant portions of the less urbanized areas of the state which are located adjacent to metropolitan areas. These cooperative-served areas are less saturated and are impacted by suburban growth around these urban centers. It is therefore reasonable to expect continued higher consumer growth rates for Seminole's Members than for Florida as a whole.

2.2.3 Usage per Consumer

After nearly two decades of steady increases, beginning in 2003 residential energy usage

per consumer for the Seminole system and Florida began to flatten and moderately decline. This change in energy usage is supported by the Seminole’s Residential Appliance Survey results shown in Schedule 1.3. The survey results show the Members reaching maximum saturations of larger homes, electric heating, electric water heating, and air conditioning. Reaching maximum saturations combined with higher energy efficiency of newer electric heating and air conditioning systems have the effect of lowering residential energy usage.

Schedule 1.3			
Homes and Electric Appliance Saturations (%)			
	2005	2008	2011
Single Family Homes	66	70	71
Homes > 2000 sq. ft.	26	27	27
Homes < 1200 sq. ft.	22	20	18
Primary Space Heating	87	89	90
Air Conditioning	97	98	97
Water Heater	91	91	85
Refrigerator	100	100	99
Computers	69	76	81
Electric Range	86	85	82
Microwave Oven	97	97	96
Dishwasher	73	76	73
Clothes Dryer	87	90	86
Pool Pump	16	15	17
SOURCE: "Residential Consumer Survey," Seminole Electric Cooperative, Inc., 2005, 2008 and 2011			

In an effort to further this trend, Seminole and its Members are promoting expansion of demand-side programs and are targeting to mitigate the continued growth in consumer usage. However, further expansion of electro-technology in the home and the introduction of mass produced electric vehicles will be an important influence on future usage per consumer. In 2012, Seminole’s average residential usage was 12,967 kWh while Florida as a whole averaged 12,965 kWh.

Commercial annual average usage per consumer on the Seminole system was 55,287 kWh in 2012, while Florida statewide was 76,635 kWh. The difference is even greater since Seminole Members' commercial usage also includes industrial consumers, whereas the Florida average does not. Seminole's Member commercial sector is dominated by small commercial loads. Commercial/industrial usage per consumer is projected to increase at an average annual growth rate of 0.7 percent through 2023.

2.2.4 Energy Sales and Purchases

Residential energy sales are projected to grow at 2.7 percent annually between 2014 and 2023. The energy sales forecast reflects energy savings from historical conservation efforts, incremental conservation growth at the same rate of adoption, a conservation estimate based primarily on the 2005 Energy Policy Act and the Energy Independence and Security Act of 2007. Commercial energy sales are also projected to grow at an annual average of 2.7 percent over the same period. These statistics for growth include the effect of the departure of LCEC from Seminole's load responsibility in 2014.

2.2.5 Peak Demand

Seminole's winter peak demand is projected to increase at an average annual rate of 2.1 percent over the 10-year planning horizon, while summer peak demand is projected to increase at an average annual rate of 2.2 percent over the same period.

Seminole as a whole, as well as the majority of its Member systems, is expected to continue to be winter peaking. For the Seminole system, winter peaks are expected to minimally increase from approximately 20 percent higher to 23 percent higher than summer peaks. The continued winter-peaking nature of the Seminole system is due primarily to continued prominence of electric space-heating saturation in the foreseeable future. The peak demand in

Seminole's current load forecast reflects no additional load management.

Seminole counts its consumer demand once and only once, on an aggregated and Member system basis, in developing its actual and forecast consumer demand values.

2.2.6 Forecast Scenarios

Seminole creates a high and low population growth scenario in addition to the base forecast. Because Seminole's system is primarily residential load, population is the primary driving force behind Seminole's load growth. Therefore, high and low population growth scenarios are developed for each Member system based on the University of Florida's Bureau of Economic Business Research's (BEBR) alternative scenarios.

Schedules 2.1, 2.2, and 2.3 summarize energy usage and Members' consumers by customer class. Schedules 3.1.1, 3.1.2, and 3.1.3 provide Seminole's total summer peak demand forecasts for base, high and low population scenarios. Schedules 3.2.1, 3.2.2, and 3.2.3 provide similar data for winter peak demand, and Schedules 3.3.1, 3.3.2, and 3.3.3 provide similar data for net energy for load. Schedule 4 provides the monthly peak demand and net energy for load for actual 2013 and the forecast for 2014 through 2015.

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	Avg. Number of Customers	Average kWh Consumption Per Customer
2004	1,537,305	2.15	10,264	713,496	14,386
2005	1,599,910	2.15	10,807	744,617	14,514
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	1,746,120	2.25	9,988	777,497	12,846
2014	1,423,920	2.15	9,331	661,294	14,110
2015	1,444,068	2.14	9,582	673,266	14,232
2016	1,469,021	2.14	9,872	686,662	14,377
2017	1,493,972	2.13	10,158	700,673	14,497
2018	1,518,925	2.13	10,436	714,488	14,606
2019	1,543,877	2.12	10,729	728,158	14,734
2020	1,568,830	2.12	11,018	741,729	14,854
2021	1,591,655	2.11	11,293	754,101	14,975
2022	1,614,480	2.11	11,577	766,424	15,105
2023	1,637,305	2.10	11,874	778,707	15,248

NOTE: 1. Estimated Population Served by Members represents only the area supplied by Seminole. Schedules 2.1, 2.2 and 2.3 forecasts represent retail consumption and consumers of the nine distribution Member cooperatives served by Seminole. History through 2013 also includes LCEC.

Schedule 2.2					
History and Forecast of Energy Consumption and Number of Customers by Customer Class					
Year	COMMERCIAL			Other Sales (GWh)	Total Sales to Ultimate Consumers (GWh)
	GWh	Avg. Number of Customers	Average kWh Consumption Per Customer		
2004	4,119	74,250	55,475	150	14,533
2005	4,370	77,547	56,353	141	15,317
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	16,160
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	4,478	82,309	54,405	165	14,631
2014	4,059	72,054	56,333	148	13,538
2015	4,228	73,494	57,529	151	13,961
2016	4,403	75,066	58,655	154	14,429
2017	4,528	76,738	59,006	157	14,843
2018	4,640	78,408	59,178	160	15,236
2019	4,749	80,081	59,302	163	15,641
2020	4,860	81,751	59,449	165	16,043
2021	4,965	83,291	59,610	168	16,426
2022	5,069	84,829	59,756	172	16,818
2023	5,173	86,368	59,895	175	17,222

NOTE: Commercial class includes industrial customers; Other sales class includes lighting customers.
History through 2013 includes LCEC.

Schedule 2.3
History and Forecast of Energy Consumption and
Number of Customers by Customer Class

Year	Sales for Resale (GWh)	Utility Use & Losses (GWh)	Net Energy for Load (GWh)	Other Customers (Avg. Number)	Total Number of Customers
2004	0	1,880	16,413	5,305	793,051
2005	0	1,449	16,766	5,544	827,708
2006	0	1,410	17,355	5,101	870,133
2007	0	1,221	17,669	5,150	897,413
2008	0	1,171	17,331	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	785	15,880	4,954	849,061
2012	134	1,036	15,769	4,818	855,007
2013	137	1,044	15,812	5,191	864,996
2014	95	803	14,436	5,018	738,366
2015	0	833	14,794	5,087	751,847
2016	0	865	15,294	5,170	766,898
2017	0	896	15,739	5,253	782,664
2018	0	922	16,158	5,340	798,236
2019	0	951	16,592	5,424	813,663
2020	0	980	17,023	5,509	828,989
2021	0	1,006	17,432	5,589	842,981
2022	0	1,034	17,852	5,669	856,922
2023	0	1,062	18,284	5,747	870,822

Excludes Wholesale Interruptible Purchases.

History through 2013 includes LCEC.

Schedule 3.1.1
History and Forecast of Summer Peak Demand (MW) - Base Case

Year	Total	Wholesale	Retail	Interruptible Load	Distributed Generation	Residential		Commercial		Net Firm Demand
						Load Mgmt.	Cons.	Load Mgmt.	Cons.	
2004	3,208	3,208	0	N/A	35	158	N/A	N/A	N/A	3,015
2005	3,336	3,336	0	N/A	35	74	N/A	N/A	N/A	3,227
2006	3,666	3,666	0	N/A	49	78	N/A	N/A	N/A	3,539
2007	3,839	3,839	0	N/A	51	130	N/A	N/A	N/A	3,658
2008	4,006	4,006	0	N/A	62	105	N/A	N/A	N/A	3,839
2009	3,778	3,778	0	N/A	48	100	N/A	N/A	N/A	3,630
2010	3,987	3,987	0	N/A	62	101	N/A	N/A	N/A	3,824
2011	3,714	3,714	0	N/A	67	99	N/A	N/A	N/A	3,548
2012	3,557	3,557	0	16	0	97	N/A	N/A	N/A	3,444
2013	3,692	3,692	0	25	0	101	N/A	N/A	N/A	3,566
2014	3,193	3,193	0	27	68	38	N/A	N/A	N/A	3,060
2015	3,235	3,235	0	28	68	38	N/A	N/A	N/A	3,101
2016	3,334	3,334	0	28	68	38	N/A	N/A	N/A	3,200
2017	3,425	3,425	0	28	68	38	N/A	N/A	N/A	3,291
2018	3,512	3,512	0	28	68	38	N/A	N/A	N/A	3,378
2019	3,600	3,600	0	29	68	38	N/A	N/A	N/A	3,465
2020	3,688	3,688	0	29	68	38	N/A	N/A	N/A	3,553
2021	3,769	3,769	0	29	68	38	N/A	N/A	N/A	3,634
2022	3,855	3,855	0	29	68	38	N/A	N/A	N/A	3,720
2023	3,941	3,941	0	29	68	38	N/A	N/A	N/A	3,806

Historical load management data is actual amount exercised at the time of the seasonal peak demand.
Distributed Generation reflects customer-owned self-service generation.
Excludes Wholesale Interruptible Purchases.
History through 2013 includes LCEC.

Schedule 3.1.2										
Forecast of Summer Peak Demand (MW) - High Case										
Year	Total	Wholesale	Retail	Interruptible Load	Distributed Generation	Residential		Commercial		Net Firm Demand
						Load Mgmt.	Cons.	Load Mgmt.	Cons.	
2014	3,321	3,321	0	27	68	38	N/A	N/A	N/A	3,188
2015	3,365	3,365	0	28	68	38	N/A	N/A	N/A	3,231
2016	3,468	3,468	0	28	68	38	N/A	N/A	N/A	3,334
2017	3,563	3,563	0	28	68	38	N/A	N/A	N/A	3,429
2018	3,653	3,653	0	28	68	38	N/A	N/A	N/A	3,519
2019	3,745	3,745	0	29	68	38	N/A	N/A	N/A	3,610
2020	3,836	3,836	0	29	68	38	N/A	N/A	N/A	3,701
2021	3,921	3,921	0	29	68	38	N/A	N/A	N/A	3,786
2022	4,010	4,010	0	29	68	38	N/A	N/A	N/A	3,875
2023	4,100	4,100	0	29	68	38	N/A	N/A	N/A	3,965

Excludes Wholesale Interruptible Purchases.

Schedule 3.1.3										
Forecast of Summer Peak Demand (MW) - Low Case										
Year	Total	Wholesale	Retail	Interruptible Load	Distributed Generation	Residential		Commercial		Net Firm Demand
						Load Mgmt.	Cons.	Load Mgmt.	Cons.	
2014	3,065	3,065	0	27	68	38	N/A	N/A	N/A	2,932
2015	3,105	3,105	0	28	68	38	N/A	N/A	N/A	2,971
2016	3,200	3,200	0	28	68	38	N/A	N/A	N/A	3,066
2017	3,287	3,287	0	28	68	38	N/A	N/A	N/A	3,153
2018	3,371	3,371	0	28	68	38	N/A	N/A	N/A	3,237
2019	3,455	3,455	0	29	68	38	N/A	N/A	N/A	3,320
2020	3,540	3,540	0	29	68	38	N/A	N/A	N/A	3,405
2021	3,617	3,617	0	29	68	38	N/A	N/A	N/A	3,482
2022	3,700	3,700	0	29	68	38	N/A	N/A	N/A	3,565
2023	3,782	3,782	0	29	68	38	N/A	N/A	N/A	3,647

Excludes Wholesale Interruptible Purchases.

Schedule 3.2.1
History and Forecast of Winter Peak Demand (MW) - Base Case

Year	Total	Wholesale	Retail	Interruptible Load	Distributed Generation	Residential		Commercial		Net Firm Demand
						Load Mgmt.	Cons.	Load Mgmt.	Cons.	
2003-04	3,655	3,655	0	N/A	39	85	N/A	N/A	N/A	3,531
2004-05	4,082	4,082	0	N/A	40	91	N/A	N/A	N/A	3,951
2005-06	4,349	4,349	0	N/A	47	77	N/A	N/A	N/A	4,225
2006-07	4,178	4,178	0	N/A	43	109	N/A	N/A	N/A	4,026
2007-08	4,410	4,410	0	N/A	56	133	N/A	N/A	N/A	4,221
2008-09	4,946	4,946	0	N/A	58	150	N/A	N/A	N/A	4,738
2009-10	5,263	5,263	0	N/A	64	152	N/A	N/A	N/A	5,047
2010-11	4,476	4,476	0	N/A	55	106	N/A	N/A	N/A	4,315
2011-12	4,118	4,118	0	N/A	66	134	N/A	N/A	N/A	3,918
2012-13	3,860	3,860	0	21	0	132	N/A	N/A	N/A	3,707
2013-14*	3,368	3,368	0	22	0	124	N/A	N/A	N/A	3,222
2014-15	3,888	3,888	0	21	68	60	N/A	N/A	N/A	3,739
2015-16	4,015	4,015	0	21	68	60	N/A	N/A	N/A	3,866
2016-17	4,127	4,127	0	21	68	60	N/A	N/A	N/A	3,978
2017-18	4,240	4,240	0	21	68	60	N/A	N/A	N/A	4,091
2018-19	4,355	4,355	0	21	68	60	N/A	N/A	N/A	4,206
2019-20	4,471	4,471	0	21	68	60	N/A	N/A	N/A	4,322
2020-21	4,580	4,580	0	21	68	60	N/A	N/A	N/A	4,431
2021-22	4,689	4,689	0	21	68	60	N/A	N/A	N/A	4,540
2022-23	4,800	4,800	0	21	68	60	N/A	N/A	N/A	4,651
2023-24	4,915	4,915	0	21	68	60	N/A	N/A	N/A	4,766

* 2013-14 values represents actuals

Historical load management data is actual amount exercised at the time of the seasonal peak demand.
Distributed Generation reflects customer-owned self-service generation.
Excludes Wholesale Interruptible Purchases.
History through 2012-13 includes LCEC.

**Schedule 3.2.2
Forecast of Winter Peak Demand (MW) - High Case**

Year	Total	Wholesale	Retail	Interruptible Load	Distributed Generation	Residential		Commercial		Net Firm Demand
						Load Mgmt.	Cons.	Load Mgmt.	Cons.	
2014-15	4,044	4,044	0	21	68	60	N/A	N/A	N/A	3,895
2015-16	4,176	4,176	0	21	68	60	N/A	N/A	N/A	4,027
2016-17	4,293	4,293	0	21	68	60	N/A	N/A	N/A	4,144
2017-18	4,411	4,411	0	21	68	60	N/A	N/A	N/A	4,262
2018-19	4,530	4,530	0	21	68	60	N/A	N/A	N/A	4,381
2019-20	4,651	4,651	0	21	68	60	N/A	N/A	N/A	4,502
2020-21	4,764	4,764	0	21	68	60	N/A	N/A	N/A	4,615
2021-22	4,878	4,878	0	21	68	60	N/A	N/A	N/A	4,729
2022-23	4,993	4,993	0	21	68	60	N/A	N/A	N/A	4,844
2023-24	5,113	5,113	0	21	68	60	N/A	N/A	N/A	4,964

Excludes Wholesale Interruptible Purchases.

**Schedule 3.2.3
Forecast of Winter Peak Demand (MW) - Low Case**

Year	Total	Wholesale	Retail	Interruptible Load	Distributed Generation	Residential		Commercial		Net Firm Demand
						Load Mgmt.	Cons.	Load Mgmt.	Cons.	
2014-15	3,732	3,732	0	21	68	60	N/A	N/A	N/A	3,583
2015-16	3,854	3,854	0	21	68	60	N/A	N/A	N/A	3,705
2016-17	3,961	3,961	0	21	68	60	N/A	N/A	N/A	3,812
2017-18	4,069	4,069	0	21	68	60	N/A	N/A	N/A	3,920
2018-19	4,180	4,180	0	21	68	60	N/A	N/A	N/A	4,031
2019-20	4,291	4,291	0	21	68	60	N/A	N/A	N/A	4,142
2020-21	4,396	4,396	0	21	68	60	N/A	N/A	N/A	4,247
2021-22	4,500	4,500	0	21	68	60	N/A	N/A	N/A	4,351
2022-23	4,607	4,607	0	21	68	60	N/A	N/A	N/A	4,458
2023-24	4,717	4,717	0	21	68	60	N/A	N/A	N/A	4,568

Excludes Wholesale Interruptible Purchases.

Schedule 3.3.1
History and Forecast of Annual Net Energy for Load (GWh) - Base Case

Year	Total	Conservation		Retail	Total Sales Including Winter Park	Utility Use & Losses	Net Energy for Load	Load Factor %
		Residential	Commercial					
2004	16,413	N/A	N/A	0	14,533	1,880	16,413	52.9
2005	16,766	N/A	N/A	0	15,317	1,449	16,766	48.4
2006	17,355	N/A	N/A	0	15,945	1,410	17,355	46.9
2007	17,669	N/A	N/A	0	16,448	1,221	17,669	50.1
2008	17,332	1	N/A	0	16,160	1,171	17,331	46.7
2009	17,454	1	N/A	0	16,236	1,217	17,453	42.1
2010	17,347	1	N/A	0	16,052	1,294	17,346	39.2
2011	15,881	1	N/A	0	15,095	785	15,880	42.0
2012	15,770	1	N/A	0	14,733	1,036	15,769	45.8
2013	15,813	1	N/A	0	14,768	1,044	15,812	48.7
2014	14,525	89	N/A	0	13,633	803	14,436	44.8
2015	14,922	128	N/A	0	13,961	833	14,794	45.2
2016	15,464	170	N/A	0	14,429	865	15,294	44.4
2017	15,952	213	N/A	0	14,843	896	15,739	45.2
2018	16,417	259	N/A	0	15,236	922	16,158	45.1
2019	16,871	279	N/A	0	15,641	951	16,592	45.0
2020	17,322	299	N/A	0	16,043	980	17,023	45.0
2021	17,750	318	N/A	0	16,426	1,006	17,432	44.9
2022	18,191	339	N/A	0	16,818	1,034	17,852	44.9
2023	18,644	360	N/A	0	17,222	1,062	18,284	44.9

Excludes Wholesale Interruptible Purchases.

History through 2013 includes LCEC.

Schedule 3.3.2
Forecast of Annual Net Energy for Load (GWh) - High Case

Year	Total	Conservation		Retail	Total Sales Including Winter Park	Utility Use & Losses	Net Energy for Load	Load Factor %
		Residential	Commercial					
2014	14,889	89	N/A	0	14,174	626	14,800	43.4
2015	15,755	128	N/A	0	14,867	760	15,627	44.3
2016	16,466	170	N/A	0	15,504	792	16,296	44.9
2017	17,118	213	N/A	0	16,084	821	16,905	45.3
2018	17,748	259	N/A	0	16,641	848	17,489	45.6
2019	18,365	279	N/A	0	17,210	876	18,086	45.9
2020	18,980	299	N/A	0	17,777	904	18,681	46.2
2021	19,605	318	N/A	0	18,354	933	19,287	46.6
2022	20,247	339	N/A	0	18,946	962	19,908	46.9
2023	20,905	360	N/A	0	19,553	992	20,545	47.2

Excludes Wholesale Interruptible Purchases.

Schedule 3.3.3
Forecast of Annual Net Energy for Load (GWh) - Low Case

Year	Total	Conservation		Retail	Total Sales Including Winter Park	Utility Use & Losses	Net Energy for Load	Load Factor %
		Residential	Commercial					
2014	13,838	89	N/A	0	13,167	582	13,749	43.8
2015	13,986	128	N/A	0	13,172	686	13,858	42.7
2016	14,364	170	N/A	0	13,490	704	14,194	42.5
2017	14,682	213	N/A	0	13,750	719	14,469	42.1
2018	14,981	259	N/A	0	13,990	732	14,722	41.7
2019	15,267	279	N/A	0	14,242	746	14,988	41.3
2020	15,550	299	N/A	0	14,492	759	15,251	41.0
2021	15,784	318	N/A	0	14,694	772	15,466	40.6
2022	16,026	339	N/A	0	14,903	784	15,687	40.2
2023	16,278	360	N/A	0	15,121	797	15,918	39.8

Excludes Wholesale Interruptible Purchases.

Schedule 4						
Previous Year and 2-Year Forecast of Peak Demand and Net Energy for Load by Month						
Month	2013 Actual		2014 Forecast		2015 Forecast	
	Peak Demand MW	NEL GWh	Peak Demand MW	NEL GWh	Peak Demand MW	NEL GWh
January	2,716	1,147	3,682	1,219	3,739	1,250
February	3,707	1,103	3,027	1,031	3,077	1,058
March	3,540	1,236	2,354	1,000	2,404	1,027
April	2,803	1,184	2,304	1,014	2,340	1,040
May	3,125	1,327	2,726	1,235	2,765	1,263
June	3,380	1,531	2,974	1,365	3,019	1,397
July	3,387	1,525	3,008	1,469	3,046	1,497
August	3,566	1,649	3,060	1,505	3,101	1,537
September	3,405	1,486	2,818	1,317	2,858	1,345
October	3,012	1,303	2,425	1,113	2,464	1,141
November	2,821	1,116	2,274	956	2,343	986
December	2,630	1,205	2,981	1,212	3,073	1,253
ANNUAL		15,812		14,436		14,794
Excludes Wholesale Interruptible Purchases.						
History through 2013 includes LCEC.						

2.3 Forecast Assumptions

2.3.1 Economic and Demographic Data

Seminole's economic and demographic database has four principal sources: (1) population from the “Florida Population Studies” furnished by the BEBR, (2) housing permits, income, and employment data furnished by Moody's Economy.com (3) electricity price data from Seminole's Member cooperatives’ “Financial and Operating Report- Electronic Distributions” (Previously referred to as the RUS Form 7), and (4) appliance and housing data from the “Residential Appliance Surveys” conducted by Seminole and its Member systems since 1980.

Population is the main explanatory variable in the residential and commercial/industrial consumer models. Historical population data by county is obtained for the 42 counties served by Seminole Member systems. Combining the county forecasts yields a population forecast for each Member. Three sets of population forecasts for each county are provided by the BEBR: low, medium, and high scenarios. Historical population growth trends are analyzed to determine the most appropriate combination of scenarios for each Member system. Low and high population scenarios are also developed for each Member.

Real Per Capita Income (RPCI) is an explanatory variable in the residential and commercial/industrial usage per consumer models. The Consumer Price Index for All Urban Consumers (CPI-U) published by the U.S. Bureau of Labor Statistics is used to convert historical nominal income to real values. Total non-farm employment (EMPL) is also used in the commercial/industrial energy usage model. County forecasts of RPCI and EMPL are taken from Moody's Economy.com long-term economic forecast.

The real price of electricity is used in the residential and commercial/industrial energy models. The real price is calculated by dividing kWh sales for each consumer class into the corresponding revenue, and then deflating the result by the CPI-U. For the forecast, the real price of electricity is assumed to increase in the future based on system-wide historical retail rates.

Appliance saturations and housing data are obtained from Seminole's Residential Appliance Survey. The information from the surveys is combined with the residential consumer forecast to produce weighted appliance stock variables for space-conditioning appliances which are used in the residential energy usage model and the peak demand load factor model.

2.3.2 Weather Data

Seminole obtains hourly weather data from the National Oceanic and Atmospheric Administration (NOAA) for six weather stations located in or around Seminole's Member service area. To better reflect weather conditions in each Member's service territory, different weather stations are assigned to individual Member systems based on geographic proximity.

Monthly heating degree hours (HDH) and cooling degree hours (CDH) are used in the energy usage models, while the peak demand models use HDH and CDH on Seminole's peak days. Seminole uses different temperature cut-off points for air conditioning and space heating demand. In addition, there are different winter cut-off values for Members in the northern versus the southern regions.

2.3.3 Sales and Hourly Load Data

Monthly operating statistics dating back to 1970 have been furnished by the Member systems. Included in this data are statistics by class on number of consumers, kWh sales, and revenue. This data is the basis for consumer and energy usage models. Hourly loads for each

Member and the Seminole system, as well as the Members' monthly total energy purchases from Seminole, are collected from 193 delivery points. Such data, taken from January 1979 to the present, is a basis for hourly load profile forecasts and modeling peak demand.

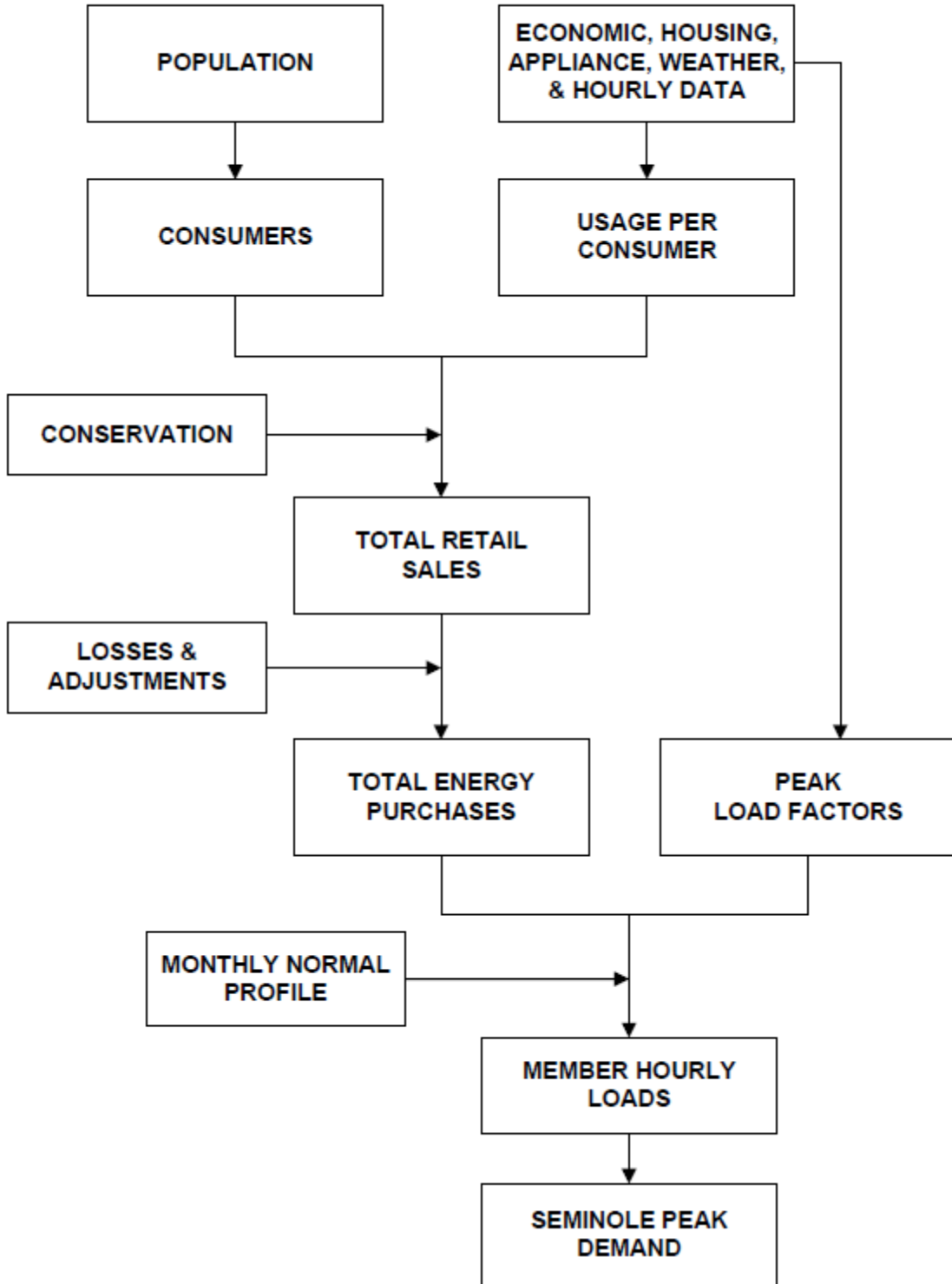
2.4 Forecast Methodology

Seminole's Integrated Forecasting System consists of the following sub-models:

- (1) Residential Consumer Model
- (2) Appliance Model
- (3) Commercial/Industrial Consumer Model
- (4) Other Class Consumers Model
- (5) Residential Energy Usage Model
- (6) Commercial/Industrial Energy Usage Model
- (7) Other Class Energy Usage Model
- (8) Peak Demand Load Factor Model
- (9) Hourly Load Profiles and Load Management

Each model consists of nine sub-models because each Member system is modeled and forecast separately. Individual Member model results are aggregated to derive the Seminole forecast. Figure 1 on the following page shows the Integrated Forecasting System.

Figure 1
Integrated Forecasting System



2.4.1 Consumer Models

For each Member, annual consumers are a function of the Member's service area population, with a first-order auto-regressive correction used when necessary. The amount of new residential housing permits was found to be a significant variable in six of the Members' residential consumer models. Forecasts are benchmarked using 2012 actual data. Seasonally adjusted monthly forecasts are developed from annual data. Expected new large commercial consumers are included.

Other consumer classes generally include irrigation, street and highway lighting, public buildings, and sales for resale, which represent less than 2 percent of Seminole's Members' total energy sales. A few Member systems include some of these classes in the commercial/industrial sector. For the others, annual consumer forecasts are projected using regression analysis against population, or a trending technique.

2.4.2 Appliance Model

The Appliance Model combines the results of the Residential Consumer Model with data from the Residential Appliance Survey to yield forecasts of space-heating and air-conditioning stock variables which are used in the Residential Energy Usage Model and the Peak Demand Load Factor Model. Annual forecasts of the shares for the following home types are produced: single-family, mobiles, and multi-family homes. Each home type is segregated into four age groups. Next, annual forecasts of space-conditioning saturations are created. Finally, the air-conditioning saturations and the space-heating saturations are combined with housing type share information, resulting in weather-sensitive stock variables for heating and cooling.

2.4.3 Energy Usage Model

The Residential Energy Usage Model is a combination of econometric and end-use methods. For each Member system, monthly residential usage per consumer is a function of heating and cooling degree variables weighted with space-conditioning appliances, real price of electricity, and real per capita income. Forecasts are benchmarked against weather-normalized estimated energy in 2012, the last year of the analysis period. The usage per consumer forecast is multiplied by the consumer forecast to produce monthly residential energy sales forecasts.

For each Member system, monthly commercial/industrial usage per consumer is a function of heating and cooling degree variables, real price of electricity, real per capita income, total non-farm employment, and dummy variables to explain abrupt or external changes. A first order auto-regressive correction is used when necessary. Forecasts of energy usage per consumer are benchmarked to 2012 actuals, the last year of the historical period. Energy usage per consumer forecasts are combined with the consumer forecasts to produce monthly commercial/industrial energy sales forecasts. Expected new large commercial loads are included in the forecast.

Historical patterns of energy usage for other classes have been quite stable for most Members and usage is held constant for the forecast period. Trending methodology is used for the Members with growth in this sector.

2.4.4 Total Energy Sales and Energy Purchases

Residential, Commercial/Industrial, and Other class energy sales forecasts are summed to create total retail energy sales forecasts for each Member system. Retail energy sales forecasts are converted to Member energy purchases from Seminole at the delivery point using historical averages of the ratio of calendar month purchases to retail billing cycle sales for each Member.

Therefore, these adjustment factors represent both energy losses and billing cycle sales and calendar month purchases differences. The latter, as a function of weather and billing days, often changes erratically.

2.4.5 Peak Demand Load Factor Model

The Seminole peak demand forecast is derived after the Member monthly peak demands and hourly load forecasts have been created. Member peak demands are derived by combining the forecasts of monthly load factors with energy purchases from Seminole. Monthly peak demand load factors are a function of heating and cooling degree variables, precipitation, air-conditioning and space-heating saturations, and heating and cooling degree hours at the time of the Member's peak demand. Two seasonal equations for each Member system are developed: one for the winter months (November through March) and the other for the summer months (April through October). The forecasted monthly load factors are combined with the energy purchases from Seminole forecasts to produce forecasts of monthly peaks by Member.

2.4.6 Hourly Load Profiles

Hourly demand forecasts are created using an algorithm that contains the following inputs: normal monthly hourly profiles, maximum and minimum monthly demands, and energy. This algorithm produces monthly hourly load forecasts by Member. Seminole peak demands are derived by summing the Members' hourly loads and identifying the monthly coincident maximum demands.

2.4.7 Scenarios

In lieu of economic scenarios, Seminole creates a high and low population growth scenario in addition to the base population forecast. Because Seminole's system is primarily residential load, population is the primary driving force behind Seminole's load growth.

Therefore, high and low population growth scenarios are developed for each Member system based on the BEBR's alternative scenarios.

3. FUEL REQUIREMENTS AND ENERGY SOURCES

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

Seminole has additional requirements for capacity in the 2019 and beyond time frame. Seminole has reflected capacity additions which are assumed to be from a portfolio of resources such as gas/oil, nuclear, and renewable resources.

**Schedule 5
Fuel Requirements For Seminole Generating Resources**

Fuel Requirements		Units	Actual*		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
			2012	2013										
Nuclear		Trillion BTU	0	0	0	0	0	0	0	0	0	0	0	0
Coal		1000 Tons	3,194	3,190	3,356	3,542	3,527	3,565	3,556	3,543	3,490	3,239	3,272	3,268
Residual	Total	1000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
	Steam	1000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
	CC	1000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
	CT	1000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
Distillate	Total	1000 BBL	41	47	38	40	40	40	40	40	40	37	37	38
	Steam	1000 BBL	37	46	38	40	40	40	40	40	40	37	37	37
	CC	1000 BBL	0	1	0	0	0	0	0	0	0	0	0	1
	CT	1000 BBL	4	0	0	0	0	0	0	0	0	0	0	0
Natural Gas	Total	1000 MCF	22,517	22,467	25,202	24,275	26,454	27,678	27,724	28,221	31,982	49,901	54,856	57,806
	Steam	1000 MCF	0	0	0	0	0	0	0	0	0	0	0	0
	CC	1000 MCF	18,934	19,821	23,313	22,812	24,398	25,497	25,046	25,903	29,911	45,718	48,737	49,620
	CT	1000 MCF	3,583	2,646	1,889	1,463	2,056	2,181	2,678	2,318	2,071	4,183	6,119	8,186

NOTE: Above fuel is for existing and future-owned generating resources (excluding purchased power contracts).
Totals may not add due to rounding.
* Actual values include LCEC.

**Schedule 6.1
Energy Sources (GWh)**

Energy Sources	Units	Actual*		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
		2012	2013											
Inter-Regional Interchange	GWh	0	0	0	0	0	0	0	0	0	0	0	0	
Nuclear	GWh	0	0	0	0	0	0	0	0	0	0	0	0	
Coal	GWh	7,754	7,725	8,308	8,774	8,639	8,719	8,693	8,636	8,479	7,780	7,871	7,859	
Residual	Total	GWh	0	0	0	0	0	0	0	0	0	0	0	
	Steam	GWh	0	0	0	0	0	0	0	0	0	0	0	
	CC	GWh	0	0	0	0	0	0	0	0	0	0	0	
	CT	GWh	0	0	0	0	0	0	0	0	0	0	0	
Distillate	Total	GWh	66	54	49	52	60	67	76	77	77	55	56	61
	Steam	GWh	24	27	22	23	23	24	23	23	23	21	21	21
	CC	GWh	38	26	0	0	0	0	0	0	0	0	0	1
	CT	GWh	4	1	27	29	37	43	53	54	54	34	35	39
Natural Gas	Total	GWh	7,000	7,071	5,077	4,966	5,591	6,258	6,786	7,305	7,905	9,037	9,367	9,814
	Steam	GWh	0	0	171	205	70	34	39	0	0	0	0	0
	CC	GWh	6,244	6,630	4,545	4,610	5,276	5,943	6,391	6,993	7,645	8,814	9,004	9,312
	CT	GWh	756	441	361	151	245	281	356	312	260	223	363	502
NUG	GWh	0	0	0	0	0	0	0	0	0	0	0	0	
Renewables	GWh	949	962	1002	1002	1004	695	603	574	562	560	558	550	
Other	GWh	0	0	0	0	0	0	0	0	0	0	0	0	
Net Energy for Load	GWh	15,769	15,812	14,436	14,794	15,294	15,739	16,158	16,592	17,023	17,432	17,852	18,284	

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.

* Actual values include LCEC.

**Schedule 6.2
Energy Sources (Percent)**

Energy Sources		Units	Actual*											
			2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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		%	49.17%	48.86%	57.55%	59.31%	56.49%	55.40%	53.80%	52.05%	49.81%	44.63%	44.09%	42.98%
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	%	0.42%	0.34%	0.34%	0.35%	0.39%	0.43%	0.47%	0.46%	0.45%	0.32%	0.31%	0.33%
	Steam	%	0.15%	0.17%	0.15%	0.16%	0.15%	0.15%	0.14%	0.14%	0.14%	0.12%	0.12%	0.11%
	CC	%	0.24%	0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
	CT	%	0.03%	0.01%	0.19%	0.20%	0.24%	0.27%	0.33%	0.33%	0.32%	0.20%	0.20%	0.21%
Natural Gas	Total	%	44.39%	44.72%	35.17%	33.57%	36.56%	39.76%	42.00%	44.03%	46.43%	51.84%	52.47%	53.68%
	Steam	%	0.00%	0.00%	1.18%	1.39%	0.46%	0.22%	0.24%	0.00%	0.00%	0.00%	0.00%	0.00%
	CC	%	39.60%	41.93%	31.49%	31.16%	34.50%	37.76%	39.55%	42.15%	44.91%	50.56%	50.44%	50.93%
	CT	%	4.79%	2.79%	2.50%	1.02%	1.60%	1.79%	2.20%	1.88%	1.53%	1.28%	2.03%	2.75%
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		%	6.02%	6.08%	6.94%	6.77%	6.56%	4.42%	3.73%	3.46%	3.30%	3.21%	3.13%	3.01%
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.

* Actual values include LCEC.

4. FORECAST OF FACILITIES REQUIREMENTS

Seminole's load is located primarily within three control areas: DEF, FPL, and SDS. Seminole is obligated to serve all Member loads within these control areas. Seminole must also supply appropriate reserves for the load it is responsible for serving. Seminole meets its total committed load obligation using a combination of owned generation and purchased capacity resources.

Schedules 7.1, 7.2, and 8 include the addition of approximately 2,100 MW of capacity by 2024. Such capacity is needed to replace expiring purchased power contracts and to serve increased Member load requirements while maintaining Seminole's reliability criteria. These needs are specified for planning purposes and represent the most economical mix of resource types for Seminole's needs.

Seminole's capacity expansion plan includes the need for seven 225 MW class combustion turbine units and one 523 MW combined cycle plant which are all currently assumed to be installed at Seminole's site in Gilchrist County (See Schedule 9). The first two of these combustion turbine units is scheduled to enter service in December 2020, the next unit by June 2021, followed by three additional units in December 2021 and the final unit in December 2023. In addition, by December 2020, Seminole also has a need for 523 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. These studies will analyze purchased power alternatives or acquisition of existing generating facilities acquired through Seminole's competitive bidding process and/or bilateral discussions with power suppliers/generation owners and will allow Seminole to further optimize the amount, type, and timing of such capacity. The

inclusion of these units in Seminole's capacity expansion plan does not represent at this time a commitment for construction by Seminole.

Seminole also has a FERC-filed qualifying facility (QF) program which complies with the requirements of the Public Utility Regulatory Policies Act (PURPA). When competitively bidding for power supplies, Seminole continues to solicit proposals from QF and renewable energy facilities. Seminole also evaluates all unsolicited QF and renewable energy proposals for applicability to the cooperative's needs. As a result of its market interactions, Seminole has signed several purchased power contracts for renewable energy (see Section 1.3.1). These renewable resources are projected to serve approximately 7% of Seminole's total energy requirements in 2014.

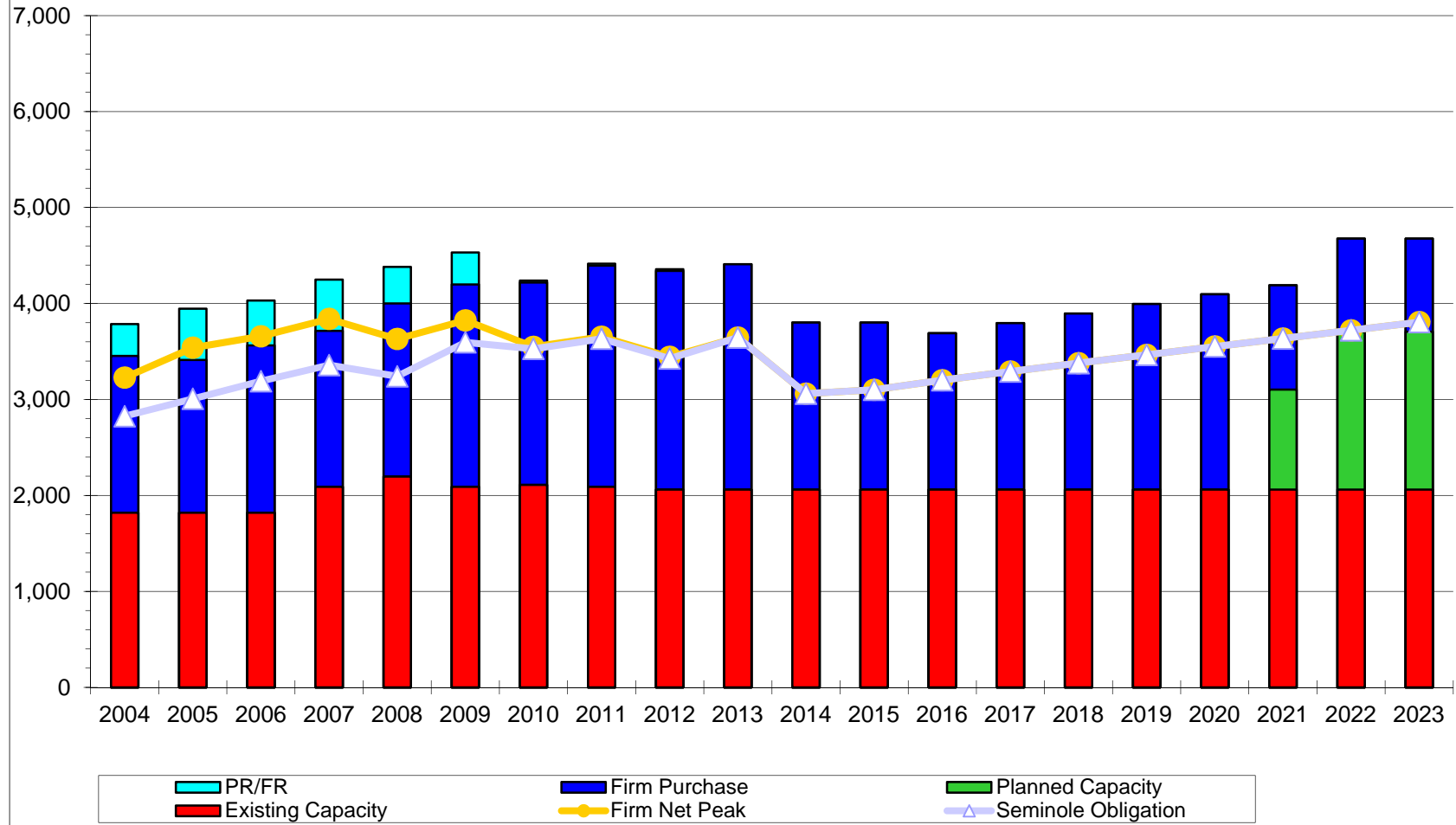
**Schedule 7.1
Forecast of Capacity, Demand and Scheduled Maintenance at Time of Summer Peak**

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
2014	2,060	0	1,741	1,741	0	0	3,801	3,801	3,060	3,060	740	24%	0	740	24%
2015	2,060	0	1,741	1,741	0	0	3,801	3,801	3,101	3,101	700	23%	0	700	23%
2016	2,060	0	1,630	1,630	0	0	3,690	3,690	3,200	3,200	490	15%	0	490	15%
2017	2,060	0	1,735	1,735	0	0	3,795	3,795	3,291	3,291	504	15%	0	504	15%
2018	2,060	0	1,835	1,835	0	0	3,895	3,895	3,378	3,378	517	15%	0	517	15%
2019	2,060	0	1,935	1,935	0	0	3,995	3,995	3,465	3,465	530	15%	0	530	15%
2020	2,060	0	2,036	2,036	0	0	4,096	4,096	3,553	3,553	543	15%	0	543	15%
2021	3,103	0	1,086	1,086	0	0	4,189	4,189	3,634	3,634	555	15%	0	555	15%
2022	3,706	0	970	970	0	0	4,676	4,676	3,720	3,720	956	26%	0	956	26%
2023	3,706	0	970	970	0	0	4,676	4,676	3,806	3,806	870	23%	0	870	23%

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.
3. Percent reserves are calculated at 15% of Seminole's obligation and include any surplus capacity.

See Figure 2 for graphical representation.

Figure 2: History and Forecast Of Total Resources And Peak Demand Summer



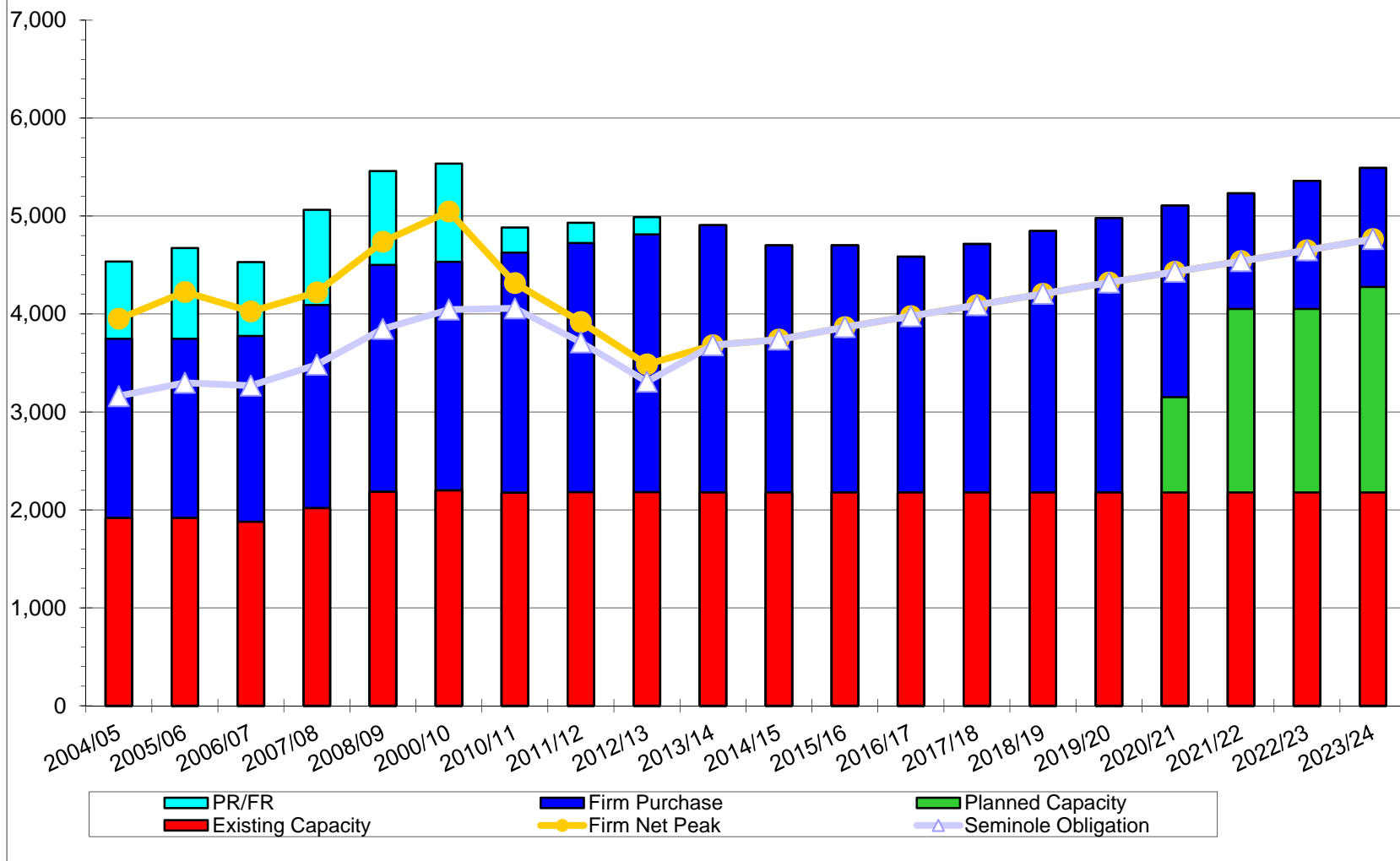
Schedule 7.2
Forecast of Capacity, Demand and Scheduled Maintenance at Time of Winter Peak

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
2014/15	2,178	0	2,523	2,523	0	0	4,701	4,701	3,739	3,739	962	26%	0	962	26%
2015/16	2,178	0	2,523	2,523	0	0	4,701	4,701	3,866	3,866	835	22%	0	835	22%
2016/17	2,178	0	2,407	2,407	0	0	4,585	4,585	3,978	3,978	607	15%	0	607	15%
2017/18	2,178	0	2,537	2,537	0	0	4,715	4,715	4,091	4,091	624	15%	0	624	15%
2018/19	2,178	0	2,670	2,670	0	0	4,848	4,848	4,206	4,206	641	15%	0	641	15%
2019/20	2,178	0	2,802	2,802	0	0	4,980	4,980	4,322	4,322	658	15%	0	658	15%
2020/21	3,151	0	1,955	1,955	0	0	5,106	5,106	4,431	4,431	675	15%	0	675	15%
2021/22	4,051	0	1,180	1,180	0	0	5,231	5,231	4,540	4,540	691	15%	0	691	15%
2022/23	4,051	0	1,308	1,308	0	0	5,359	5,359	4,651	4,651	708	15%	0	708	15%
2023/24	4,276	0	1,215	1,215	0	0	5,491	5,491	4,766	4,766	725	15%	0	725	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.
3. Percent reserves are calculated at 15% of Seminole's obligation and include any surplus capacity.

See Figure 3 for graphical representation.

Figure 3: History and Forecast Of Total Resources And Peak Demand Winter



**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							
Unnamed CT	1	Gilchrist	CT	NG	DFO	PL	TK	(2)	12/2020	Unk	225	201	225	P
Unnamed CT	2	Gilchrist	CT	NG	DFO	PL	TK	(2)	12/2020	Unk	225	201	225	P
Unnamed CT	3	Gilchrist	CT	NG	DFO	PL	TK	(2)	6/2021	Unk	225	201	225	P
Unnamed CT	4	Gilchrist	CT	NG	DFO	PL	TK	(2)	12/2021	Unk	225	201	225	P
Unnamed CT	5	Gilchrist	CT	NG	DFO	PL	TK	(2)	12/2021	Unk	225	201	225	P
Unnamed CT	6	Gilchrist	CT	NG	DFO	PL	TK	(2)	12/2021	Unk	225	201	225	P
Unnamed CT	7	Gilchrist	CT	NG	DFO	PL	TK	(2)	12/2023	Unk	225	201	225	P
Unnamed CC	1	Gilchrist	CC	NG	DFO	PL	TK	(2)	12/2020	Unk	523	440	523	P

Abbreviations: Unk Unknown
A Generating unit capability increased (re-rated or re-licensed)
P Planned, but not under construction
TBA To Be Announced

NOTES:
(1) Existing resources whose capacity rating is expected to decrease.
(2) Future resource which may be existing or new as determined by future Request for Proposal results.

5. OTHER PLANNING ASSUMPTIONS AND INFORMATION

5.1 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).

5.2 Fuel Price Forecast

5.2.1 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 affect US coal prices. The underlying value of coal at the mine will continue to be driven by changing domestic demand, 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 cost

increases. In 2012 and during part of 2013, lower natural gas prices created an opportunity for electric utilities to swap natural gas for coal fired generations and this situation may have reduced the railroads' near-term ability to apply upward pricing pressure during contract renewals. Currently, the spot coal market pricing is depressed, however with the rise of natural gas prices during the winter of 2013/2014, the railroads and coal companies may use this opportunity to exert pricing pressure on the utility marketplace, resulting in increased delivered cost of utility coal. 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 relationships reduce Seminole's coal price volatility risk for the near term time horizon.

5.2.2 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 2012, the Southeast U.S. refined product supplies were impacted by several domestic and international refinery closures. Due to reduced demand for such refined products, the market impact has been minimized, but could increase price volatility in the future as demand increases. Additional upward pressure to market pricing will result from any new governmental rules and laws for improved fuel qualities. Federal mandate required refiners to convert their production in 2013 so that all diesel fuel oil would be ultra-low sulfur oil. Seminole is only purchasing ultra-low sulfur fuel oil for its generating stations.

5.2.3 Natural Gas

At year-end 2013, natural gas prices remain near \$4.00 per mmBtu and nominal Henry Hub prices are projected to increase slowly over the next ten years reaching \$5.00 per mmBtu near the end of the ten-year study period.

5.2.4 Coal/Gas Price Differential

The current natural gas and coal markets 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 expected to remain compressed throughout the study period given the projected slow rise in gas prices.

Seminole's base fuel price forecast for this Ten-Year Site Plan does not take into account potential federal carbon emission initiatives, such as taxation or emission credits, 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.

5.3 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.

5.4 Financial Assumptions

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

5.5 Generation 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. For a not-for-profit cooperative, revenue requirements translate directly into rates to our Member distribution cooperatives. 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 in Figure 4.

The impact of DSM and conservation in Seminole's planning process is included in the load forecast. DSM reduces peak demand and Seminole resource needs to meet the demands in Seminole's direct serve area, the FPL area, and the DEF area.

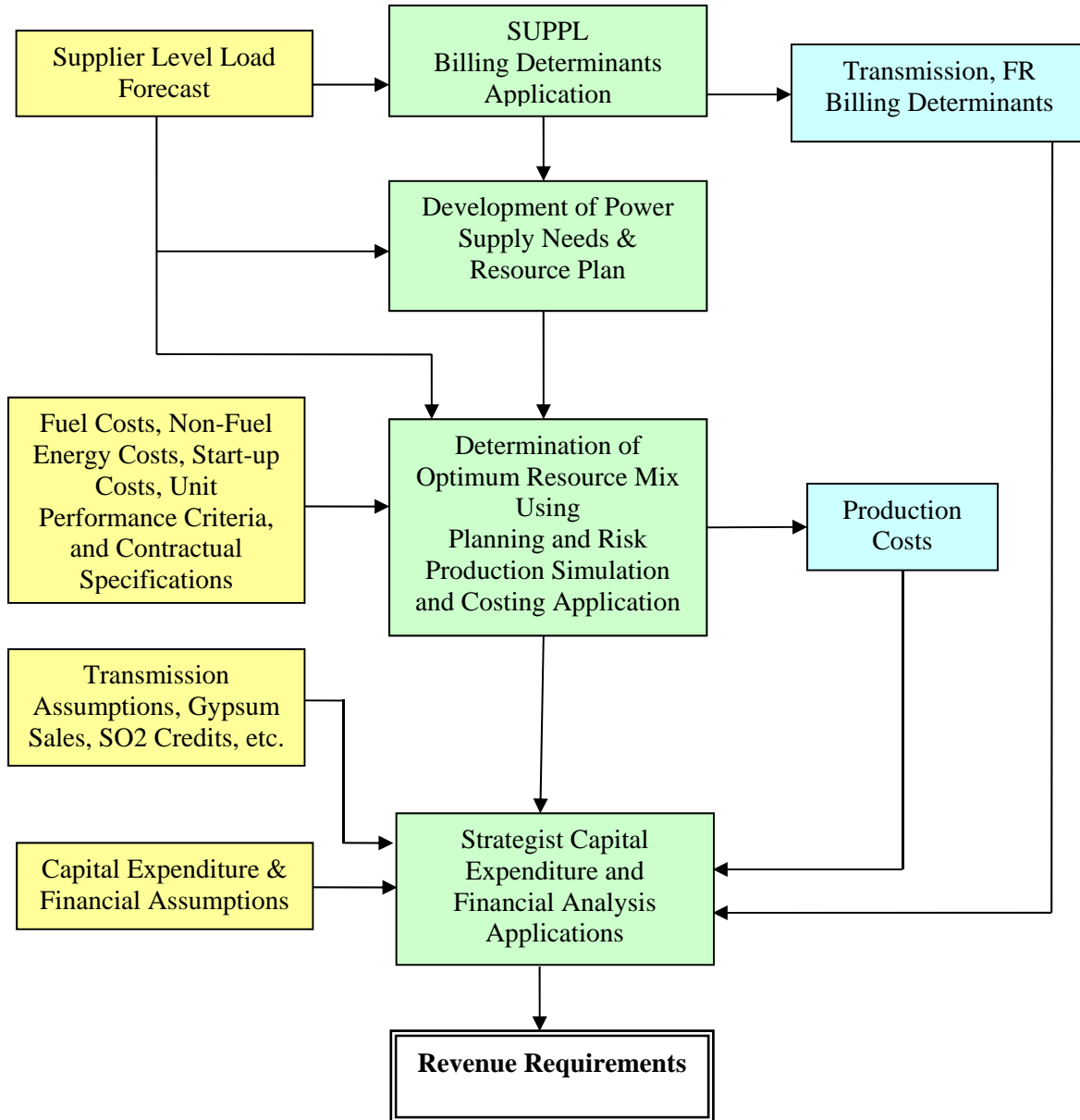
Seminole considers cost effective energy efficiency and conservation resources as a priority resource option in meeting future expansion needs. Seminole has committed to work jointly with its Members to assess the feasibility and effectiveness of demand-side resources.

5.6 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 reliance on interconnected neighboring systems for emergency purchases.

**Figure 4
Resource Planning Process**



5.7 Strategic Concerns

In the current 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 decision process.

Seminole values resource flexibility as a hedge against a variety of risks, as evidenced by a generation portfolio which includes approximately the same amount of purchased capacity as owned capacity. Both owned and long-term purchased resources contribute stability to a power supply plan while shorter term purchase arrangements add flexibility. For purchased power agreements, the decision to acquire system-type capacity versus unit-specific power is also a consideration. System capacity, which is sourced from many generating units, is more reliable, and agreements can be structured to reduce Seminole's reserve requirements and provide greater reliability. 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 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 that 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 generation will be fueled with natural gas.

5.8 Procurement of Supply-Side Resources

In making decisions on future procurement of power supply, Seminole compares its self-build alternatives with purchased power alternatives. Seminole solicits purchased power proposals from utilities, independent power producers, QFs, renewable energy providers, and power marketers. Seminole’s evaluation of its options includes an assessment of economic life cycle cost, reliability, operational flexibility, strategic concerns and risk elements.

5.9 Transmission Plans

The following table lists all 69 kV and above projects for new, upgraded, or reconfigured transmission facilities planned by Seminole over the ten-year planning horizon that are required for new generation facilities.

Status	Line Terminals		Circuits	Line Miles	Commercial In-Service Date	Nominal Voltage (kV)	Capacity (MVA)
	From	To					
New	Gilchrist Plant	Gilchrist East Switching Station	2	10	2020	230	1195

5.9.1 Transmission Facilities for Gilchrist Generating Station

The following transmission system additions would tentatively be required for the addition of the Gilchrist units:⁴

⁴ Note, at the time of this filing Seminole had not submitted a network service request to designate these new units as network resources to serve Member load in the DEF area.

- Construction of a new Gilchrist East Switching Station along the existing DEF Ft. White – Newberry 230 kV transmission line.
- Construction of two new 230 kV circuits (rated at 3000 Amps), ten miles in length each, to connect the Gilchrist generating station to the new Gilchrist East Switching Station (see Schedule10).

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

1	Plant Name & Unit Number	Gilchrist Generating Station Unit 1-2
2	Capacity a. Summer (MW): b. Winter (MW):	201 (each) 225 (each)
3	Technology Type:	Combustion Turbine
4	Anticipated Construction Timing a. Field construction start-date: b. Commercial in-service date:	December 2018 December 2020
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:	Approximately 530 acres
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% 9900 Btu/kWh (HHV) - ISO Rating
13	Projected Unit Financial Data (\$2017) 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:	30 681 655 26 Included in values above 7.92 0.96* N/A *Variable O&M does not include start up charge of \$7,098 per start

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

1	Plant Name & Unit Number	Gilchrist Generating Station Unit 3
2	Capacity a. Summer (MW): b. Winter (MW):	201 225
3	Technology Type:	Combustion Turbine
4	Anticipated Construction Timing a. Field construction start-date: b. Commercial in-service date:	June 2019 June 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:	Approximately 530 acres
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% 9900 Btu/kWh (HHV) - ISO Rating
13	Projected Unit Financial Data (\$2018) 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:	30 696 669 27 Included in values above 8.16 0.98* N/A *Variable O&M does not include start up charge of \$7,252 per start

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

1	Plant Name & Unit Number	Gilchrist Generating Station Units 4-6
2	Capacity a. Summer (MW): b. Winter (MW):	201 (each) 225 (each)
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:	Approximately 530 acres
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% 9900 Btu/kWh (HHV) - ISO Rating
13	Projected Unit Financial Data (\$2019) 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:	30 696 669 27 Included in values above 8.16 0.98* N/A *Variable O&M does not include start up charge of \$7,252 per start

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

1	Plant Name & Unit Number	Gilchrist Generating Station Units 7
2	Capacity a. Summer (MW): b. Winter (MW):	201 225
3	Technology Type:	Combustion Turbine
4	Anticipated Construction Timing a. Field construction start-date: b. Commercial in-service date:	December 2021 December 2023
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:	Approximately 530 acres
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% 9900 Btu/kWh (HHV) - ISO Rating
13	Projected Unit Financial Data (\$2019) 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:	30 726 698 28 Included in values above 8.52 1.03* N/A *Variable O&M does not include start up charge of \$7,562 per start

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

1	Plant Name & Unit Number	Gilchrist Generating Station CC Unit 1
2	Capacity a. Summer (MW): b. Winter (MW):	440 523
3	Technology Type:	Combined Cycle
4	Anticipated Construction Timing a. Field construction start-date: b. Commercial in-service date:	December 2017 December 2020
5	Fuel a. Primary fuel: b. Alternate fuel:	Natural Gas #2 Oil
6	Air Pollution Control Strategy	SCR, DLN Burner
7	Cooling Method:	Wet Cooling Tower with Forced Air Draft Fans
8	Total Site Area:	Approximately 530 acres
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):	3.00 2.50 94.50 50% 6630 Btu/kWh (HHV) - ISO Rating
13	Projected Unit Financial Data (\$2019) 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): K Factor:	30 725 668 57 Included in values above 11.76 1,156 N/A

Schedule 10
Status Report and Specifications of Proposed Associated Transmission Lines

1	Point of Origin and Termination:	Originating at SECI's Gilchrist plant site; terminating at SECI's Gilchrist East Switching Station
2	Number of Lines:	Two
3	Right-of-Way	To be determined
4	Line Length:	10 miles each
5	Voltage:	230 kV
6	Anticipated Construction Timing:	Start: January 2019 Completion: May 2020
7	Anticipated Capital Investment:	\$24 million (total)
8	Substation:	The Gilchrist Interconnection will require a new Seminole Gilchrist East Switching Station on the DEF Ft. White - Newberry 230 kV transmission line
9	Participation with Other Utilities:	N/A

6. ENVIRONMENTAL AND LAND USE INFORMATION

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

SGS is located in a rural unincorporated area of Putnam County approximately 5 miles north of the City of Palatka. The site is 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.

Units 1 and 2 went into commercial operation in February and December of 1984, respectively. 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.

State-listed species that are likely to occur on the site include the bald eagle, the indigo snake, and the gopher tortoise. No known listed plants occur on the site. The site has not been listed as a natural resource of regional significance by the regional planning council.

The local government future land use for the area where the existing units are located is designated as industrial use.

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.

The primary fuel for SGS is bituminous coal. No. 2 (distillate) fuel oil is used for startups and flame stabilization. Coal is delivered to the site by unit trains and fuel oil is delivered by truck. Coal for SGS is stored at the site. Coal pile stormwater is collected and treated. The plant maintains sufficient secondary containment for all storage tanks.

SGS is designed so that solid waste from the Flue Gas Desulfurization (FGD) system will be treated to produce wallboard grade synthetic gypsum and sold for use in producing wallboard. Most bottom ash is currently sold to recyclers with flyash currently being disposed of in the onsite lined landfill.

SGS Units 1 and 2 completed a major air pollution control upgrade project in 2011 costing approximately \$282 million. These upgrades included low NO_x burners, overfired air ports and selective catalytic reduction (SCR) systems for NO_x control, FGD improvements to increase SO₂ removal efficiency from 88% to 95%, and an alkali(lime) injection system for sulfuric acid control. The existing electrostatic precipitator (ESP) is fully operational and removes 99.7% of the flue gas particulate matter. The combination of these technologies removes approximately 90% of the mercury contained in the flue gas.

Noise generated during operation of SGS does not result in sound levels in excess of the Putnam County Noise Control Ordinance.

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

MGS is located in Hardee and Polk Counties about nine miles northwest of Wauchula, 16 miles south-southwest of Bartow, and 40 miles east of Tampa Bay. The site is bordered by County Road 663 on the east, CF Industries on the south, and Mosaic, Inc. on the 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. A more detailed description of environmental and land use is available in the site certification application PA-89-25SA.

6.3 Gilchrist Generating Station Site – Gilchrist County, Florida

The Gilchrist Generating Station site is approximately 530 acres in size. The site is located in the central portion of Gilchrist County, approximately 8 miles north of the City of Trenton and is a suitable site for advanced natural gas facilities, peaking units, and renewable energy 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 recently 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 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. The following discussion summarizes the results of the ecological survey.

6.3.1 Vegetation/Land Use

There are eight vegetation or land use types on the Site. These were classified using the Florida Land Use Cover and Forms Classification system (FLUCFCS) published by the Florida Department of Transportation in 1999. The following are brief descriptions of each of the vegetation/land use types identified. For convenience, the descriptions are broadly classified as uplands and wetlands.

6.3.2 Upland Vegetation

Coniferous Plantations (FLUCFCS 441) - Approximately 337.5-acres or 63.7 percent of the Site are classified as upland pine plantation. These areas are periodically harvested on a 20- to 30-year cycle. Planted pine stands ranged in age from mature stands on the eastern portion of the Site; 3- to 4-year-old stands in the southern portion; to recently cleared and replanted lands on the far east side; and 8- to 10-year-old pine near the focus area in the western portion of the Site. Typical species are longleaf pine and some slash pine in the canopy, scattered saw palmetto, blackberry, gallberry, Chapman's oak, myrtle oak, and shiny blueberry in the shrub layer and wiregrass, earleaf greenbrier, fennel, broomsedges, and yankeeweed in the understory.

Longleaf Pine – Xeric Oak (FLUCFCS 412) - Within the Site boundary, there are approximately 131.5 acres, or 24.8 percent, that are classified as Longleaf Pine – Xeric Oak. This community predominantly exists in the north-central portion of the Site on well-drained sandhill.

These areas have been used for pine cultivation in the past; remnant scrub oaks and a few remnant pines have resulted in a community that is similar to a relatively undisturbed sandhill community. The remaining vegetative community after logging is mostly intact and diverse in some areas of the Site. The canopy consists of longleaf and slash pines with xeric oaks including sand live oak and turkey oak, Myrtle oak, saw palmetto staggerbush, winged sumac, pawpaw, sand blackberry, fetterbush, and less commonly Chapman's oak and Florida rosemary occur in the shrub layer. Common species in the herb stratum include yankeeweed, wiregrass, little bluestem, reindeer moss, prickly-pear cactus, gopher apple, goldenasters, witchgrasses, bracken fern, blackroot, chaffhead, blazing stars, and whitetassels.

Xeric Oak (FLUCFCS 421) - Approximately 40 acres or 7.6 percent of the Site is classified as xeric oak. This community consists predominantly of clusters of turkey oak and/or sand live oak. This community is similar to the Longleaf Pine – Xeric oak community except pine trees are absent from the community and the oak canopy is dense. Shrub and herb species are similar to those occurring in the Longleaf Pine – Xeric oak community.

Roads – Unpaved Logging Roads (FLUCFCS 814) - This designation is used for logging roads found throughout the site that are clearly visible in aerial photography. All these roads are unpaved, and one of the roads used for access is an abandoned railway line. They are unvegetated and periodically maintained and passable. Roads cover approximately 10.7 acres or 2 percent of the Site area.

6.3.3 Wetland Vegetation

All wetlands and/or surface waters in Florida are regulated by the Florida Department of Environmental Protection (FDEP), and Waters of the United States (streams, rivers, etc., and wetlands connected or exhibiting a significant nexus thereto) are regulated by the U.S. Army

Corps of Engineers (USACE). Any disturbance to any wetland on the Site will require a permit from FDEP; disturbance to wetlands connected to Waters of the United States will also require a permit or approval from USACE for any proposed impacts. Impacts usually require mitigation of some sort.

Approximately 10.1 acres of the Site (1.9 percent) consist of various categories of vegetation types classified as wetlands. When the property was surveyed, many of the wetland communities were dry, likely as a result of the recent significant drought in Florida. The Site predominantly consists of well-drained soils supporting no wetlands, except in the far eastern portion of the Site where soil and geological differences support a higher frequency of wetlands. No wetlands are found near the focus area in the northwestern portion of the Site. The following is a classification and brief description of each wetland type on the Site.

Cypress (FLUCFCS 621) - Within the Site boundary there was one 2.6-acre cypress wetland. Besides pond cypress, the canopy consists of red maple, sweet bay, and tupelo with a dense shrub layer of titi, dahoon holly, highbush blueberry, and fetterbush and a minimal understory due to shading. Scattered individuals of maidencane, Virginia chain fern, laurel greenbrier, and yellow-eyed grasses comprise the herb stratum. Although, the wetland had been logged in the past and the area surrounding the wetland had recently been clear-cut, the quality of this particular wetland was high. Minimal disturbance was evident, cypress recruitment as evidenced by the presence of several age classes was observed, and there were lots of titi seedlings. The wetland was dry when observed, and no indicators of ponding were evident.

Wet Prairie (FLUCFCS 643) - There were four wetlands comprising 6.7 acres that are classified as wet prairies. These marshes tended to be low diversity and were usually dominated by maidencane and redroot and fringed by a few red maple, buttonbush, and titi. Due to the dry

conditions, many of these wetlands were becoming dominated by yankeeweed (*Eupatorium compositifolium*) in all but the center of the wetland. Few hydrologic indicators were observed in these dessicated wetlands, and many of the soils consisted of a thin veneer of dried peat over sandy soils. These wetlands were all impacted by minor hydrologic alterations due to a variety of factors including spoil mounds on the perimeter and furrowing associated with pine plantation bedding, which disrupts inflow from surrounding uplands. The two wet prairies that are adjacent to or within clear-cut stands were of the lowest quality with regard to hydrology, vegetation, and water resources. Only one wet prairie was of relatively good quality.

Freshwater Marshes with Shrubs, Brush, and Vines (FLUCFCS 6417) - One wetland comprising 0.8 acre is classified as a freshwater shrub marsh. This small, isolated wetland is dominated by a thick shrub layer of predominantly titi, with red maples, dahoon holly, swamp bay, and gallberry also present. The quality is low.

6.3.4 Soils

There are seven soil types on the Site according to the 2006 Soil Survey of Gilchrist County published by the U.S. Department of Agriculture (USDA)-NRCS. These include the excessively drained Entisols, Penney, and Kershaw Fine Sand; the moderately well-drained Entisol, Ortega Fine Sand; the somewhat poorly drained Spodosol, Hurricane Fine Sand; and the poorly drained Lynnhaven and Allenton mucky fine sands, depressional (a hydric soil type). Most of the soils, even within pine plantations, have not been thoroughly disturbed by bedding or other large-scale land moving activities.

6.3.5 Wildlife (Overview)

Species assemblages were determined from the site visit in November, 2010 and using information on typical species found in these habitats from literature. Pedestrian and vehicular

surveys were conducted over the entire Site. A more thorough wildlife analysis was conducted in the focus area in the western portion of the Site, mostly to ascertain the density of gopher tortoises. All species or signs observed (such as tracks, scats, nests, burrows, etc.) were recorded and are discussed in the following sections.

Due in large part to the dry conditions of the Site, there were few wildlife sightings or signs. Wildlife that were observed or signs thereof include the white-tailed deer, red-shouldered hawk, American kestrel, fence lizard, gopher tortoise, turkey vulture, black vulture, ground dove, and wild turkey.

6.3.6 Listed Species (Overview)

A list of all rare, threatened, endangered or commercially exploited plants known to occur in Gilchrist County was compiled from records available online on the Websites of FNAI (www.fnai.org) and the *Atlas of Florida Vascular Plants* developed by the Institute of Systematic Botany at the University of South Florida (www.plantatlas.usf.edu). The plants included as threatened or endangered for *Gilchrist County in the Atlas of Florida Vascular Plants* are derived from the Regulated Plant Index contained within Chapter 5B-40, Florida Administrative Code (F.A.C.), amended February 17, 2003, and administered by the Florida Department of Agriculture and Consumer Affairs Division of Plant Industry. Information on listed wildlife species that could occur in Gilchrist County in habitats that occur on the Site is available online from FNAI and the FWC. Remnant sandhill and xeric oak communities are found on the Site. This natural community has a state listing of S3, indicating that it is rare or uncommon in the state. Due to the presence of remnant xeric habitats, the Site provides habitat that has a moderate to high potential for the occurrence of listed species, particularly animals adapted to sandhill communities.

6.3.7 Listed Plants

Based on available records from FNAI, no federally listed plants are known in Gilchrist County. Several state-listed endangered and threatened plants are known in Gilchrist County. The only state-listed plants that have the potential to occur onsite are the state-endangered incised agrimony and sandhill spiny pod. These plants are distinctive in their morphology and were not seen during the field survey. Therefore, the potential for their occurrence on the Site is considered low.

6.3.8 Listed Wildlife

Listed wildlife species are those formally classified as endangered, threatened, or of special concern by FWC or as endangered or threatened by USFWS. One listed species, the gopher tortoise, was observed onsite and found within the focus area. Gopher tortoise burrows provide suitable habitat for many commensal animals, many of which are listed species including the Florida mouse, eastern indigo snake, gopher frog, short-tailed snake, and the Florida pine snake. In addition, a kestrel was observed near the focus area. Due to the time of year, it is unknown if the bird was the resident kestrel that is a state-listed species.

This initial survey indicates that gopher tortoise burrows are present throughout the Site and in moderate to high densities in portions of the Site. The focus area had a sufficiently high population of gopher tortoise burrows to indicate that a full survey would be necessary before construction activities. Due to current management guidelines for gopher tortoises, the impacts would likely require relocation onsite as a preference of FWC. There is abundant habitat on the Site for relocation.

Other animal species recorded for Gilchrist County that have the potential to occur in the

Site vicinity, according to FNAI, include gopher frog (*Rana capito*), eastern indigo snake (*Drymarchon couperi*), Florida pine snake (*Pituophis melanoleucus mugitus*), Florida mouse (*Podomys floridamus*), short-tailed snake (*Stilosoma extenuatum*), Florida burrowing owl (*Athene cunicularia floridana*), and Sherman's fox squirrel (*Sciurus niger shermani*).

While only the kestrel and gopher tortoise were observed on the Site, Figure 5 discusses the likelihood of occurrence for other listed animal species on the Site. It should be noted that while a kestrel was observed at this time of the year, it is possible it is the migratory subspecies and not listed. However, the habitat preference of the listed resident subspecies is identical, so it could be present onsite.

In summary, there appear to be no fatal flaws to the development of the Site from an ecological perspective. Gopher tortoises were observed in moderate to high densities in every upland habitat found on the Site, including the focus area. Any activities planned that could impact their habitat will require thorough gopher tortoise surveys and tortoise relocation. Since wetlands onsite can easily be avoided by careful planning and layout of facilities, onsite wetland impacts are not expected to be an issue.

Figure 5. Potential for Occurrence for Listed Wildlife Species on the SECI Gilchrist Site

Common Name	Scientific Name	Status		Preferred Habitat	Likelihood of Occurrence
		FWC	USFWS		
<u>Amphibians</u>					
Gopher frog	<i>Rana capito</i>	SSC	None	Longleaf pine-turkey oak communities, usually in gopher tortoise burrows, near wetlands for breeding	Moderate—Habitats are available onsite; minimal presence of wetlands near suitable habitat
<u>Reptiles</u>					
Eastern indigo snake	<i>Drymarchon corais couperi</i>	T	T	Wide range of habitats in Florida, usually found near gopher tortoise burrows	High—Presence of gopher tortoise burrows
Gopher tortoise	<i>Gopherus polyphemus</i>	T	None	Xeric habitats with sandy soils	Present—Observed
Florida pine snake	<i>Pituophis melanoleucus mugitus</i>	SSC	None	Xeric habitats, usually sandhill communities, also found in association with gopher tortoises	High—Sandhill and xeric habitats found and gopher tortoise burrows; found in Gilchrist County
Short-tailed snake	<i>Stilosoma extenuatum</i>	T	None	Dry upland habitats, principally sandhill, xeric hammock, and sand pine scrub	High—Suitable habitats present

Figure 5. Potential for Occurrence for Listed Wildlife Species on the SECI Gilchrist Site (Continued, Page 2 of 3)

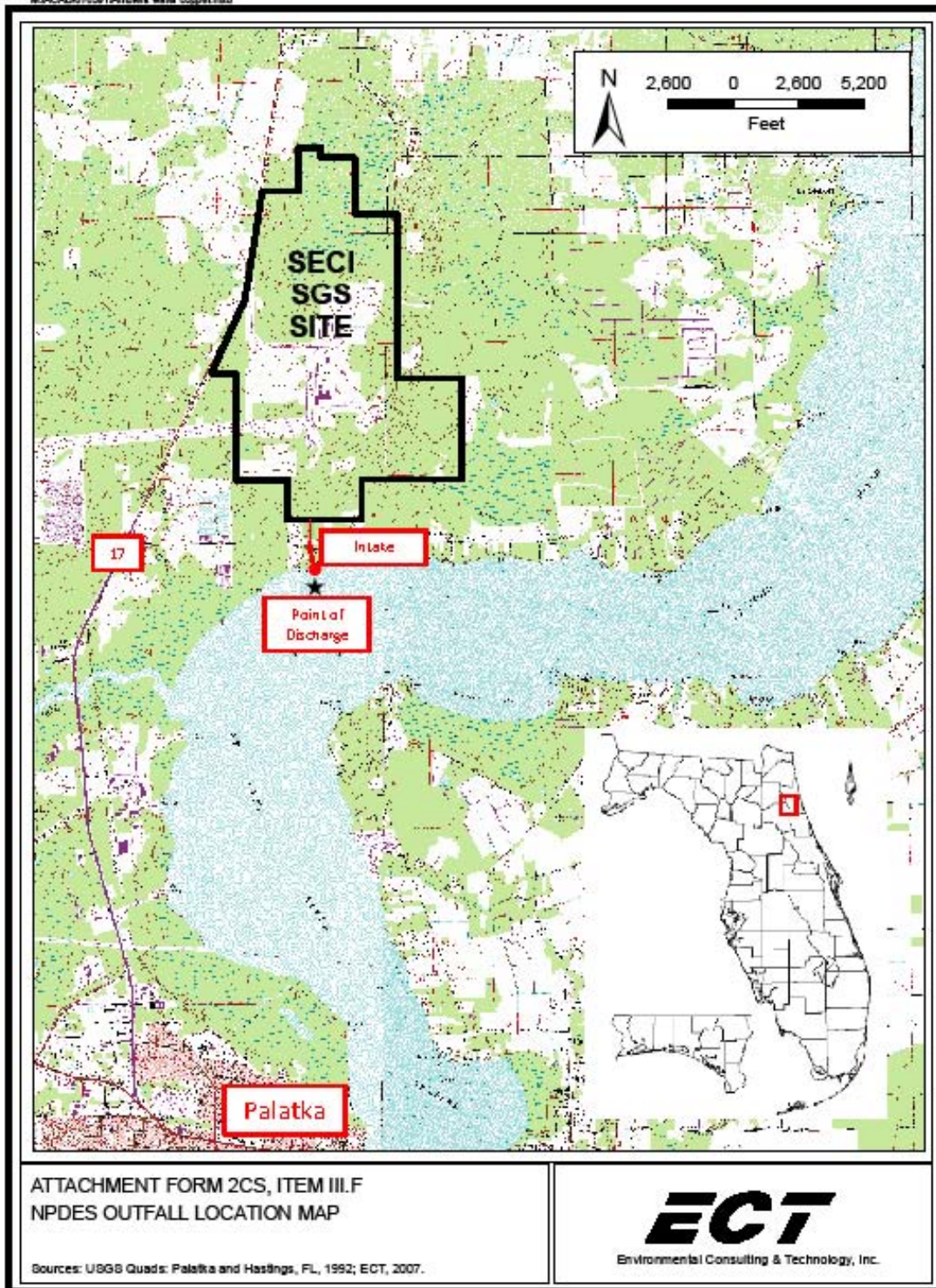
Common Name	Scientific Name	Status		Preferred Habitat	Likelihood of Occurrence
		FWC	USFWS		
<u>Birds</u>					
Limpkin	<i>Aramus guarauna</i>	SSC	None	Freshwater marshes, swamps, springs and spring runs. Also lake margins in peninsular Florida	Low—Minimal presence of wetland habitat
Florida burrowing owl	<i>Athene cunicularia floridana</i>	SSC	None	High, sparsely vegetated, sandy ground; dry prairies and sandhill	High—Suitable habitat and presence in county
Little blue heron	<i>Egretta caerulea</i>	SSC	None	Forested wetlands for nesting; shallow wetlands for foraging	Low—Minimal presence of wetland habitat
Snowy egret	<i>Egretta thula</i>	SSC	None	Many kinds of seasonal and permanently inundated wetlands	Low—Minimal presence of wetland habitat
Tricolored heron	<i>Egretta tricolor</i>	SSC	None	Many kinds of seasonal and permanently inundated wetlands	Low—Minimal presence of wetland habitat
White ibis	<i>Eudocimus albus</i>	SSC	None	Forested wetlands, wet prairies and swales	Low—Minimal presence of wetland habitat
Southeastern American kestrel	<i>Falco sparverius paulus</i>	T	None	Dry open pine habitats, utilize cavities excavated by woodpeckers	High—Possibly observed on property; sable habitat present
Florida sandhill crane	<i>Grus Canadensis pratensis</i>	T	None	Wet prairies, emergent wetlands	Low—Minimal presence of wetland habitat

Figure 5. Potential for Occurrence for Listed Wildlife Species on the SECI Gilchrist Site (Continued, Page 3 of 3)

Common Name	Scientific Name	Status		Preferred Habitat	Likelihood of Occurrence
		FWC	USFWS		
Bald eagle	<i>Haliaeetus leucocephalus</i>	***	***	Tall trees (usually pines) near open water for foraging	Low—No significant open water areas for foraging
Wood stork	<i>Mycteria americana</i>	E	E	Nesting habitat is forested wetlands with standing water, foraging habitat is shallow wetlands, ditches	Low—Minimal presence of wetland habitat
<u>Mammals</u>					
Florida mouse	<i>Podomys floridamus</i>	SSC	None	Prefers fire-maintained xeric habitats and is a commensal with gopher tortoises	High—Gopher tortoise burrows found. Suitable habitat
Sherman’s fox squirrel	<i>Sciurus niger shermani</i>	SSC	None	Mature flatwoods, sandhill communities	High—Sandhill community habitat present
Florida black bear	<i>Ursus americanus floridanus</i>	T	None	Flatwoods with hardwood swamps, usually prefers thick habitats	Low—Minimal amount of thick habitat or swamps. Not found in county

***While the bald eagle has been both state and federally delisted, it is still governed by the state bald eagle rule and the federal Bald and Golden Eagle Protection Act (see http://myfwc.com/docs/WildlifeHabitats/Eagle_Plan_April_2008.pdf#page=35)

Sources: FWC, 2008,2010
ECT, 2007

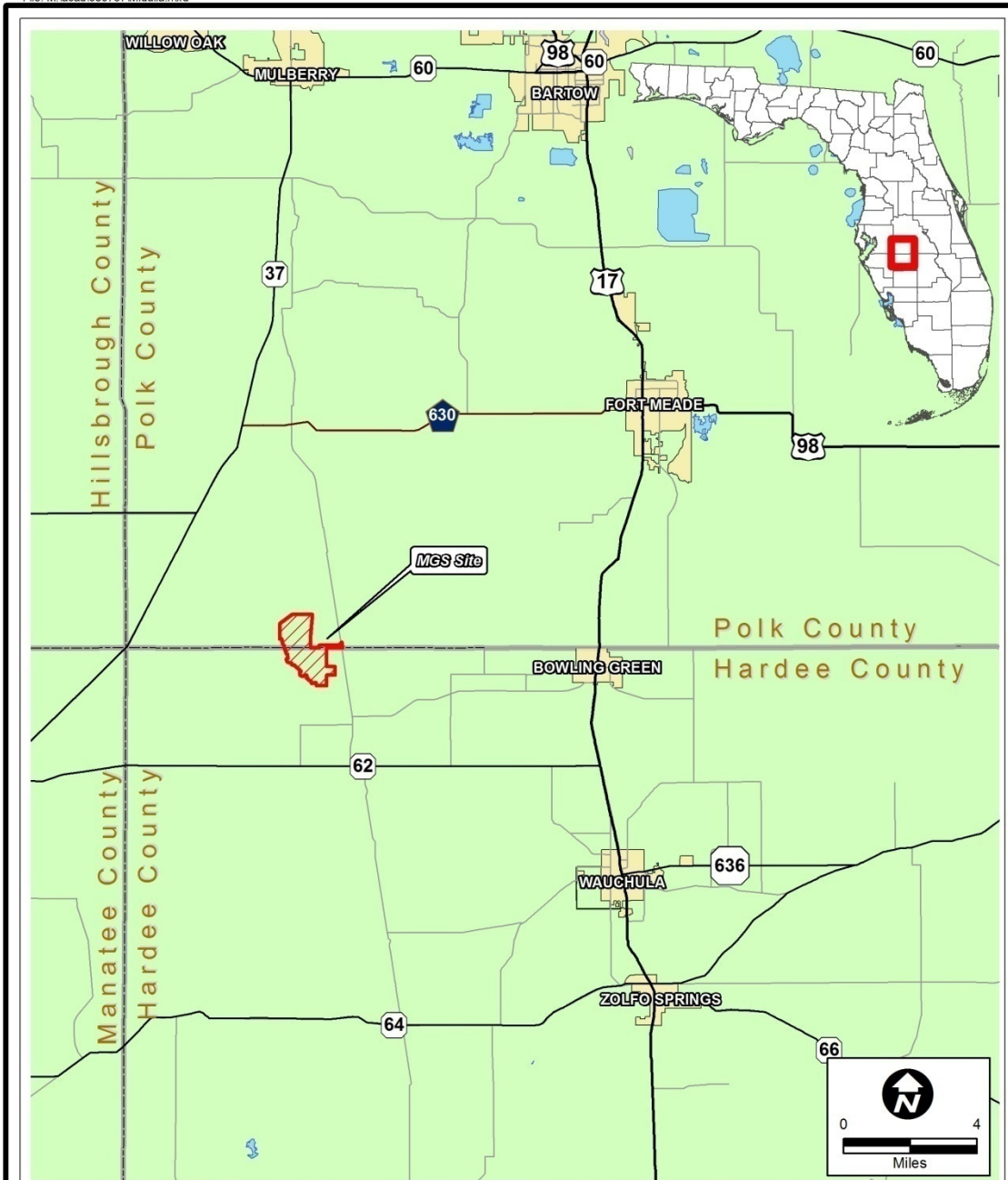


ATTACHMENT FORM 2CS, ITEM III.F
NPDES OUTFALL LOCATION MAP

Sources: USGS Quads: Palatka and Hastings, FL, 1992; ECT, 2007.

ECT

Environmental Consulting & Technology, Inc.



LOCATION OF MIDULLA GENERATING STATION

Source: ESRI, 2009; US Census, 2000; ECT, 2009.



