090000-OT

Review of 2009 Ten-Year Site Plans

for Florida's Electric Utilities

Florida Public Service Commission
Tallahassee, Florida
October 2009

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF UTILITIES FILING A TEN-YEAR SITE PLAN

FMPA	Florida Municipal Power Agency
FPL	Florida Power & Light Company
GRU	Gainesville Regional Utilities
Gulf	Gulf Power Company
JEA	JEA (formerly Jacksonville Electric Authority)
LAK	City of Lakeland
OUC	Orlando Utilities Commission
SEC	Seminole Electric Cooperative
PEF	Progress Energy Florida, Inc.
TECO	Tampa Electric Company
TAL	City of Tallahassee

LIST OF ACRONYMS

Bcf	Billion Cubic Feet
CC	Combined Cycle generating unit
Commission	Florida Public Service Commission
CT	Combustion Turbine generating unit
DEP	Florida Department of Environmental Protection
DOE	United States Department of Energy
DSM	Demand-Side Management
ECCR	Energy Conservation Cost Recovery Clause
EIA	Energy Information Administration
ERO	Electric Reliability Organization
FEECA	Florida Energy Efficiency and Conservation Act
FGT	Florida Gas Transmission
FRCC	Florida Reliability Coordinating Council
GWh	Gigawatt-Hour
IGCC	Integrated Coal Gasification Combined Cycle generating unit
LFG	Landfill Gas
LNG	Liquefied Natural Gas
MMBtu	Million British Thermal Units
MSW	Municipal Solid Waste
MW	Megawatt
NEL	Net Energy for Load
NERC	North American Electric Reliability Corporation
NUG	Non-Utility Generator
PPSA	Power Plant Siting Act
RTO	Regional Transmission Organization
TLSA	Transmission Line Siting Act
TYSP	Ten-Year Site Plan

1. EXECUTIVE SUMMARY

Pursuant to Section 186.801(1), Florida Statutes (F.S.), each generating electric utility must submit to the Florida Public Service Commission (Commission) a ten-year site plan which estimates the utility's power generating needs and the general location of its proposed power plant sites over the ten-year planning horizon. The Commission is required to perform a preliminary study of each plan and classify them as either "suitable" or "unsuitable." All findings of the Commission are made available to the Florida Department of Environmental Protection (DEP) for its consideration at any subsequent electrical power plant site certification proceedings. A copy of this report is also posted on the Commission Web site and is available to the public.

The Commission has reviewed the Ten-Year Site Plans filed by the eleven reporting utilities in Florida and finds that the projections of load growth appear reasonable.[1] Several utilities have reported net customer losses, and the state as a whole has reported a decline in population. It is unclear at this time whether this decline is a short term phenomenon based on current economic conditions in Florida and the nation as a whole or is a portent of a longer term downturn in population growth and energy usage in the state. In response to declining load forecasts, the reporting utilities have modified the number and size of additional generation facilities required in order to maintain an adequate supply of electricity at a reasonable cost. At the time of filing, the state's electric utilities planned to add a net summer capacity of 10,225 MW over the next 10 years. This figure represents a decrease of approximately 4,000 MW of net summer capacity compared to the 2008 Ten-Year Site Plans. As in past years, the majority of new capacity planned is expected to come from gas-fired units, with nuclear generation representing the next largest fuel source addition. The Commission finds the 2009 Ten-Year Site Plans filed by the eleven reporting utilities to be suitable for planning purposes.

While the 2009 Ten-Year Site Plans are suitable for planning purposes, they are subject to modification due to several factors including changes to fuel cost, energy use projections, evolving technology, and shifting energy policy. Therefore, the Commission will continue to closely monitor the future rate of load growth in Florida and its effect on the need for additional generation and transmission facilities in the state.

Reliable and Affordable Power

Pursuant to Section 366.03, F.S., each public utility has a statutory obligation to serve every customer within its service territory. Florida's utilities must continue to explore all measures to ensure the most efficient means of producing and delivering reliable and affordable power to their customers. Multiple components are required to create an effective energy policy for Florida. Conservation and demand-side management, renewable generation, modernization of existing utility generation resources, and new generation facilities combine to provide the necessary services to every customer.

[1] Investor-owned utilities (IOUs) filing 2009 Ten-Year Site Plans include Florida Power & Light Company (FPL), Tampa Electric Company (TECO), Gulf Power Company (GULF), and Progress Energy Florida, Inc. (PEF). Municipal utilities filing 2009 Ten-Year Site Plans include Florida Municipal Power Agency (FMPA), Orlando Utilities Commission (OUC), City of Lakeland (LAK), City of Tallahassee (TAL), JEA (formerly Jacksonville Electric Authority), and Gainesville Regional Utilities (GRU). Seminole Electric Cooperative (SEC) also filed a 2009 Ten-Year Site Plan.

Conservation and Demand-Side Management

The first step in any resource planning process is to focus on the efficient use of electricity by consumers. Florida's utilities can efficiently serve their customers by offering demand-side management (DSM) and conservation programs designed to use fewer resources at lower cost. Because DSM programs are voluntary, customer choice is a fundamental component in reducing the state's dependence upon expensive fuels and reduction of greenhouse gas emissions. Consequently, DSM programs that educate consumers to make smart energy choices are particularly important.

Over the planning period, Florida's utilities have projected nearly 8,000 MW of summer demand peak load reduction, and more than 10,000 GWh of annual energy savings from their DSM and energy efficiency programs. The demand reductions projected in the 2009 Ten-Year Site Plans are based on goals and subsequent programs which were approved by the Commission in 2004. Current rules require the Commission to review DSM goals every five years. On June 6, 2008, the Commission opened seven dockets in order to satisfy this requirement.

Also, in 2008, the Legislature amended Section 366.82, F.S., which directs the Commission's process for establishing DSM and energy conservation goals. More specifically, the Commission must now consider the impact of demand-side renewable energy systems as well as an expanded scope of potential conservation and efficiency measures. Additional considerations include the need for incentives and the effect of greenhouse gas compliance costs. A hearing in Docket Nos. 080407-EG through 080413-EG was held on August 10-13, 2009. New goals will be set in December 2009 and will be reflected in the utilities' 2010 Ten-Year Site Plans.

Renewable Generation

Renewable generation is another key component of providing clean, reliable, and affordable power to Florida's electric utility customers. Currently, approximately 1,170 MW of renewable generation are operating in Florida. Roughly 470 MW are sold to Florida's utilities as firm capacity, and the remaining capacity is either sold on a non-firm basis or used internally by the owners of the renewable generation facility.

Historically, relatively high capital and operating costs, as well as limited physical applications, have hampered the development of renewable energy in the state. The 2009 Ten-Year Site Plans indicate that approximately 750 MW of new renewable projects are planned through the year 2018. While these new projects are a significant increase from the existing level of renewable generation, current utility-owned generation is approximately 55,000 MW, so the contribution toward fuel diversification from renewable energy remains relatively small.

The Commission has taken steps to promote renewable generation on the customer's side of the meter as well. In April 2008, amendments made by the Commission to Rule 25-6.065, Florida Administrative Code (F.A.C.), relating to interconnection and net metering of small customer-owned renewable generation, became effective.[2] Such changes promote the development of small customer-owned renewable generation by streamlining the interconnection process and allowing for monthly credits for excess on-site renewable generation on the retail customer's bill. Currently, Florida's

[2] See Order No. PSC-08-0161-FOF-EI, issued March 19, 2008, Docket No. 070674-EI, In re: Interconnection and Net Metering of Customer-Owned Renewable Generation.

utilities report approximately 600 residential interconnections with a total capacity of approximately 2.8 MW.

Modernization of Existing Utility Generation

Current projections indicate that the state's total energy demand will surpass existing DSM and energy efficiency programs offered by Florida's utilities and planned renewable generation. As a result, the remaining generation needs must be met by traditional utility generation.

When considering the addition of supply-side generation, Florida's electric utilities must consider how best to serve their customers cleanly, reliably, and affordably. The modernization of existing units plays a key role in addressing all of these issues. Such projects may require the temporary removal of existing units, thus impacting reliability until the completion of the modernization. Modernization of units allows for an increased output of power and improved fuel efficiency for the same or lower emission rates. The Commission has recently approved several projects involving modernization with a combined capacity of approximately 3,600 MW.

Only a portion of Florida's fossil units are considered suitable for modernization. Of the 6,845 MW of generation identified by the utilities for modernization, over 1,100 MW is coal-fired, and several units are being considered for retirement. FPL has also announced plans to place several of its fossil-steam units in Inactive Reserve, approximately 2,400 MW of generation, which will improve the overall system efficiency. The Commission encourages utilities to continue to explore potential conversion projects and report the feasibility of each conversion in next year's Ten Year-Site Plans.

New Generation Facilities

Fuel diversity is a strategic concern when the construction of new supply-side generation is necessary. Maintaining a balanced mix of fuel sources enhances the reliability of supply and allows utilities to mitigate the effects of volatile price fluctuations. In previous Ten-Year Site Plans, Florida's utilities responded to fuel diversity concerns through the inclusion of multiple coal-fired power plants. Due to a combination of fuel cost uncertainties, high capital costs, and uncertainties regarding potential environmental costs related to possible carbon emission regulations, more than 3,500 MW of coal-fired generation was canceled. Despite initial opposition, Seminole Electric Cooperative received final certification of Seminole Unit 3, a 750 MW coal-fired power plant, on June 13, 2008. Seminole Unit 3 has an in-service date of May 2016, and represents the only planned addition to Florida's coal-fired generating capacity.

Because nuclear generation is one generating technology that provides base-load capacity that produces no greenhouse gas emissions, it has become a cornerstone of an energy efficient Florida. In 2007 and 2008, the Commission approved the need for approximately 5,000 MW of additional nuclear capacity based primarily on projected fuel cost savings. All existing nuclear units are scheduled to receive capacity uprates, and the 4,400 MW of proposed new power plants will mark the first construction of new nuclear generation in Florida in more than 20 years. The 2009 Ten-Year Site Plan for PEF contains the first two units, Levy Units 1 and 2, which are scheduled to be completed in 2016 and 2017, respectively. However, since the publishing of its Ten-Year Site Plan, PEF has announced that the Levy Units will face a minimum delay of 20 months related to their schedule with the Nuclear Regulatory Commission. FPL's Turkey Point Unit 6, scheduled for an in-service date of

2018, is also contained in FPL's 2009 Ten-Year Site Plan, but Unit 7 does not appear in the schedules since the in-service date is 2020.

Due to the long permitting and construction periods involved with nuclear generating plants, coupled with the cancellation of more than 3,500 MW of coal-fired generation, natural gas-fired generation has become the default fuel of choice. The 2009 Ten-Year Site Plans include the net addition of approximately 11,000 MW of natural gas generation. The 2008 Ten-Year Site Plans included roughly 15,500 MW. This decline can be attributed in part to the reduction in load forecasts, and the inclusion of the nuclear units in the 2009 Ten-Year Site Plans. A majority of the capacity identified in the 2009 Ten-Year Site Plans has already received a determination of need from the Commission or is under construction. A single proposed unit, TECO's 555 MW combined cycle unit with an in-service date of May 2018, would still require certification by the Commission. Given typical lead times associated with combined cycle units, a petition would be expected for this unit by 2014.

Even with the identified new base-load coal and nuclear units, Florida's dependence on natural gas is projected to increase from 40.4 percent in 2008 to 46.7 percent by 2018. As the state continues to construct new natural gas-fired generation, natural gas storage and supply becomes increasingly significant in ensuring the reliability of the state's electrical system. Multiple supply options and sufficient storage are critical to maintain the integrity of Florida's electric system during supply disruptions due to severe storms and hurricanes. Florida's utilities have begun increasing the amount of natural gas storage that is available to the state. Utilities should continue to evaluate diversity within a fuel type, such as liquefied natural gas (LNG) and gas storage, as options to traditional sources and delivery methods for natural gas.

2. INTRODUCTION

A Ten-Year Site Plan gives state, regional, and local agencies advance notice of proposed power plants and transmission facilities. The Commission receives comments from these agencies regarding various issues of concern, and these comments are summarized in Chapter 7. Because a utility's Ten-Year Site Plan is a planning document containing tentative data, it may not contain sufficient information to allow regional planning councils, water management districts, and other review agencies to evaluate site-specific issues within their jurisdictions. Each utility must provide detailed data, based on in-depth environmental assessments, during certification proceedings under the Power Plant Siting Act (PPSA), Sections 403.501-403.518, F.S., or the Transmission Line Siting Act (TLSA), Sections 403.52-406.5365, F.S.

Statutory Authority

Section 186.801, F.S., requires that all major generating electric utilities in Florida submit a Ten-Year Site Plan to the Florida Public Service Commission for annual review. To fulfill the requirements of Section 186.801, F.S., the Commission has adopted Rules 25-22.070 through 25-22.072, F.A.C. Each utility's Ten-Year Site Plan contains projections of the utility's electric power needs, fuel requirements, and the general location of proposed power plant sites and major transmission facilities. Utilities whose existing generating capacity is below 250 megawatts (MW) are exempt from this requirement unless the utility plans to build a new unit larger than 75 MW within the ten-year planning period.

Also in accordance with the Section 186.801, F.S., the Commission performs a preliminary study of each Ten-Year Site Plan and is required to determine whether it is **suitable** or **unsuitable**. The results of the Commission's study are contained in this report, *Review of 2009 Ten-Year Site Plans*, which is forwarded to the Florida Department of Environmental Protection (DEP) for use in subsequent power plant siting proceedings.

Section 377.703(2)(e), F.S., requires the Commission to analyze and provide natural gas and electricity forecasts to the Florida Energy and Climate Commission. The Ten-Year Site Plan Review also fulfills this statutory requirement.

Information Sources

In April 2009, 11 utilities filed their Ten-Year Site Plans, and on August 19, 2009, the Commission held a public workshop to facilitate discussion of the plans. In addition to the individual utility filings, the Commission relies on cost and performance data obtained through supplemental data requests made to the reporting utilities, as well as other sources. The Florida Reliability Coordinating Council (FRCC) annually publishes several documents that assess the adequacy and reliability of Peninsular Florida's[3] generating units and transmission system. The Commission used the following FRCC documents to supplement this review:

[3] Peninsular Florida refers to the FRCC region which includes all utilities with the exception of Gulf Power Company.

- The *2009 Regional Load and Resource Plan* contains aggregate data on demand and energy, capacity and reserves, and proposed new generating unit and transmission line additions for Peninsular Florida as well as statewide. The FRCC submitted this study in July 2009.
- The *2009 Reliability Assessment* is an aggregate study of generating unit availability, forced outage rates, load forecast methodologies, and gas pipeline availability. The FRCC submitted this study in August 2009.
- The *Long Range Transmission Reliability Study* is an assessment of the adequacy of Peninsular Florida's bulk power and transmission system. The study includes both short-term (2009-2013) detailed analysis and long-term (2014-2018) evaluation of developing trends that would require transmission additions or other corrective action. The FRCC submitted an executive summary of this study in August 2009.

Suitability

The Commission has reviewed the Ten-Year Site Plans filed by the 11 reporting utilities[4] and finds that the projections of load growth appear reasonable and that the reporting utilities have identified additional generation facilities required in order to maintain an adequate supply of electricity at a reasonable cost. Therefore, the Commission finds the 2009 Ten-Year Site Plans filed by the 11 reporting utilities to be **suitable** for planning purposes.

Since the Ten-Year Site Plan is not a binding plan of action on electric utilities, the Commission's classification of a Ten-Year Site Plan as suitable or unsuitable has no formal effect on the utility. Such a classification does not constitute a finding or determination in docketed matters before the Commission. The Commission may address any concerns raised by a utility's Ten-Year Site Plan at a public hearing.

[4] Investor-owned utilities (IOUs) filing 2009 Ten-Year Site Plans include Florida Power & Light Company (FPL), Tampa Electric Company (TECO), Gulf Power Company (Gulf), and Progress Energy Florida, Inc. (PEF). Municipal utilities filing 2009 Ten-Year Site Plans include Florida Municipal Power Agency (FMPA), Orlando Utilities Commission (OUC), City of Lakeland (LAK), City of Tallahassee (TAL), JEA (formerly Jacksonville Electric Authority), and Gainesville Regional Utilities (GRU). Seminole Electric Cooperative (SEC) also filed a 2009 Ten-Year Site Plan.

3. DEMAND AND ENERGY FORECASTS

Historical data forms the foundation for utility load and energy forecasts. These data take into account energy usage patterns, trends in population growth, demographics, and weather data for the utility's service territory. Florida's electrical demand and energy requirements are heavily dependent on the energy consumption behaviors of residential customers. As shown in Table 1 below, residential customers make up close to 90 percent of Florida's electric customers, and purchase more than 50 percent of the state's electric energy.

Table 1. Characteristics of Florida's Electric Customers (2008 Actual)

Customer Class	Number of Customers	% of Customers	Energy Sales (GWh)	% of Sales
Residential	8,351,253	88.7	112,431	51.8
Commercial	1,036,598	11.0	82,205	37.8
Industrial	30,134	0.3	22,615	10.4
Total	**9,417,985**	**100.0**	**217,251**	**100.0**

A utility's peak demand and energy forecasts serve as the starting point for determining new capacity additions needed to reliably and efficiently serve load. Reducing load and energy requirements is essential in deferring the need for additional generating capacity as well as reducing the burning of fossil fuels. Key to controlling load and energy usage is customer participation in utility-sponsored DSM and energy conservation programs.

Demand-Side Management and Energy Efficiency

Since 1980, utilities have offered DSM programs to customers based on the requirements of the Florida Energy Efficiency and Conservation Act (FEECA).[5] FEECA emphasizes reducing the growth rates of weather-sensitive peak demand, reducing and controlling the growth rates of electricity consumption, and reducing the consumption of scarce resources such as petroleum fuels. To accomplish these objectives, FEECA requires the Commission to establish conservation and DSM goals and requires all IOUs and any municipal or cooperative utility with annual energy sales of at least 2,000 GWh as of July 1, 1993, to implement DSM programs to meet the established goals. Demand and energy goals for the seven FEECA utilities (FPL, FPUC,[6] Gulf, JEA, OUC, PEF, and TECO) were last set in July 2004. The goals set by the Commission represent a minimum threshold utilities must meet before building any major power plants.

The seven Florida utilities which are subject to FEECA currently offer more than 100 DSM and conservation programs to residential, commercial, and industrial customers. Energy audit programs provide a first step for utilities and customers to assess conservation opportunities for Florida's electric customers and serve as the foundation for all other DSM and conservation programs. All FEECA utilities are required to offer energy audits to residential customers, pursuant to Section 366.82(5), F.S., and most utilities also provide energy audits for commercial/industrial customers.

[5] Sections 366.80-366.85 and 403.519, F.S.

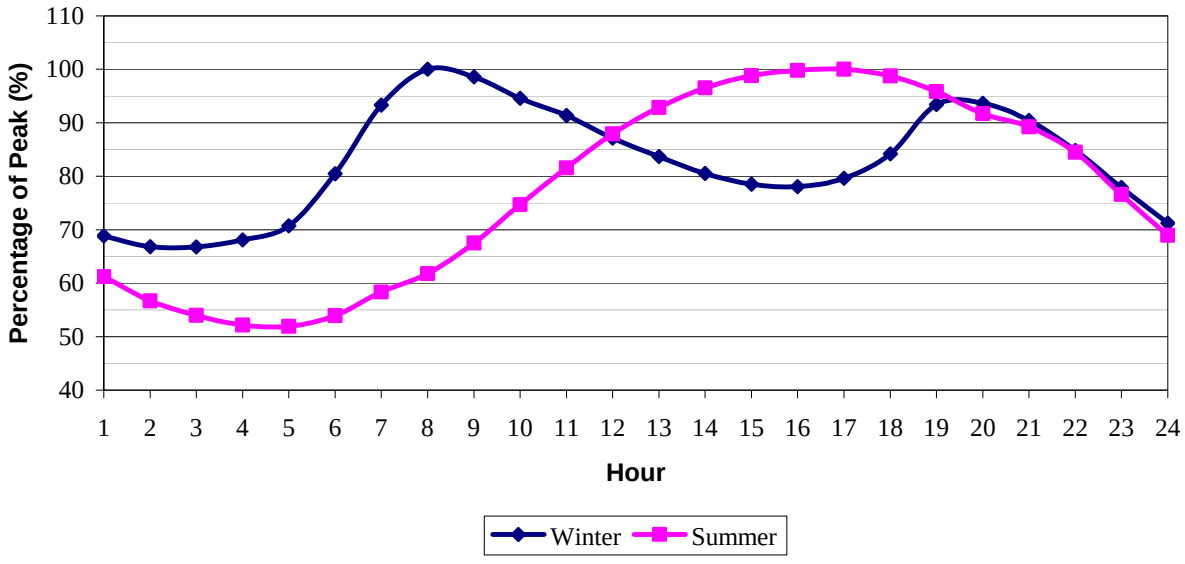
[6] Florida Public Utilities Corporation (FPUC) is a non-generating, investor-owned utility subject to FEECA's requirements. FPUC does not file a Ten-Year Site Plan with the Commission.

Load and energy savings from non-dispatchable DSM programs (conservation), such as ceiling insulation installation, enable utilities and customers to realize sustained energy savings over time. Savings from dispatchable DSM, such as load management and interruptible load programs, also play a significant role in any utility energy conservation plan. Load management programs pay the participant for allowing the utility to control when certain electric appliances are available for use. Interruptible load programs allow a utility to interrupt specific services to a commercial or industrial customer. Load management and interruptible service are measures that allow reductions in system peak demand when needed. In 2008, the Legislature amended Section 366.82, F.S., which directs the Commission's process for establishing DSM and energy conservation goals. More specifically, the Commission must now consider the impact of demand-side renewable energy systems and an expanded scope of potential conservation and efficiency measures. Additional considerations include the need for incentives and the effect of greenhouse gas compliance costs. A hearing in Docket Nos. 080407-EG through 080413-EG was held on August 10 - 13, 2009. New goals will be set in December 2009 and should be reflected in the utilities' 2010 Ten-Year Site Plans.

Peak Demand

Seasonal peak demand, which is a measure of the amount of electric power required at a specific point in time (measured in MW), determines the timing and size of a capacity addition. The high proportion of residential customers in Florida results in more pronounced summer and winter peak demands than in a state with a higher proportion of industrial customers. Figure 1 illustrates a typical daily load curve for peak summer and winter days in Florida. In the summer, customer demand begins to climb in the morning and peaks in the early evening, a pattern which corresponds to increasing air conditioning loads. In contrast, the winter load curve has two peaks, the largest in mid-morning followed by a smaller peak in the late evening. Both correspond to heating loads.

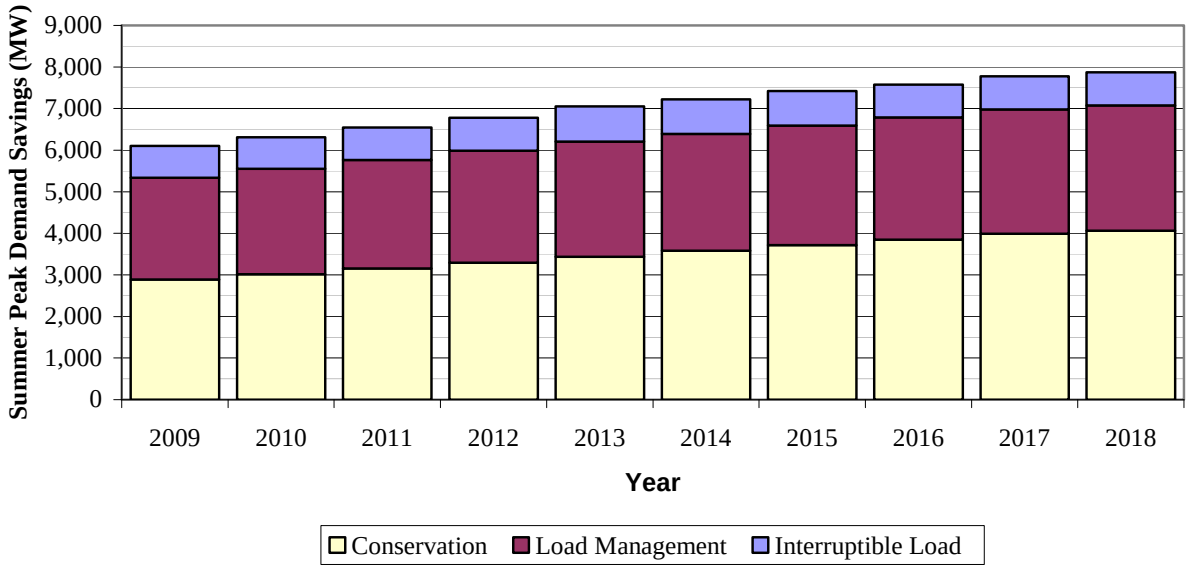
Figure 1. Typical Daily Load Curve



Historically, Florida's actual electric demand has been highest in the summer. Although the 2008 winter peak demand was greater than the 2008 summer peak demand, current forecasts project greater demand in the summer throughout the planning period. Consequently future capacity additions, if necessary, will likely be governed by the projected summer peak demand.

As discussed, DSM is a critical component in the reduction of load requirements for both residential and commercial customers. DSM programs are projected to reduce summer peak demand by just over 6,000 MW in 2009 to nearly 8,000 MW by 2018. Projections indicate a summer peak demand reduction of approximately 12 percent from DSM for each year between 2009 and 2018. Figure 2 below illustrates the projected total amounts of summer peak demand savings from utility-sponsored DSM programs over the ten-year planning horizon.

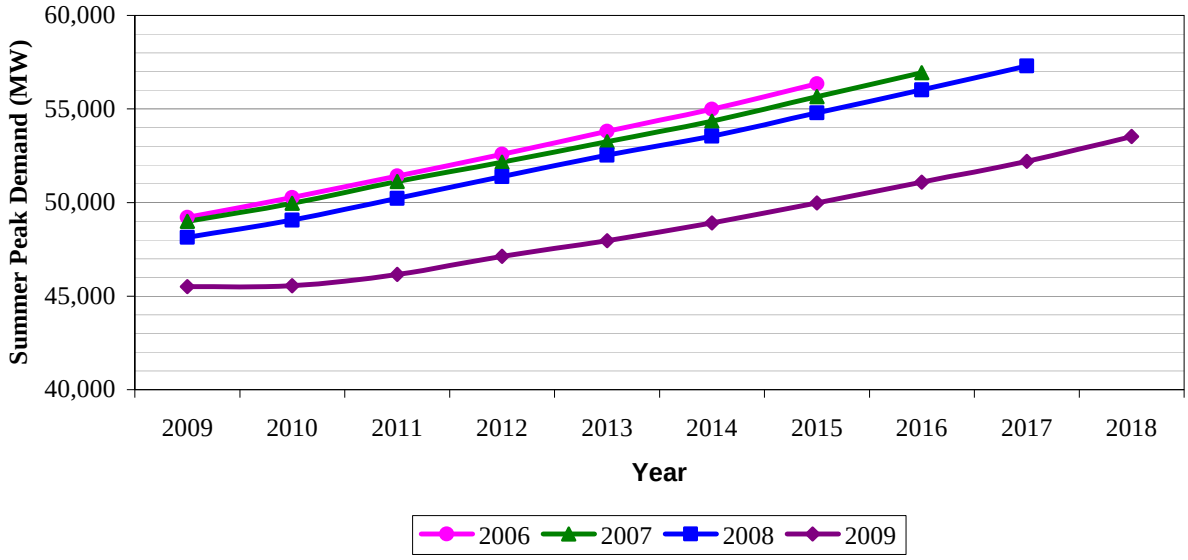
Figure 2. State of Florida: DSM Summer Peak Demand Savings



In addition to DSM, the deterioration of economic conditions and lower customer growth have resulted in a significant reduction in peak demand projections. The severity of current conditions has resulted in a decrease in Florida's population, marking the first time in 63 years (the last during World War II) that the population of Florida decreased rather than increased. To further illustrate the extent of current conditions, peak demand over the planning period is expected to grow at an annual rate of 1.8 percent. Actual peak demand, over the prior 10 years (1999-2008), grew at a rate of more than 3 percent.

Although the utilities have decreased their summer peak demand forecasts consistently since 2006, current forecasts reflect a much greater reduction as a result of the previously discussed circumstances. Over a ten-year planning period, current annual summer peak demand forecasts are, on average, more than 3,000 MW less than the last year's forecasts. Figure 3 on the next page illustrates the magnitude of the utilities' most recent reduction in peak demand forecasts when compared to prior forecasts.

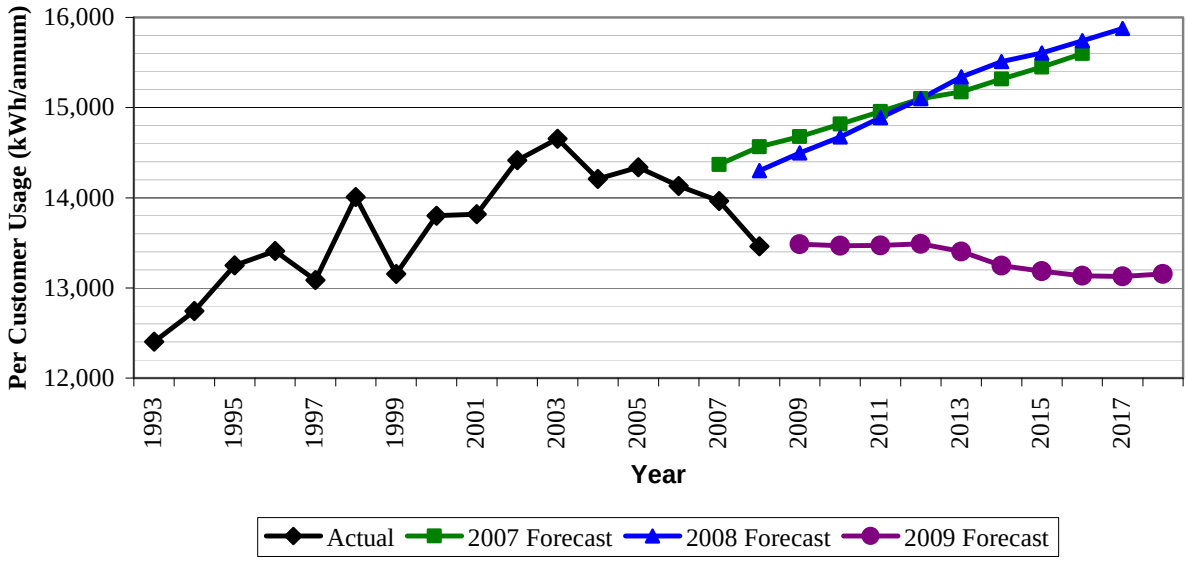
Figure 3. Historical Summer Peak Demand Forecasts



Net Energy for Load

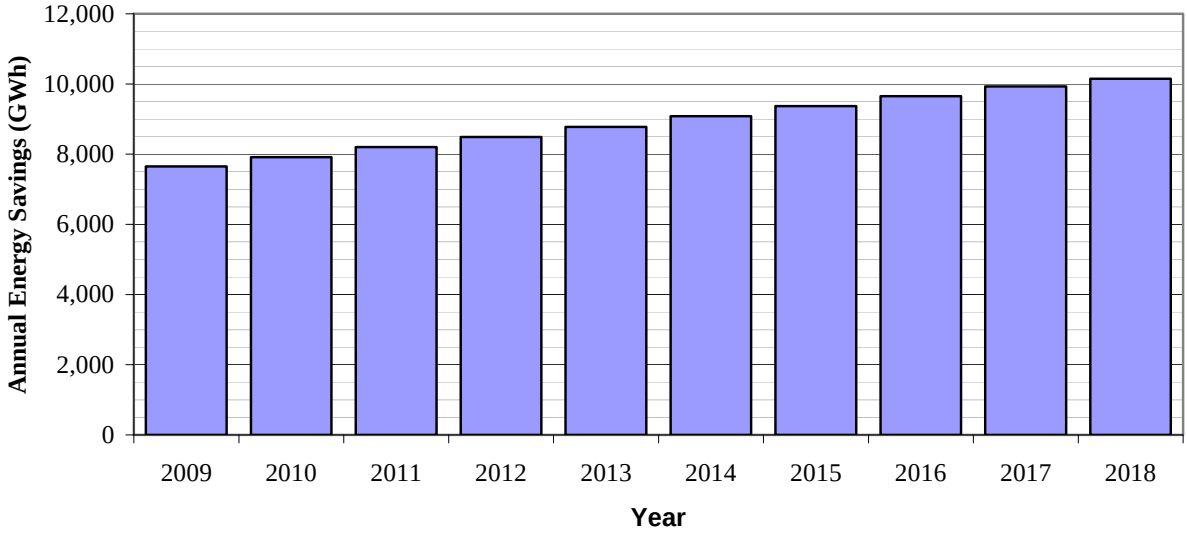
Net energy for load, which is an accumulation of demand over time (measured in GWh), determines the type of capacity addition that is necessary to meet customers' needs. Per customer energy consumption, which is ultimately used to determine the utilities' net energy for load, is not affected by the slowed growth rate. However, per customer energy consumption is greatly affected by economic prosperity. The effects of the current recession, with regard to energy consumption in Florida, are clearly illustrated in the utilities' forecasts of per customer usage within the residential sector. Per customer energy usage has trended downward since peaking in 2003. Last year in 2008, actual per customer consumption dropped more than 500 kWh/yr from 2007's actual consumption and more than 1,000 kWh/yr from the actual peak consumption in 2003. In a departure from prior forecasts, Florida's utilities are projecting declining per customer energy consumption over the planning period. This point is illustrated in Figure 4 on the next page.

Figure 4. State of Florida: Energy Consumption per Residential Customer



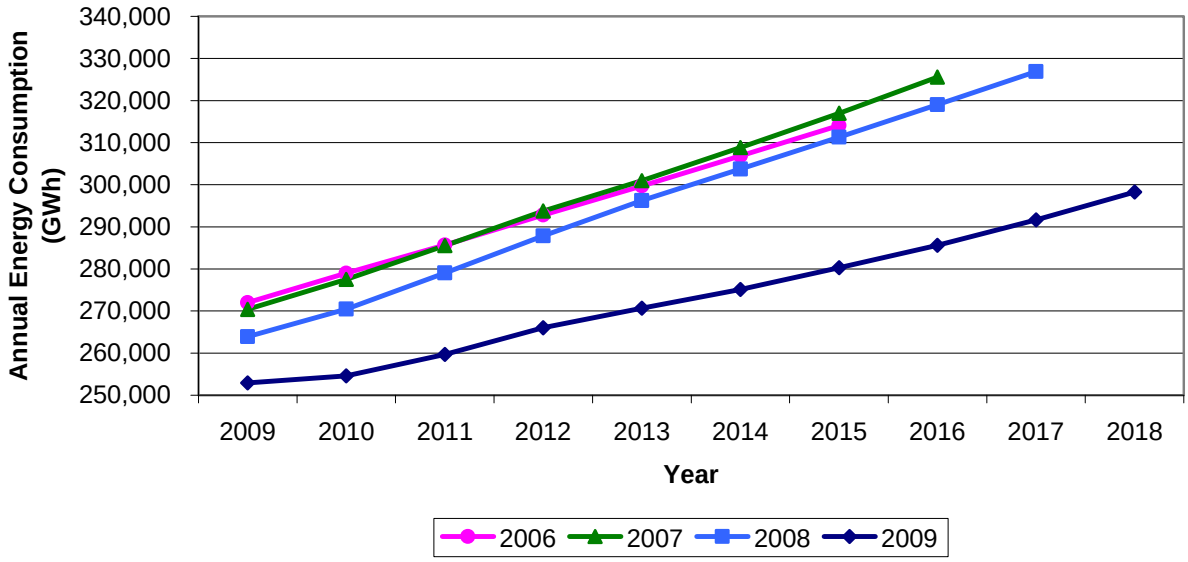
Declining per customer energy consumption is not only a result of current economic conditions, but also of mandated energy efficiency measures, voluntary conservation efforts, and customer participation in utility DSM programs. DSM is projected to reduce annual energy consumption by 7,500 GWh in 2009 to approximately 10,250 GWh in 2018. Such energy savings allow utilities to avoid burning fossil fuels. Figure 5 below illustrates the projected total amounts of annual energy savings from utility-sponsored DSM programs over the ten-year planning horizon.

Figure 5. State of Florida: DSM Net Energy for Load Savings



The utilities' current peak demand forecasts are significantly below previous years' forecasts. A similar trend can be seen in the utilities' energy forecasts as current annual net energy for load projections are on average nearly 6,000 GWh less than last year's projections. Figure 6 below illustrates the reduced energy forecasts when compared with prior years.

Figure 6. Energy Forecast



Outlook

Current forecasts are significantly affected by the state and national economic conditions. These conditions have resulted in dramatic reductions in energy consumption. Historically, utilities have seen an increase in energy sales following a recession. FPL, Florida's largest utility, projects a return to historical growth rates as soon as 2012. Several utilities have reported net customer losses, and the state as a whole has reported a decline in population. It is unclear at this time whether this decline is a short term phenomenon based on current economic conditions in Florida and the nation as a whole, or is a portent of a longer term down turn in population growth and energy usage in the state.

Another key element to future energy consumption is increasing conservation efforts. In 2008, the Legislature amended Section 366.82, F.S., which directs the Commission's process for establishing DSM and energy conservation goals. Specifically, the Commission must now consider the impact of demand-side renewable energy systems and an expanded scope of potential conservation and efficiency measures. Additional considerations include the need for incentives and the effect of greenhouse gas compliance costs. A hearing in Docket Nos. 080407-EG through 080413-EG was held on August 10 - 13, 2009. New goals will be set in December 2009 and should be reflected in the utilities' 2010 Ten-Year Site Plans.

4. ENERGY GENERATION

Current projections indicate that the state's total energy needs will surpass the existing DSM and energy efficiency programs offered by Florida's utilities. For this reason, the addition of supply-side generation is necessary to satisfy reliability requirements. Florida's electric utilities must consider several strategic and economic factors prior to selecting a supply-side resource. In recent years, the Legislature and the Commission have stressed the importance of utilities reducing the state's dependence on natural gas, which generated over 40 percent of the state's energy in 2008, and maintaining a balanced fuel supply. A balanced fuel supply adds value in terms of supply reliability and price stability.

Florida's utilities must additionally address growing environmental concerns. Discussions regarding renewable generation requirements and emission requirements for substances such as carbon dioxide, are underway at both the state and national level. Potential incremental environmental requirements and costs, therefore, must also be considered as utilities explore supply-side resources. Such costs are particularly critical when considering fossil fuel-fired generation.

Renewable Energy Generation

Despite currently providing a small percentage of the utilities' total energy supply, renewable generation is a key component to Florida's energy future by reducing reliance on fossil fuels and improving environmental conditions. In Florida, renewable energy is primarily fueled by municipal solid waste, biomass, and waste heat energy sources. Currently, renewable energy facilities provide more than 1,170 MW of firm and non-firm capacity. Table 2 below summarizes Florida's existing renewable resources according to the FRCC.

Table 2. Existing Renewable Resources

Fuel Type	Capacity (MW)
Solar	2.8
Wind	0.0
Biomass	343.2
Municipal Solid Waste	403.7
Waste Heat	323.8
Landfill Gas	42.7
Hydro	54.5
Total	**1170.7**

A portion of Florida's renewable energy generation comes from renewable generators which sell to electric utilities under firm contracts. Capacity purchased under a firm contract from these renewable energy sources can defer the need for utilities to construct power plants. Florida's utilities currently purchase more than 470 MW of firm renewable generation. Table 3 below lists firm contracts with the Ten-Year Site Plan utilities.

Table 3. Contracts for Firm Renewable Energy

Purchasing Utility	Facility Name	Fuel Type	Contracted Firm Capacity (MW)	Commercial In-Service Date
GRU	G2 Energy	LFG	3.0	2008
SEC	Bioenergy	LFG	7.0	2005
SEC	Brevard Energy	LFG	9.0	2008
SEC	Timberline Energy	LFG	1.6	2008
SEC	Seminole Landfill	LFG	6.2	2007
FPL	Broward-North	MSW	56.0	1992
FPL	Broward-South	MSW	54.0	1991
FPL	Palm Beach County	MSW	50.0	2005
PEF	Dade County Resource Recovery	MSW	43.0	1991
PEF	Lake County Resource Recovery	MSW	12.8	1990
PEF	Pasco County Resource Recovery	MSW	23.0	1991
PEF	Pinellas County Resource Recovery	MSW	40.0	1983
PEF	Pinellas County Resource Recovery	MSW	14.8	1986
SEC	Lee County Resource Recovery	MSW	50.0	1999
TECO	City Of Tampa Refuse-To-Energy	MSW	19.0	1985
TECO	Hillsborough County Refuse-To-Energy	MSW	23.0	1987
JEA	Trailridge	OBG	9.6	2008
PEF	Ridge Generating Station	WDS	39.6	1994
SEC	Timber Energy	WDS	12.0	2004
Total Firm Capacity			**473.6**	

Renewable energy facilities also produce over 630 MW of non-firm capacity for sale to utilities on an as-available basis. Energy purchased on an as-available basis is considered non-firm capacity, so Florida's utilities do not count on this generation for reliability purposes. However, the energy produced by these utilities can give a utility the ability to avoid burning fossil fuels from existing generators. Table 4 on the next page details the various non-firm energy purchases.

Table 4. Non-Firm Renewable Energy Generators

Purchasing Utility	Facility Name	Fuel Type	Non-Firm Capacity (MW)	Commercial In-Service Date
Gulf	Montenay Bay LLC	MSW	12.5	1987
TECO	City Of Tampa Sewage	OBG	1.6	1989
FMPA	US Sugar Corporation	OBS	26.5	1984
FPL	Okeelanta	OBS	70.0	1995
FPL	US Sugar-Bryant	OBS	20.0	1980
FPL	Tomoka Farms	LFG	3.8	1998
FPL	Georgia Pacific	WDS	52.0	1983
PEF	Jefferson Power	WDS	6.0	2002
PEF	Proctor & Gamble (Buckeye)	WDS	38.0	1954
Gulf	International Paper Company	WDS	42.8	1983
Gulf	Stone Container	WDS	34.7	1960
TECO	Millpoint	WH	47.0	1995
TECO	CF Industries	WH	35.3	1988
TECO	New Wales	WH	90.0	1984
TECO	Ridgewood	WH	76.0	1992
TECO	South Pierce	WH	33.5	1969
PEF	Potash Of Saskatchewan	WH	42.0	1980 & 1986
Total Non-Firm Capacity			**631.7**	

Proposed Renewable Generation

Florida's utilities plan to construct or purchase an additional 750 MW of renewable generation over the ten-year planning period. The majority of the state's generation additions are currently proposed to come from biomass, with significant amounts from solar and municipal solid waste as well. Table 5, below, summarizes the planned renewable resources through the planning horizon according to the FRCC.

Table 5. Planned Renewable Resource Net Additions

Fuel Type	Capacity (MW)
Solar	147.0
Wind	13.8
Biomass	498.0
Municipal Solid Waste	80.9
Waste Heat	0.0
Landfill Gas	5.7
Hydro	2.0
Total	**747.4**

Legislative and Commission Actions to Encourage Renewables

Recently, the Legislature and Commission have taken several steps to encourage additional development of renewable generation while minimizing the cost of power supply to retail ratepayers. The 2008 Legislature passed several amendments to Section 366.92, F.S. Specifically, Section 366.92(2), F.S., was amended to require the Commission to draft rules to establish a renewable portfolio standard (RPS) which will require each investor-owned utility (IOU) to supply a percentage of their retail electricity sales from renewable energy sources located in Florida. The statute requires specific focus to be placed on existing and potential sources of renewable energy in Florida and the economic impact of new renewable generation. The Commission submitted a draft rule, along with alternate language and supporting documents, to the Legislature in February 2009.

In order to demonstrate the feasibility and viability of clean energy systems, the Florida Legislature passed amendments to Section 366.92, F.S. One amendment allows full cost recovery under the environmental cost recovery clause for renewable energy projects that are zero greenhouse gas emitting at the point of generation up to a total of 110 MW. On July 15, 2008, the Commission approved FPL's petition for the approval of eligibility for cost recovery of 3 solar energy projects totaling 110 MW.

FPL is currently constructing 110 MW of solar capacity at 2 photovoltaic (PV) sites and a single solar thermal site, and was granted approval for cost recovery. DeSoto Solar and Space Coast Solar will generate 25 MW and 10 MW, respectively. DeSoto Solar will use a tracking array of solar PV panels, while Space Coast Solar will use fixed array solar PV panels. Both projects will convert energy from sunlight directly into electricity. FPL will consider both DeSoto Solar and Space Coast Solar as non-firm resources until sufficient operating experience is obtained to determine what contribution these facilities can reliably provide at FPL's system's peak hours.

FPL's largest proposed project, Martin Solar, will be a 75 MW solar thermal steam generating facility at the existing Martin Power Plant Site in Martin County, Florida. Martin Solar is designed to serve as a "fuel substitution" resource, and not to provide firm capacity. Martin Solar involves the installation of solar thermal technology integrated into the existing steam cycle for the currently operating Martin Power Plant Unit 8, a natural gas-fired combined cycle plant. The supplemental steam to be supplied by Martin Solar for the Unit 8 heat recovery steam generators will be generated from the concentration of solar radiation via parabolic trough solar collectors.

In April 2008, the Commission amended Rule 25-6.065, F.A.C., on interconnection and net metering for customer-owned renewable generation. The rule requires the IOUs to offer a standard interconnection agreement with an expedited interconnection process and net metering for all types of renewable generation up to 2 MW in capacity. Customers first benefit from such renewable systems by reducing their energy purchases from the utility. Net metering provides an additional benefit by allowing customers with excess renewable energy production to reduce future energy purchases from the utility.

The Commission's rule requires all electric utilities to annually report data associated with their interconnection and net metering programs. Data submitted in April 2009 show that the number of customers owning renewable generation systems in Florida is growing. Electric IOUs report that 383 customers owned solar photovoltaic systems in 2008, up from 99 in 2007.

For all electric utilities, about 2,800 kilowatts (2.8 MW) of solar photovoltaic capacity from 577 systems have been installed statewide. Based on an average 4 kW peak demand, this solar photovoltaic energy provides enough power for approximately 700 households.

Florida's utilities reported the following information on customer-owned renewable generation for 2008 on Table 6 below.

Table 6. Customer-Owned Renewable Generation

Utility Type	Connections	Non-Firm Capacity (kW)
Investor-Owned	383	1,761
Municipal	137	797
Rural Electric Cooperatives	57	272
Total	**577**	**2,830**

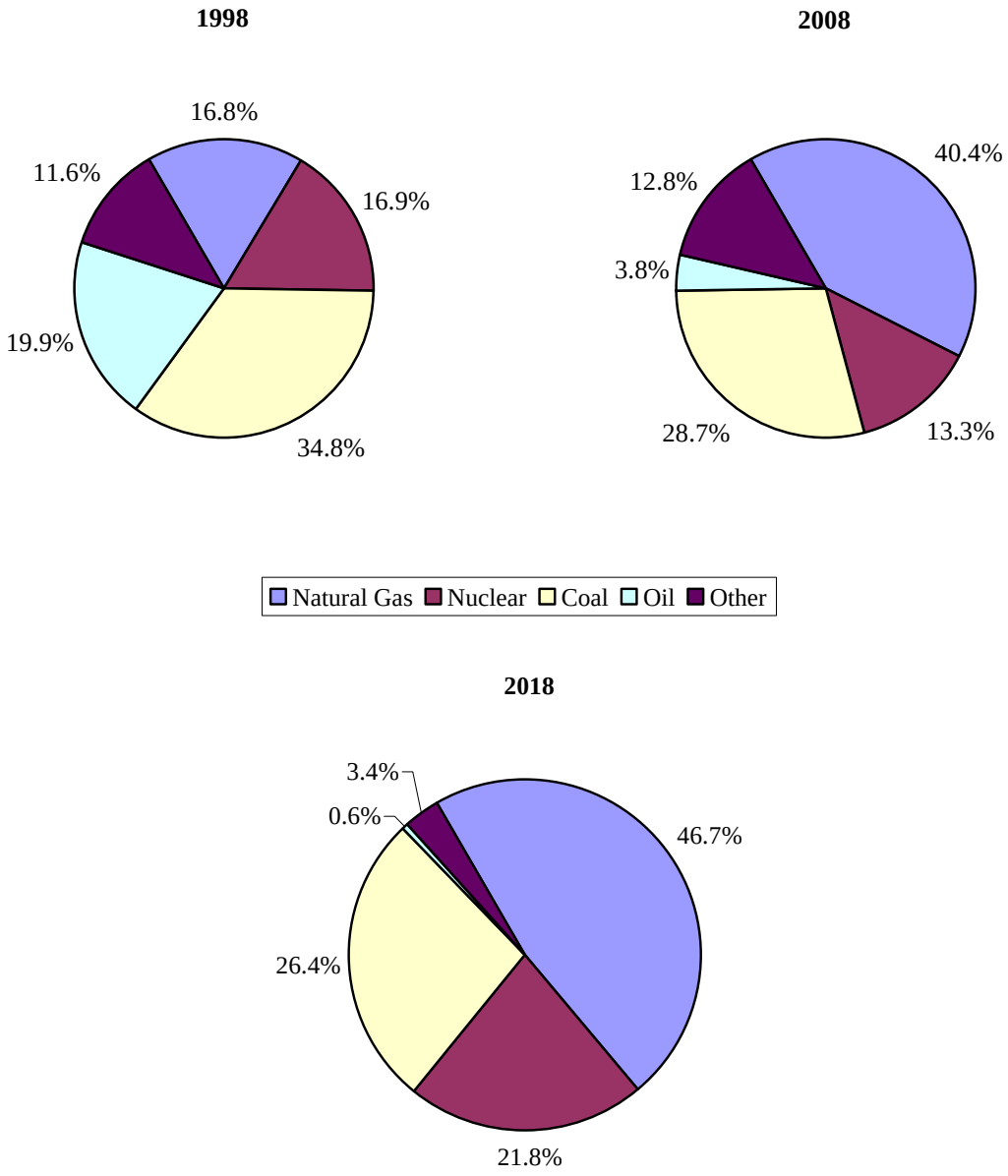
Traditional Energy Generation and a Balanced Fuel Supply

Prior to the late 1970s, Florida's utilities used oil as the primary fuel source for generating electricity. Following the dramatic increase in oil prices in the 1970s, Florida's utilities made a concerted effort to add generating units that used solid fuels. One early response was the purchase of economical "coal-by-wire" from the Southern Company, which had a temporary surplus of coal-fired generation resources already constructed. The Commission supported the utilities' efforts to maintain fuel diversity with regulatory programs such as the Oil Backout Cost Recovery Factor, which gave utilities an incentive to recover costs of converting from oil-based generation to other fuels, and the Energy Broker, a computerized system which matched buyers and sellers of economy energy to minimize the real time fuel costs of the participating utilities.

Prior to congressional repeal of the Power Plant and Industrial Fuel Use Act in 1987, natural gas demand had declined substantially because of restrictions on its usage as a boiler utility fuel. These restrictions contributed to a significant oversupply of gas, resulting in falling prices. Shortly after the repeal, a new era of highly efficient, flexible, environmentally preferred combustion turbine (CT) and combined cycle (CC) units entered the market. The addition of these technologies by Florida's utilities fostered an increase in the use of natural gas to produce electricity.

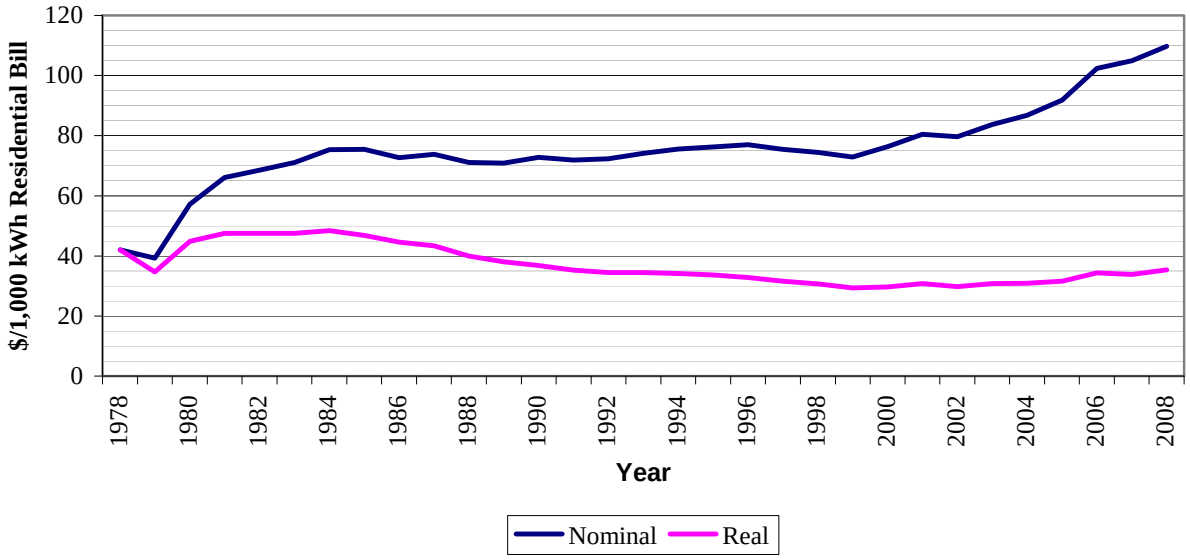
Due to the state's continued increase in the demand for electricity and the relatively low natural gas prices during the 1990s, Florida's utilities continued to add gas-fired generating units to satisfy economic and reliability needs. Figure 7, on the next page, illustrates Florida's energy generation by fuel type and the growth of overall energy demands which utilities were required to serve. As shown in Figure 7, natural gas generation has increased from nearly 16.8 percent of the state's electricity requirements in 1998 to 40.4 percent in 2008. Current projections indicate that natural gas generation will supply 46.7 percent of the state's energy generation by 2018.

Figure 7. State of Florida: Energy Generation by Fuel Type (Percent of Total)



Between 1980 and 2000, moderate fuel prices, as well as a balanced planning approach used by Florida's utilities, resulted in relatively stable average electricity prices for Florida's ratepayers with real prices actually declining. Starting in 2001, natural gas prices began to increase nationwide, and as a result, electricity prices have been increasing consistently since 2003. This increase is illustrated in Figure 8 on the next page.

Figure 8. Average Residential Electric Bill: 1980 to Present



Moreover, in 2005, hurricanes and tropical storms in the Gulf of Mexico caused short-term spikes due to gas supply disruptions. The effects of higher, volatile gas prices have been dramatic on customer bills. Such events illustrate the importance of a balanced fuel supply since fuel diversity can serve as a risk mitigation strategy by providing a dampening effect on fuel price volatility caused by daily market conditions.

Over the last 20 years, Florida's utilities have turned to natural gas to satisfy the state's growing energy demand. The recent volatility of natural gas prices, however, has shown that the overdependence on a single fuel can lead to an unacceptable risk of supply disruptions and rate increases. Unfortunately, fuel diversity cannot be achieved overnight.

Utility Generation Efficiency and Modernization

When considering the addition of supply-side generation, Florida's electric utilities must consider many environmental, economic, and reliability issues. The modernization of existing units plays a key role in addressing each of these issues. The conversion of less efficient fossil steam generation to combined cycle generation increases capacity while improving the thermal efficiency of the existing unit, results in less fuel use, and lower emissions. Such projects may require the temporary removal of existing units, thus impacting reliability until the completion of the modernization. Utilities should continue to explore potential conversion projects and report the feasibility of each conversion in next year's Ten Year-Site Plans.

In response to a staff data request, the Ten-Year Site Plan utilities identified facilities that are potentially capable of conversion. Table 7 on the next page summarizes their responses.

Table 7. Fossil Steam Facilities to Consider for Conversion

Company	Plant Name	Fuel & Unit Type	Combined Summer Capacity (MW)	In-Service Year(s)
FPL	Cutler Units 5 & 6	NG Steam	205	1954 & 1955
FPL	Manatee Units 1 & 2	Oil Steam	1,624	1976 & 1977
FPL	Martin Units 1 & 2	Oil Steam	1,652	1980 & 1981
FPL	Port Everglades Units ST1, 2, 3, & 4	Oil Steam	140	1971
FPL	Sanford Unit 3	Oil Steam	138	1959
FPL	Turkey Point Units 1 & 2	Oil Steam	788	1967 & 1968
PEF	Crystal River Units 1 & 2	Coal Steam	869	1966 & 1969
PEF	Suwannee River Units 1, 2, & 3	Oil Steam	131	1953, 1954, 1956
PEF	Anclote Units 1 & 2	Oil Steam	1,011	1974 & 1978
Gulf	Scholz Units 1 & 2	Coal Steam	92	1953
Gulf	Smith Unit 2	Coal Steam	195	1967
Total Capacity			**6,845**	

The Commission has already granted determinations of need for two conversions from fossil steam to combined cycle units. The approved conversions, located at FPL's Cape Canaveral and Riviera sites, represent a significant increase in generating capacity while reusing the plant site and reducing fuel usage and emissions. PEF has also recently conducted a conversion of its Bartow plant from fossil steam to a combined cycle unit. This conversion did not require a PPSA determination of need. PEF currently plans the retirement of Crystal River Units 1 and 2 after Levy Unit 2 has completed its first fuel cycle, due to stipulations relating to environmental issues. Gulf also is evaluating the conversion of two of its smaller coal units, Scholz Units 1 and 2, to biomass fuel.

In its Ten-Year Site Plan, FPL is planning to temporarily remove several of its older, less efficient generating units from active service and place them into "Inactive Reserve" Status. Table 8 on the next page details these units, several of which appear in the Table 7 above. With a reduction of load, and the construction of recent, more energy-efficient natural-gas fired, solar, and nuclear generation capacity, FPL has determined that by temporarily removing from service those units with higher operating costs, the utility can more affordably service customers. The units will continue to be maintained and will be placed back in service as needed. PEF, JEA, and Gulf have plans to retire some fossil steam units during the planning period.

Table 8. FPL's Inactive Reserve Units

Plant Name	Fuel & Unit Type	Summer Capacity (MW)	Year Removed from Service	Year Returned to Service
Cutler Unit 5	NG Steam	64	Summer 2009	–
Cutler Unit 6	NG Steam	137	Summer 2009	–
Port Everglades Unit 1	Oil Steam	213	Summer 2009	–
Port Everglades Unit 2	Oil Steam	213	Summer 2009	–
Sanford Unit 3	Oil Steam	139	Summer 2009	–
Martin Unit 2	Oil Steam	826	Summer 2010	Summer 2016
Manatee Unit 2	Oil Steam	822	Summer 2010	Summer 2017
Total Capacity		**2,414**		

Proposed Generating Units

Any proposed steam-fired or solar generating unit of at least 75 MW requires certification under Florida's PPSA. Under the PPSA, the Commission is the exclusive forum for determining the need for electric power plants. The Commission has granted a determination of need for several generating units of various technology types in recent years.

A majority of the capacity identified in the 2009 Ten-Year Site Plans has already received a determination of need from the Commission or is under construction. As a result, with approximately 11,000 MW of new natural gas-fired generation planned to enter service over the next 10 years, only 555 MW requires a determination of need by the Commission. As discussed below, a petition for determination of need could be expected by approximately 2014.

Reserve Margin Requirements

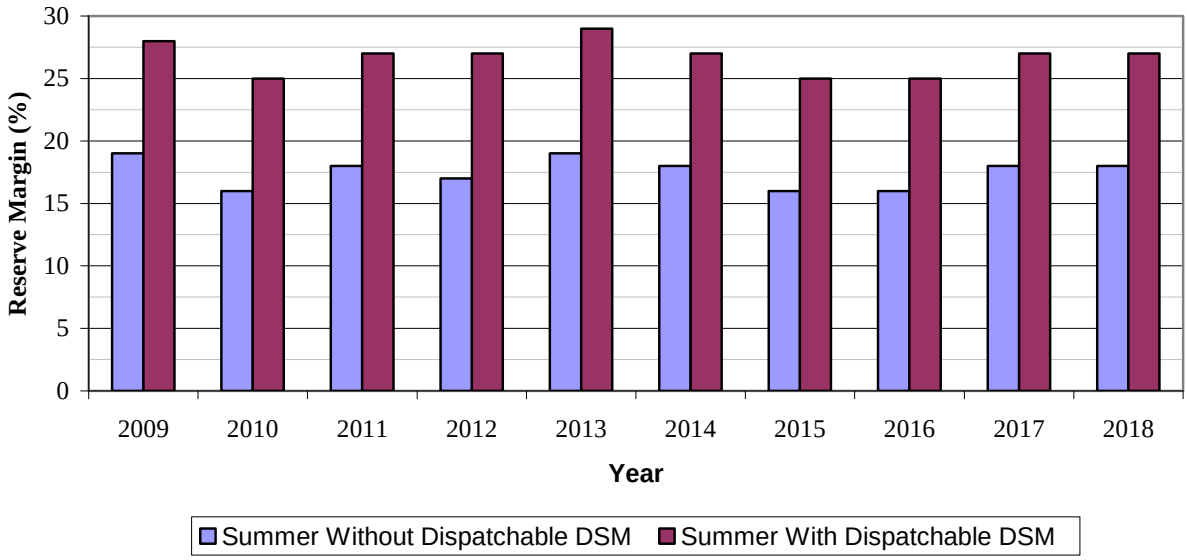
As a measure to ensure power is delivered to Florida's customers reliably, the FRCC has a resource adequacy standard of a 15 percent reserve margin above peak demand that must be met by the utilities. Multiple utilities in the FRCC region, including FPL, PEF, and TECO, have employed a higher standard of a 20 percent reserve margin criteria. The primary season when reserve margins approach the minimum FRCC reserve margin criteria is the summer. The lower summer reserve margin is partially due to load forecasting, but also due to the fact that generating units can operate at a higher capacity in the winter than the summer due to ambient temperatures.

Although the 20 percent reserve margin employed by FPL, PEF, and TECO provides increased reliability to the state's system, it is paramount that, in an era of rising rates, utilities should study all options available to mitigate price increases, including possible modification of current planning criteria.

DSM, such as load management and interruptible load, is also included in the region's reserve margin. Although the FRCC has not set a standard which limits the percentage of the reserve margin which can be met with DSM, utilities have found that when these types of programs are used frequently, customers are more likely to leave the program. The sudden loss of DSM participants can lead to a lower system reliability, so utilities must balance the reserve margin between DSM and

generation. As shown in Figure 9 below, the projected reserve margins with and without DSM are above the FRCC minimum standard of 15 percent.

Figure 9. Summer Peninsular Reserve Margin Projections



Nuclear

Nuclear generation is a generating technology that produces no greenhouse gas emissions. Significant strides have been made nationally to bring nuclear generation back to the forefront, including new standardized plant designs pre-approved by the Nuclear Regulatory Commission and streamlined safety and operating licensing to expedite construction. Nevertheless, licensing, certification, and construction of a new nuclear power plant in Florida is expected to take approximately ten years. Coupled with extremely high capital costs, due in part to worldwide industrialization and demand for construction materials and labor, the commitment to the construction of new nuclear power plants entails its own set of financial risks. In an effort to mitigate the economic risks associated with nuclear power plants, the Florida Legislature enacted Section 366.93, F.S., in June 2006. The Florida Legislature directed the Commission to establish new rules to provide for early cost recovery mechanisms for costs related to the siting, design, licensing, and construction of nuclear power plants in Florida. Rule 25-6.0423, F.A.C., enacted April 8, 2007, fulfills the legislative mandate for nuclear power plant cost recovery.

Increased nuclear capacity will significantly contribute to both greater system fuel diversity and lower greenhouse gas emissions. Additionally, nuclear generation does not face the same supply disruptions as fossil fuel generation because nuclear fuel is added to the units during refueling outages which typically take place once every 18 to 24 months.

Both FPL and PEF have included additional nuclear capacity from expansion (uprates) of their existing nuclear power plants in their 2009 Ten-Year Site Plans. Combined, the uprates of the PEF and FPL units will add approximately 554 MW of additional nuclear capacity.

In 2008, the Commission also granted PEF and FPL a determination of need for new nuclear generation. PEF's Levy Units 1 and 2 will mark the first construction of new nuclear generation in Florida in more than 20 years. According to the Ten-Year Site Plan filed on April 1, 2009, Levy Units 1 and 2 will provide approximately 1,100 MW of capacity each and will have in-service dates during 2016 and 2017, respectively. The units will be constructed on a greenfield site located eight miles from PEF's existing Crystal River site. Since the filing of its Ten-Year Site Plan, PEF announced on May 1, 2009, that the Levy Units will be delayed by a minimum of 20 months, as work requiring a Limited Work Authorization from the Nuclear Regulatory Commission could not be acquired. As a result of the delay, PEF's reserve margin will be reduced below its 20 percent threshold by 2016. The impact of the delay will be incorporated into next year's Ten-Year Site Plan.

FPL's Turkey Point Units 6 and 7 will also provide approximately 1,100 MW of capacity each. The two new nuclear units have in-service dates set for 2018 and 2020, respectively, and will be constructed at FPL's existing Turkey Point power plant site. Because of the later in-service date, Turkey Point Unit 7 does not appear in FPL's 2009 Ten-Year Site Plan. On June 30, 2009, FPL submitted its application for a Combined Operating License to the NRC.

Currently, all four new nuclear power plants have received a determination of need from the Commission, and no other new nuclear projects are within the planning period. Also, on August 11, 2009, the Governor and Cabinet unanimously approved PEF's site request for Levy Units 1 and 2. Table 9 below summarizes the new nuclear projects which have been granted a determination of need by the Commission.

Table 9. Nuclear Capacity Additions

Utility	Generating Unit Name	Summer Capacity (MW)	Dates		
			Need Approved (Commission)	PPSA Certified (DEP)	In-Service Date
PEF	Crystal River Unit 3	26 & 129	2 / 2007	8 / 2008	12 / 2009 & 12 / 2011
FPL	St. Lucie Unit 1	103	1 / 2008	9 / 2008	12 / 2011
FPL	Turkey Point 3	104	1 / 2008	10 / 2008	5 / 2012
FPL	St. Lucie Unit 2	88	1 / 2008	9 / 2008	6 / 2012
FPL	Turkey Point 4	104	1 / 2008	10 / 2008	12 / 2012
PEF	Levy Unit 1	1,092	5 / 2008	8 / 2009	6 / 2016
PEF	Levy Unit 2	1,092	5 / 2008	8 / 2009	6 / 2017
FPL	Turkey Point 6	1,100	3 / 2008	-	2018
FPL	Turkey Point 7[7]	1,100	3 / 2008	-	2020
Total Capacity		**4,938**			

Nuclear power plant construction is capital-intensive, has a long lead time, and remains uncertain with regard to future capital costs and fuel prices. The Commission, however, reviews the continued feasibility of both Levy Units 1 and 2 and Turkey Point 6 and 7 during its annual nuclear

[7] Because of its in-service date, Turkey Point Unit 7 does not appear in FPL's schedules, though it is discussed within their Ten-Year Site Plan.

cost recovery proceedings. Such proceedings provide the Commission with a forum to ensure that construction of the nuclear units continues to be in the best interest of ratepayers.

Coal

In an effort to balance the state's fuel supply, several coal-fired power plants were proposed in recent Ten-Year Site Plans. Due to a combination of fuel cost uncertainties, high capital costs, and uncertainties regarding potential environmental costs related to possible carbon emission regulations, more than 3,500 MW of coal-fired generation was canceled in 2007. Despite initial opposition, Seminole Electric Cooperative received final certification of Seminole Unit 3, a 750 MW coal-fired power plant, on June 13, 2008. Seminole Unit 3 has an in-service date of May 2016, and represents the only planned addition to Florida's coal-fired generating capacity, shown below in Table 10. Due to the opposition faced by the Seminole unit, this plant may be the last coal unit to be built in Florida for a long time, leaving natural gas and nuclear energy as the primary utility-owned generation alternatives. In addition, PEF has entered into a stipulation with DEP (to comply with environmental regulations) to retire Crystal River Units 1 and 2 when Levy Unit 2 completes its first fuel cycle.

Table 10. Coal Capacity Additions

Utility	Generating Unit Name	Summer Capacity (MW)	Dates		
			Need Approved (Commission)	PPSA Certified (DEP)	In-Service Date
SEC	Seminole Unit 3	750	7 / 2006	8 / 2008	5 / 2014
Total Capacity		**750**			

Natural Gas

Due to the long permitting and construction periods involved with nuclear generating plants, coupled with the cancellation of more than 3,500 MW of coal-fired generation, additional natural gas-fired generation has been planned for the interim. Natural gas-fired generation accounts for a majority of the incremental capacity being added to Florida's generation base and will likely be the fuel of choice for years to come. The 2009 Ten-Year Site Plans include the net addition of approximately 11,000 MW of natural gas generation. The 2008 Ten-Year Site Plans included roughly 15,500 MW of gas generation. This decline can be attributed in part to the reduction in load forecasts and the inclusion of the nuclear units in the 2009 Ten-Year Site Plans.

A total of 2,159 MW of natural gas-fired combustion turbine capacity is expected to enter service by the end of 2018. These units, as they are not steam-fired capacity, do not require siting under the PPSA, and therefore do not appear before the Commission for approval. A list of all combustion turbine units entering service is included in Table 11 on the following page.

Table 11. Natural Gas - Combustion Turbine Additions

Utility	Generating Unit Name	Summer Capacity (MW)	In-Service Date
GRU	South Energy Center Unit 1	4	5 / 2009
JEA	JD Kennedy Unit 8	150	4 / 2009
TECO	Bayside Units CT3-CT6	224	2009
TECO	Big Bend Unit CT4	56	9 / 2009
TECO	Future Units CT1-CT11	895	2012 - 2016
PEF	Suwannee River Units P4 & 5	356	2014 - 2015
SEC	Gilchrist Units 1-3	474	12 / 2015
Total Capacity		**2,159**	

The remainder of the natural gas capacity comes from combined cycle units, which have greater than 75 MW of steam capacity and are therefore covered under the PPSA. A majority of the capacity to be added during the ten-year period has already received a determination of need from the Commission, excluding a single proposed unit. TECO's Ten-Year Site Plan lists a 555 MW combined cycle unit with an in-service date of May 2018. Given typical lead times associated with combined cycle units, a petition would be expected for this unit by 2014. Table 12, below, includes all combined cycle units planned to enter service by 2018.

Table 12. Natural Gas - Combined Cycle Additions

Utility	Generating Unit Name	Summer Capacity (MW)	Dates		
			Need Approved (Commission)	PPSA Certified (DEP)	In-Service Date
FPL	West County Energy Center Unit 1	1,219	6 / 2006	12 / 2006	6 / 2009
PEF	Bartow	1,159	n/a	n/a	6 / 2009
FPL	West County Energy Center Unit 2	1,219	6 / 2006	12 / 2006	11 / 2009
OUC	Stanton Unit B	287	6 / 2006	12 / 2006	2 / 2010
FMPA	Cane Island 4	296	8 / 2008	12 / 2008	5 / 2011
FPL	West County Energy Center Unit 3	1,219	9 / 2008	11 / 2008	6 / 2011
JEA	Greenland Energy Center	491	2 / 2009	-	6 / 2014
FPL	Cape Canaveral Conversion	1,219	9 / 2008	-	6 / 2013
FPL	Riviera Conversion	1,207	9 / 2008	-	6 / 2014
TECO	Future CC	555	-	-	5 / 2018
Total Capacity		**8,871**			

Resource Additions

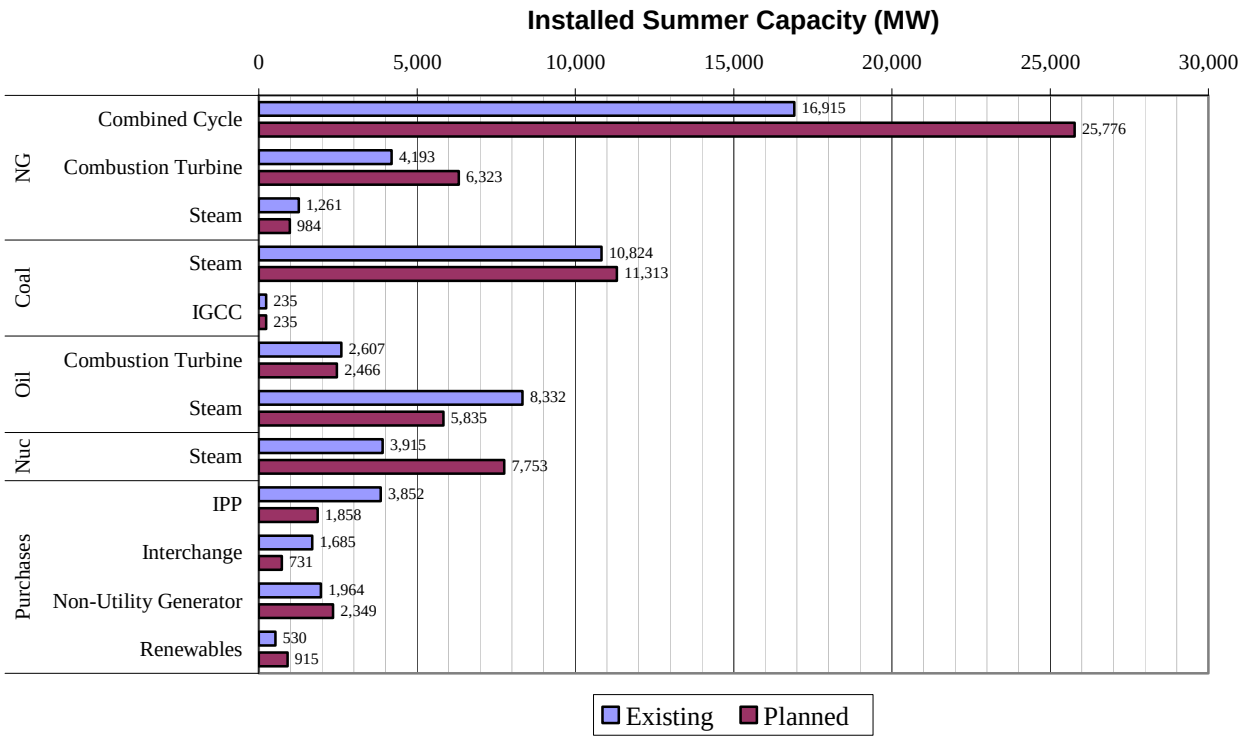
Table 13 below reflects the aggregate capacity additions contained in the reporting utilities' 2009 Ten-Year Site Plans. At the time of filing, the state's electric utilities planned to add a net summer capacity of 10,225 MW over the next 10 years. For example, coal, including new construction of 750 MW, has a net capacity of 489 MW over the planning period due to existing unit uprates, derates, and retirements. Negative values in the table reflect the retirement or downrating of fossil steam units, the expiration of firm capacity interchange contracts from out of state, and the expiration of firm capacity contracts with independent power producers and qualifying facilities within the state. If new contracts are signed in the future to replace those that expire, these resources will once again be included in the state's capacity mix. The subsequent effects of these additions as well as recent changes, are discussed throughout this report. These proposed capacity changes represents a decrease in approximately 4,000 MW of net summer capacity as filed with the 2008 Ten-Year Site Plans. As in past years, the majority of new capacity planned in the 2009 Ten-Year Site Plans is expected to come from gas-fired units, with nuclear generation representing the next largest fuel source.

Table 13. State of Florida: Proposed Capacity Changes As Reported

Unit Type	Net Summer Capacity Changes (MW)	
	2008 Ten-Year Site Plan (2008-2017)	2009 Ten-Year Site Plan (2009-2018)
Natural Gas (NG)		
Combined Cycle	14,514	8,861
Combustion Turbine	1,293	2,130
Steam	-247	-277
Coal		
Steam	705	489
Integrated Coal Gasification	0	0
Oil		
Combustion Turbine & Diesel	-208	-141
Steam	-541	-2,497
Nuclear (NUC)		
Steam	2,764	3,838
Firm Purchases		
Independent Power Producer (IPP)	-1,496	-1,993
Interchange	-1,813	-954
Non-Utility Generator (NUG)	-608	384
Renewables	202	385
Net Capacity Additions	**14,565**	**10,225**

Figure 10 on the following page illustrates the present and future aggregate capacity mix. The capacity values in Figure 10 incorporate all proposed additions, changes, and retirements from Table 13.

Figure 10. State of Florida: Electric Utility Summer Capacity (MW) Mix As Reported



Outlook

In response to the declining load forecasts, the reporting utilities have modified the number and size of additional generation facilities required in order to maintain an adequate supply of electricity at a reasonable cost. As in past years, the majority of new capacity planned in the 2009 Ten-Year Site Plans is expected to come from gas-fired units, with nuclear generation representing the next largest fuel source. Only a single coal-fired unit is planned by 2018. Also, only a single generating unit, a natural gas-fired combined cycle, does not yet have a determination of need and requires one for construction.

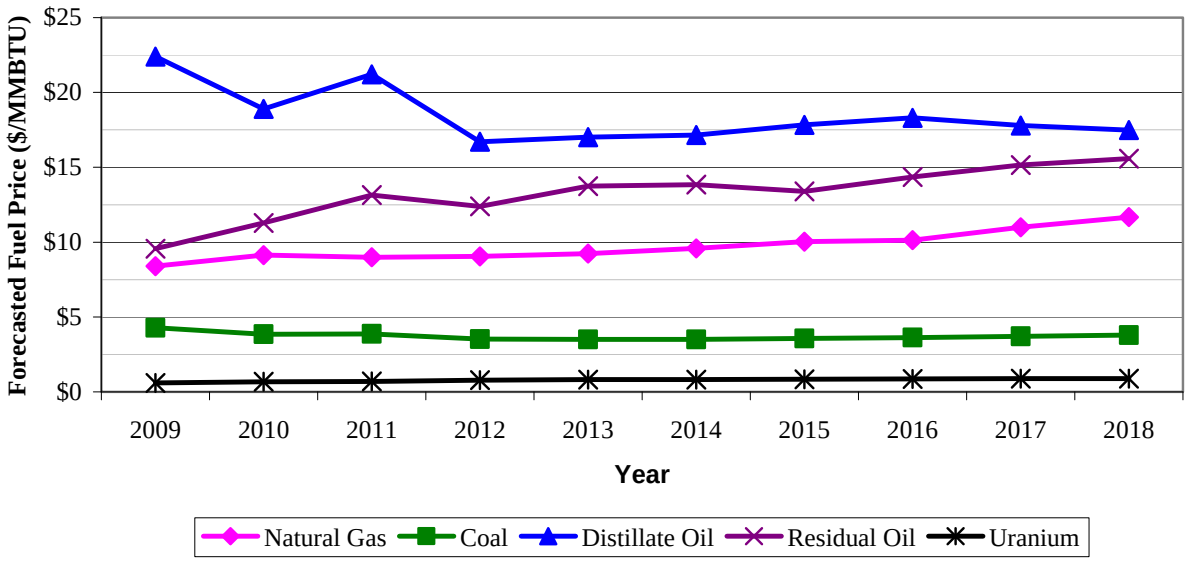
While generation planning requires considerable lead time, plans are subject to change due to several factors including changes to fuel cost, energy use projections, evolving technology, and changing energy policy. The primary fuel types remaining in Florida as a viable option for new generation are natural gas, either as a combustion turbine for peaking needs or a combined cycle for intermediate or baseload capacity, or nuclear power plants, as baseload generation. As a result, fuel diversity will be impacted by the leading role of these two sources of energy for the state and may, in turn, limit the ability to protect Florida's ratepayers from price volatility.

5. FUEL PRICE, SUPPLY, AND TRANSPORTATION

Utilities must decide which type of plant to build several years in advance: approximately four years for combined cycle, seven years for coal, and ten or more years for nuclear. Fuel price forecast is an important element of generation expansion planning. However, because long-term fuel prices cannot be predicted precisely, factors other than price such as supply, transportation, and diversity are also important.

Figure 11 below illustrates the weighted average forecasted fuel price for the 11 reporting utilities. The forecasted price for each fuel type is weighted by energy generation, meaning that utilities that generate large amounts of electricity from a particular fuel type will have more of an influence on the average. Prices for solid fuels, such as nuclear and coal, are forecasted to remain stable compared to oil and natural gas prices.

Figure 11. Reporting Utilities: 2009 Weighted Average Fuel Price Forecast



Natural Gas Price Forecasts and Supply

The utilities provided forecasts of natural gas prices in nominal dollars on a delivered basis. Natural gas prices are driven by various factors, including weather, inventories, macroeconomic conditions, and prices of other refined petroleum products. Refined petroleum products such as distillate oil and residual oil have been considered as close substitutes in U.S. industry and electric power generation. Different assumptions of these factors contained in utilities' forecasting models result in different forecasts of natural gas prices. Figure 11 shows on average, that the utilities expect natural gas prices continue to be less expensive compared with distillate oil and residual oil, based on equivalent energy contained in the fuel.

Short-term supply issues such as hurricanes and tropical storms in the Gulf of Mexico typically cause spikes in the price of natural gas. Demand for natural gas over the planning period will be driven by the requirements of gas-fired electric generators. Demand growth in other industry sectors and the residential sector is expected to be modest.

Transportation

In Florida, increased dependency on natural gas could affect the reliability of electric utility generation supply, primarily from the possibility of natural gas supply or transportation disruption. The North American Electric Reliability Corporation (NERC) established a Gas/Electricity Interdependency Task Force to determine reliability impacts and to recommend mitigating measures should reliability risks arise. The NERC task force completed a study in May 2004, concluding in part that gas pipeline reliability can substantially impact electric generation and that electric system reliability can have an impact on gas pipeline operations. The FRCC continues to review the recommendations made by the NERC task force to determine where to focus future analyses. The FRCC has recommended that Peninsular Florida has adequate pipeline capacity for reliability purposes for both current and future natural gas demand. However, with this statement, the FRCC assumes that generating units having the capability to burn oil will do so at time of peak demand. Therefore, economics may be the driving factor for any future gas pipeline expansions.

For several years, Florida has relied primarily on two gas pipeline companies, Florida Gas Transmission (FGT) and Gulfstream Natural Gas (Gulfstream), to supply natural gas to electric utilities, large industrial customers, and local distribution companies. FGT operates approximately 5,000 miles of pipeline nationwide, including 3,300 miles in Florida. FGT's system has undergone 7 expansions since its inception in 1959, increasing pipeline capacity from its original 0.278 Bcf/day to its current 2.3 Bcf/day. FGT's Phase VII Expansion Project began service in May 2007. FGT is proposing its Phase VIII Expansion Project that will consist of approximately 483.2 miles of multi diameter pipeline in Alabama, Mississippi, and Florida with approximately 365.8 miles built parallel to existing pipelines. FGT estimates the total cost of the project will be $2,455 million. The project is expected to be completed and in service in the spring of 2011.

Gulfstream has a system pipeline capacity of 1.25 Bcf/day. The first phase of Gulfstream's system, which entered service in 2002, crosses the Gulf of Mexico between Pascagoula, Mississippi, and Manatee County, Florida, with more than 430 miles of 36-inch diameter pipe. The Phase II expansion, a 110-mile extension to FPL's Martin plant site in Martin County, entered service in February 2005. Phase III expansion, which began service in the summer of 2008, has provided service to FPL's West County Energy Center. Phase IV expansion, completed in the first quarter of 2009, provides pipeline capacity for PEF's Bartow site in Pinellas County.

The newest pipeline system serving Florida is the Cypress Pipeline. Phase I of this project connects the Elba Island LNG facility near Savannah, Georgia, to FGT's system near Jacksonville. This pipeline began service in May 2007 and provides gas to PEF's Hines' units. The new pipeline provides an incremental 220 million cubic feet per day (MMcf/d) of takeaway capacity. On May 1, 2008, Phase II of the pipeline was placed into service. During this phase of the project compression, facilities were installed to add an additional 116 MMcf/d of capacity to the pipeline. Phase III of the project, which will add an incremental 164 MMcf/d through additional compression, is scheduled to be in service by 2010.

On April 7, 2009, FPL petitioned the Commission to determine the need for its proposed Florida EnergySecure Pipeline, a 280-mile long, 30-inch diameter pipeline.[8] The proposed line would have commenced in Bradford County and extend southeast to its terminus at FPL's Martin Plant site. The pipeline's initial transportation capacity was planned as 600 million cubic feet per day (MMcf/d) with an ultimate capacity of 1.25 billion cubic feet per day (Bcf/d). The Commission denied the project's determination of need on October 6, 2009, given that the pipeline project was not the most cost-effective alternative.

Out-of-State pipeline projects also increase supply options for Florida. The Southeast Supply Header project is a 270-mile, 36-inch diameter pipeline from the Perryville hub in Louisiana to interconnect with the Gulfstream Pipeline at Pascagoula, Mississippi. FPL contracted for 50 percent of the capacity, and PEF contracted for 20 percent. For both utilities, the Commission has approved the recovery of prudent transportation costs associated with this pipeline through the fuel cost recovery clause. This pipeline began service in September 2008. Other examples are the expansion projects by Gulf South Pipeline Company that bring unconventional gas, from areas such as the Barnett Shale and Bossier Sands in east Texas, to connections with FGT and Gulfstream.

In addition to the Cypress Pipeline, one other LNG project is proposed to serve Florida. Höegh LNG – Port Dolphin, a proposed offshore terminal and submerged buoy system, would be 28 miles offshore and will be connected to Port Manatee near Tampa Bay by a 42-mile pipeline. The project is scheduled to start commercial operations by 2011 with a peak send-out capacity of 1.2 Bcf/day. The pipeline project application was approved by the Governor on September 11, 2009.

Coal Price Forecasts and Supply

The reporting utilities forecasted coal prices on a delivered basis, resulting in differences in the forecasted prices depending on the location of the particular utility's coal plant and the mode of transportation. The forecasts use existing long-term contract prices and estimates of the spot market prices.

The reporting utilities generally see relatively stable coal prices over the planning horizon. Ample supply of domestic coal and the availability of imported coal should provide support for a stable commodity pricing. However, rising rail transportation costs may contribute to higher delivered prices. As railroads expand tracks to relieve congestion problems, transportation costs will increase since the railroads will include returns on expansions in their rates. Some reporting utilities depend entirely on rail for coal transport. Others use waterborne and rail transportation, both of which can reduce costs. Over the planning horizon, the Energy Information Administration (EIA) sees periodic bottlenecks for railroads transporting western coal to the eastern United States. Potentially, a combination of ocean transport with short-haul rail transport can reduce delivered MMBtu costs. For utilities with plants at interior sites, the ability to get short-haul rail transport contracts is an important factor for reducing the costs of delivered coal over the planning period.

[8] Docket No. 090172-EI – Petition to determine need for Florida EnergySecure Pipeline by Florida Power & Light Company.

Figure 11 shows on average, that the utilities expect coal prices continue to be less expensive compared with other fossil fuels, based on equivalent energy contained in the fuel. Therefore, existing coal plants may continue to play an important role in fuel diversity and lower fuel costs for customers.

Residual and Distillate Oil Price Forecast and Supply

Oil prices depend on global economic growth, other competing energy developments, and geopolitics. Economic growth in India, China, and the Pacific Rim countries has increased demand. Platts, an energy information service, states there will always be a geopolitical risk premium in oil prices. Sources of geopolitical risk for oil prices are Venezuela, Nigeria, Russia, the former Soviet states, and the Middle East. These factors contributed to the increased volatility of crude oil prices in recent years. Residual oil and distillate oil prices have been affected by being the refined products of crude oil.

Several Florida electric utilities continue the use of residual fuel oil (heavy oil) for generation. The companies provided price forecasts showing nominal delivered prices for residual fuel oil, typically in three categories based on sulfur content. Florida electric utilities also use distillate oil (No. 2 fuel oil) as a back-up fuel for natural gas plants that are fuel switchable and as a starter fuel for coal plants. Due to its relatively high price, utilities do not use distillate oil to generate a significant amount of electricity. Figure 11 shows on average, that the utilities expect natural gas prices continue to be less expensive compared with distillate oil and residual oil, based on equivalent energy contained in the fuel. Distillate oil and residual oil are likely to continue their declining significance as a source of electric generation in Florida.

Nuclear Fuel Price Forecasts and Supply

The long-term outlook for the nuclear fuel supply chain is currently influenced by the following factors:

- Aging milling, conversion, and enrichment facilities
- Lack of excess capacity
- Lack of supply diversification at processing facilities
- Potential regulatory changes and increased security requirements
- Number and timing of the start-up of new nuclear plants
- Number and timing of the start-up of new mines and milling facilities
- Performance of processing plants

Traditionally, nuclear fuel prices have been very stable; however, based on the above factors, prices are becoming more volatile. Both owners of Florida nuclear units, PEF and FPL, are forecasting a moderate upward trend in nuclear fuel prices for the 2009 to 2018 planning period. An additional feature of industry pricing is that utilities depend increasingly on long-term contracts, with terms out to five years, for uranium conversion, enrichment, and fabrication.

6. TRANSMISSION PLANS

As generation capacities increase, the transmission system must grow accordingly to maintain the capability of delivering the energy to the end user. The Commission has been given broad authority under certain sections of Chapter 366, F.S., known as the Grid Bill, to require reliability within Florida's coordinated electric grid and to ensure the planning, development, and maintenance of adequate generation, transmission, and distribution facilities within the state.

Reliability Standards

Nationwide, electric utilities plan their bulk power systems (100 kV and above) to comply with the NERC and regional reliability standards. The NERC's mission is to ensure that the bulk electric system in North America is reliable, adequate, and secure. Since its formation in 1968, the NERC operated successfully as a self-regulatory organization, and the electric industry voluntarily complied with the NERC's reliability standards. Changes in the electric industry, however, have rendered the voluntary compliance system inadequate. In response to these industry changes, Congress required the Federal Energy Regulatory Commission (FERC) to develop a new mandatory system of reliability standards and compliance. The Energy Policy Act of 2005 authorized the creation of an electric reliability organization (ERO) with the statutory authority to enforce compliance with reliability standards among all market participants. The NERC received certification as the ERO from the FERC in July 2006.

NERC works with all stakeholder segments of the electric industry, including electricity users, to develop standards for the reliable planning and operation of the bulk power systems. Fundamentally, a power system should always operate in such a way that no credible contingency could trigger cascading outages or another form of instability. Reliability standards are generally applied as follows:

- Under a single-contingency criterion, a utility's transmission system experiences no equipment overloads, voltage violations, or instability following a contingency outage of the single most crucial element, whether that piece of equipment is a generator, a transmission line, or a transformer. The single-contingency criterion is generally the minimum reliability standard at which electric utilities plan their bulk power systems.

- Under a multiple-contingency criterion, a utility's transmission system must withstand the simultaneous failure of two or more elements with a controlled loss of load and no cascading outages which affect neighboring utilities. The transmission system must subsequently be able to adjust so that all elements operate within their emergency ratings for the duration of the outage.

In response to congressional actions to require mandatory reliability standards, which were supported by the Commission, the FRCC has implemented a compliance program that will monitor and enforce compliance with the NERC and the FRCC reliability standards. The program relies on self-assessment, periodic reporting, and on-site audits for compliance. In administering the compliance program, the FRCC works closely with all owners, operators, and users of the state's bulk electric system. The Commission staff attends FRCC meetings and maintains an open dialog with the

FRCC on reliability matters affecting the state. The Commission will continue to work closely with the FRCC, NERC, and FERC to guarantee the adequacy and reliability of Florida's electric grid.

FRCC Transmission Planning Process

One of the benefits attributed to the formation of a regional transmission organization (RTO) is centralized, coordinated transmission planning. In April 2006, the Commission closed a lengthy investigation into the prudence of forming an RTO, known as GridFlorida, because the RTO did not appear to be cost-effective. The Commission directed Peninsular Florida's utilities to coordinate their transmission planning activities through the FRCC in an effort to capture some benefits of an RTO. The FRCC's transmission planning process is expected to yield a more complete transmission expansion plan from a peninsular perspective. The process will make sure that the reliability standards and criteria established by the NERC and the FRCC are met and will use the specific design, operating, and planning criteria employed by Peninsular Florida transmission owners. The Commission staff continues to participate in the FRCC's meetings on transmission planning. The Commission will continue to monitor coordinated planning efforts by Florida's utilities and, if necessary, will exercise its Grid Bill authority to ensure the adequacy and reliability of Florida's transmission system.

The FRCC performs a long range, ten-year study, as well as a study of the interface between Florida and the Southern Company (Southern). Sensitivity studies test the robustness of Peninsular Florida's transmission system under various conditions and are performed within both studies. Examples of the sensitivities studied are as follows:

- Transmission and/or generation facilities unavailable due to scheduled and/or forced outages
- Weather extremes for summer and winter periods
- Different load levels (e.g., 100-, 80-, 60-, and 40 percent) and/or seasons of the year
- Various generation dispatches that will test or stress the transmission system
- Reactive supply and demand assessment (generator reactive limits and power factor)
- Specific areas of combination/cluster of generation and load serving capability among various transmission owners/providers in the FRCC that continually experience or are expected to experience significant congestion
- Other scenarios or system conditions, such as stability analysis

Consistent with the FRCC transmission planning process, these sensitivity studies will not necessarily call for the construction of transmission facilities identified in the studies, but will furnish insight into how robust the planned transmission system is expected to be.

2009-2018 Long Range Transmission Study

The long range transmission study is a steady-state assessment of the adequacy of the FRCC's bulk and 69 kV transmission system for 2009-2018. The NERC Transmission Planning Standards are used to gauge the adequacy of the transmission system. These transmission planning standards state that the transmission system must remain stable within the applicable thermal and voltage rating limits without cascading outages, under normal system conditions, as well as during single and multiple contingency events. The FRCC's Long Range Transmission Reliability Study covers both near-term and long-term portions of the planning horizon. The near-term part examines years two through five (2009-2013) and analyzes in detail specific remedies identified for all thermal and/or voltage screening criteria exceptions. The long-term section examines years six through ten (2014-2018) to determine if any trends are developing that would require attention.

The Long Range Transmission Reliability Study for transmission facilities, 69kV and greater, within the FRCC Region concluded that potential thermal and voltage screening criteria violations can be resolved by operator intervention meeting the NERC Transmission Planning Standards. The resolutions were thoroughly reviewed by the transmission owners and found to be adequate to maintain acceptable system performance under all conditions and events. The FRCC found no major projects requiring long lead times.

Florida-Southern Interface Transfer Capability Study

Currently, Peninsular Florida imports 1,605 MW of firm capacity into the FRCC region from the Southern Control Area within the SERC region (Southern). The remaining transferrable capacity, nearly 2,000 MW, is available for non-firm energy sales. Firm capacity exports to Southern do not occur at this time, nor are they forecasted to occur during the planning horizon. The FRCC and Southern annually perform an interregional transmission study to confirm the maximum import and export capability between the two regions and to make sure that the transmission plans of both regions jointly meet the NERC reliability standards. Based on studies performed by the FRCC and Southern, there do not appear to be any reliability constraints at the Florida-Southern interface at this time concerning the current use of interface capacity. The 2009 study confirmed the total transfer capabilities between the FRCC and Southern, which are shown in Table 14 below.

Table 14. Florida-Southern Interface Transfer Capability

Transfer	Transfer Capability (MW)	
	Summer	Winter
Southern to Florida (import)	3600	3800
Florida to Southern (export)	1000	1900

Proposed Transmission Lines Requiring Certification

Many of the transmission lines proposed by the FRCC as needing to be built require TLSA certification. To require certification under Florida's TLSA, a proposed transmission line must meet the following criteria: a rating of at least 230 kV, crossing a county line, and a length of at least 15 miles. Proposed lines in an existing corridor are exempt from TLSA requirements. The Commission determines the reliability need for and the proposed starting and ending points for lines requiring TLSA certification. The Commission must issue a final order granting or denying a determination of need within 90 days of the petition filing. The proposed corridor route is determined by the DEP during the certification process. The Governor and Cabinet sitting as the Siting Board ultimately must approve or deny the overall certification of the proposed line.

The Commission has granted a determination of need for four transmission lines in recent years. Two of these facilities have also received certification under the TLSA by Florida's Governor and Cabinet. Table 15 below lists all proposed transmission lines in the Ten-Year Site Plans that meet the criteria for TLSA certification.

Table 15. Proposed Transmission Lines Requiring Certification

Line Owner	Transmission Line	Line Length (Miles)	Nominal Voltage (kV)	Dates		In-Service Date
				Need Approved	TLSA Certified	
FPL	St. Johns-Pringle	26.0	230	5 / 2005	4 / 2006	6 / 2009
PEF/TECO	Lake Agnes-Gifford	32.3	230	9 / 2007		6 / 2011
FPL	Manatee-Bob White	30.0	230	8 / 2006		12 / 2011
TECO	Willow Oak-Davis	29.4	230	6 / 2007	8 / 2008	6 / 2012

7. STATE, REGIONAL, AND LOCAL COMMENTS

Florida Municipal Power Agency

Florida Energy and Climate Commission: No comment on FMPA's Ten-Year Site Plan.

Treasure Coast Regional Planning Council: The TCRPC considers the Ten-Year Site Plan to be inconsistent with Regional Goal 9.1 and Strategy 9.1.1 of the Strategic Regional Policy Plan. Council urges FMPA to develop new programs to reduce the reliance on fossil fuels, increase conservation activities, and increase the use of renewable energy sources to produce electricity.

Withlacoochee Regional Planning Council: FMPA's Ten-Year Site Plan is adequate for planning purposes.

South Florida Water Management District: No comment on FMPA's Ten-Year Site Plan.

Florida Power & Light Company

Fish and Wildlife Conservation Commission: The three sites FPL anticipates developing may become community issues due to water needs. Also, the environmental impact of water use needs to be developed and explained. The FWC therefore does not find FPL's Ten-Year Site Plan adequate for planning purposes.

Florida Energy and Climate Commission: No comment on FPL's Ten-Year Site Plan.

Central Florida Regional Planning Council: FPL's Ten-Year Site Plan is adequate for planning purposes.

Southwest Florida Regional Planning Council: Based on information provided in the plan, the existing and potential development located in southwest Florida as described will enhance the health, safety, and welfare of the region's population through the adequate provision of electrical power.

Tampa Bay Regional Planning Council: FPL's Ten-Year Site Plan is adequate for planning purposes.

Treasure Coast Regional Planning Council: The Council considers the Ten-Year Site Plan to be inconsistent with Regional Goal 9.1 and Strategy 9.1.1 of the Strategic Regional Policy Plan. Council urges FPL to develop new programs to reduce the reliance on fossil fuels, increase conservation activities, and increase the use of renewable energy sources to produce electricity. The council encourages FPL to develop more solar and wind generation as well as developing additional regeneration programs modeled after the California Edison plan.

South Florida Water Management District: No comment on FPL's Ten-Year Site Plan.

Manatee County: No comment on FPL's Ten-Year Site Plan.

Gainesville Regional Utilities

Fish and Wildlife Conservation Commission: The FWC does not find the Ten-Year Site Plan adequate as their anticipated environmental and land use expansion needs are not explained.

Florida Energy and Climate Commission: No comment on GRU's Ten-Year Site Plan.

North Central Florida Regional Planning Council: No comment on GRU's Ten-Year Site Plan.

Gulf Power Company

Fish and Wildlife Conservation Commission: The FWC found the information submitted for Gulf Power Company suitable for planning purposes.

Florida Energy and Climate Commission: No comment on Gulf's Ten-Year Site Plan.

West Florida Regional Planning Council: Gulf's Ten-Year Site Plan is adequate for planning purposes.

Escambia County: No comment on Gulf's Ten-Year Site Plan.

JEA

Fish and Wildlife Conservation Commission: The FWC does not find the report sufficient as JEA did not report environmental and land use data. This information is needed to cover anticipated environmental issues and land use changes

Florida Energy and Climate Commission: No comment on JEA's Ten-Year Site Plan.

Northeast Florida Regional Planning Council: The Council staff supports JEA and the State in its efforts to continue developing programs that reduce the reliance on coal and oil along with conservation efforts to develop and provide reliable electric service at the lowest cost.

City of Lakeland

Fish and Wildlife Conservation Commission: The Commission found the information submitted for Lakeland Electric suitable for planning purposes.

Florida Energy and Climate Commission: No comment on Gulf's Ten-Year Site Plan.

Orlando Utilities Commission

Fish and Wildlife Conservation Commission: The Commission found the information submitted for OUC suitable for planning purposes.

Florida Energy and Climate Commission: No comment on OUC's Ten-Year Site Plan.

South Florida Water Management District: No comment on OUC's Ten-Year Site Plan.

Progress Energy Florida

Fish and Wildlife Conservation Commission: The Commission finds the PEF plan suitable for the area and the people served.

Florida Energy and Climate Commission: No comment on PEF's Ten-Year Site Plan.

North Central Florida Regional Planning Council: No comment on PEF's Ten-Year Site Plan.

Tampa Bay Regional Planning Council: PEF's Ten-Year Site Plan is adequate for planning purposes.

Withlacoochee Regional Planning Council: No comment on PEF's Ten-Year Site Plan.

Pinellas County: The County will continue to support renewable energy resources and development by the utility. The County would like to review any transmission corridors that impact the environment, the county, and its land use.

Seminole Electric Cooperative

Fish and Wildlife Conservation Commission: The FWC finds the information submitted by SEC inadequate for planning purposes in developing the Putnam County and Gilchrist county generating facilities.

Florida Energy and Climate Commission: No comment on SEC's Ten-Year Site Plan.

North Central Florida Regional Planning Council: No comment on SEC's Ten-Year Site Plan.

Northeast Florida Regional Planning Council: The Council staff supports SEC and the State in its efforts to continue developing programs that reduce the reliance on coal and oil along with conservation efforts to develop and provide reliable electric service at the lowest cost.

Putnam County: No comment on SEC's Ten-Year Site Plan.

City of Tallahassee

Fish and Wildlife Conservation Commission: The Commission did not find any projects or enhancements planned by the City of Tallahassee. Therefore, fish and wildlife resources are not likely to be affected.

Florida Energy and Climate Commission: No comment on TAL's Ten-Year Site Plan.

Tampa Electric Company

Fish and Wildlife Conservation Commission: The Commission found TECO's Ten-Year Site Plan suitable for planning purposes.

Florida Energy and Climate Commission: No comment on TECO's Ten-Year Site Plan.

Central Florida Regional Planning Council: TECO's Ten-Year Site Plan is adequate for planning purposes.

Tampa Bay Regional Planning Council: TECO's Ten-Year Site Plan is adequate for planning purposes.

Hillsborough County: No comment on TECO.