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VIA HAND DELIVERY

Blanca S. Bayó, Director
Division of the Commission Clerk &
Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: Docket No.: 060220-EC

Dear Ms. Bayó:

In lieu of errata sheets, enclosed for filing on behalf of Seminole Electric Cooperative, Inc. are the original and fifteen (15) copies of revised pages of its Need Study and various direct testimonies. The following revised pages should be substituted:

(1) Need Study – pages 2, 19, 33, 34, 43, 50, 73, 74, 78, and 81; 04646-06
(2) Direct Testimony of Timothy S. Woodbury – page 17; 04647-06
(3) Direct Testimony of Michael P. Opalinski – pages 8, 10, 12 and 13; 04648-06
(4) Direct Testimony of William T. Lawton - pages 3 and 7; 04649-06
(5) Direct Testimony of Lane Mahaffey – pages 8 and 21; and 04650-06
(6) Direct Testimony of Wm. Jack Reid – page 5 04657-06

CMP ____
COM 5 (strong)
CTR ____
ECR ____
GCL 1
OPC 1
RCA ____
SCR ____
SGA ____
SEC 1
OTH ____

If there are any questions regarding this transmittal, please contact me at 222.2300.

Very truly yours,

SQUIRE, SANDERS & DEMPSEY L.L.P.

Charles A. Guyton
Partner

CAG:gcm
Enclosure
Copy to: Martha Carter Brown, Esq. (w/enclosures)
Lee Colson (w/enclosures)

TALLAHASSEE/55458.1

nuclear plant. In addition, those resources will soon include gas peaking facilities that are currently under construction. Seminole has contracts for the purchase of power with four independent power producers, three renewable resource generators, one municipal electric utility and one investor-owned utility. Seminole is interconnected with seven other electric utilities at fifteen interconnection points. Seminole owns and operates 230 kV and 69 kV transmission facilities, and it receives firm network transmission service from two investor owned electric utilities.

As of the end of 2004, the ten Members comprising Seminole's system served 805,085 retail consumers. During calendar year 2004, those customers consumed 15,348 GWh of energy and placed a maximum coincident demand on the system of 3,364 MW. Seminole's highest peak demand on record occurred in February 2006 at 4,113 MW (estimated). Seminole and its Members serve one of the fastest growing service areas in Florida. The forecasted average annual growth rates for the next ten years of the customers, energy and demand served by Seminole's Members are 2.8%, 4.1%, and 4.1%, respectively.

In its power supply planning process, Seminole determined that due to forecasted load growth and the scheduled expiration of some existing purchased power contracts, it needed to add over 1200 MW of generating capacity by 2012. These additional resources were necessary for Seminole and its Members to be able not only to maintain system reliability, but also to provide electric service at a reasonable cost.

Because of the longer lead times associated with base load technologies, Seminole focused first on meeting its need for base load capacity. Seminole already had agreed to participate

IV. THE DESCRIPTION OF SGS UNIT 3

A. Overview

The proposed generating addition, SGS Unit 3, is a pulverized coal unit using supercritical boiler design with a rating of 750 MW (net). SGS Unit 3 will be designed to burn 100% bituminous coal or coal in combination with up to 30% petroleum coke. The unit is scheduled to begin commercial operation in May 2012.

The location for the new unit will be Seminole's existing Seminole Generating Station in Putnam County, Florida, which contains two existing 650 MW class coal units (SGS Units 1 and 2). Thus, SGS Unit 3 is a brownfield project. The site contains all facilities for the operation of the existing units, including but not limited to all coal unloading and storage facilities, pollution control equipment, and solid waste disposal areas for flyash and other solid waste materials. The design of the new coal fired facility will maximize the co-use of existing site facilities.

B. Site Description

1. Location

The Seminole Generating Station is located on a 1,922 acre plant site in northeast Putnam County approximately five miles north of Palatka, Florida. Figure IV.B.1.1 is a map of Putnam County showing the location of the Seminole Generating Station site.

Johns River, and cooling tower blowdown will be discharged to the St. John's River. Most process wastewater streams will be treated and recycled as make-up water to the wet scrubber. Blowdown from the wet scrubber will be treated in the existing clarification system and in a new zero liquid discharge system consisting of brine concentrators and a spray dryer system. Site runoff will be integrated into the existing site drainage system which will be expanded to accommodate Unit 3. Sanitary discharge will be to a sanitary water treatment system.

Most of the coal combustion by-products produced as a result of the addition of SGS Unit 3 will be sold for reuse, with the balance disposed in the permitted on-site landfill or an offsite permitted landfill (e.g., similar to existing SGS Units 1 & 2, waste from the flue gas desulfurization process will be converted to gypsum and sold to a wall board company on an adjacent site). A monitoring well system is currently in place to monitor ground water quality adjacent to the landfill area and around the SGS property. The ground water monitoring system will be modified as necessary to evaluate the impact of SGS Unit 3.

D. Regulatory Approvals

Table IV.D.1.1 is a list of state, local, and federal regulatory approvals that will be required for the construction, operation, and maintenance of SGS Unit 3, together with the dates when each approval is expected. All regulatory approval documents for SGS Unit 3 were filed with the appropriate agencies in March 2006, except for the request for an amended zoning determination, which was approved by the Putnam County Board of County Commissioners in January 2006.

Table IV.D.1.1
SGS Unit 3 Environmental Approvals

	Approval	Agency	Expected Approval Date
1	Determination of Need	Florida Public Service Commission	9-1-06
2	Prevention of Significant Deterioration Permit (PSD)	Florida Department of Environmental Protection	6-10-07
3	Power Plant Siting Act (PPSA) Site Certification	Florida Siting Board (Governor & Cabinet)	5-1-07
4	National Pollutant Discharge Elimination System (NPDES)	Florida Department of Environmental Protection	6-10-07
5	Clean Water Act Sec. 404 Permit	Army Corps of Engineers	4-13-06
6	Zoning Approval	Putnam County	Approved 1-10-06
7	Environmental Impact Statement	Rural Utilities Service	9-28-07

E. Fuel

Seminole's fuel management program for Seminole Generation Station is designed to provide a balanced portfolio of long and short term fuel, transportation, and service agreements. Active management of fuel supply, transportation, and related assets provides fuel availability, reliability, and cost control. Fuel management for SGS Unit 3 will be part of the larger fuel management program for the Seminole Generating Station.

Figure IV.J.1.1.
SGS Unit 3 Fact Sheet

Plant Design

Megawatt (net)	750 MW
Net Plant Heat Rate (71°F/80% RH)	9,000 Btu/kWh
Steam Cycle Conditions	3700 PSI/1,050 F/1,050 F

Water Supply

Cooling Tower Makeup	St. Johns River
Boiler Makeup	Ground Water
Potable Water	Well System
Average Annual Makeup from St. John's River	34 MGD

Fuels

Type	Eastern Bituminous Coal/Petroleum Coke
Blend	Up to 30% Petroleum Coke
Delivery	Rail
Startup Fuel	Fuel Oil

Air Quality Control Systems

SO_2	Wet FGD
NO_x	Low NO_x Burners/Overfire Air/SCR
PM	ESP
Sulfuric Acid Mist	Wet ESP

Reagent

Wet FGD	Limestone
Limestone Delivery	Truck
SCR	Urea
Urea Delivery	Truck/Rail

Reuse and Disposal

Gypsum	Lafarge
Gypsum Transport	Conveyor
Fly Ash	Sold/Landfilled
Bottom Ash	Sold/Landfilled
Ash Transport	Truck
Landfill Location	On-site

2008, with such supplemental capacity need continuing through 2012 and expanding thereafter. Without additional power purchases Seminole would require the capacity amounts shown in Figure V.E.2.1.

Figure V.E.2.1.
Capacity Needed (Cumulative) To Meet Reliability Criteria

	Capacity Need Without SGS Unit 3	
Year	**Winter MW**	**Summer MW**
2012	971	1261
2013	1801	1702
2014	4058	3440
2015	4663	3620
2016	4907	3794

3. Capacity Needed To Minimize Costs.

In addition to being needed for Seminole to meet its reliability criteria, SGS Unit 3 is needed for Seminole and its Members to be able to provide adequate electricity at a reasonable cost. When Seminole issued its RFP in April 2004, Seminole had identified that it had a need for up to 600 MW of base load capacity as early as 2009. In conjunction with Seminole's economic assessment of self-build and purchased power alternatives, Seminole subsequently concluded that approximately 750 MW of base load capacity would be economically feasible as a base load resource by 2012.

4. Coal Capacity Needed To Minimize Reliance on Natural Gas and Improve Rate Stability

In addition to the demonstrated economic advantage of coal over gas for meeting base load requirements, natural gas prices have been extremely volatile in the short term and have deviated significantly from historic long term forecast trends. The combination of short term

demand charge that applies to Seminole's system coincident peak demand rather than the maximum non-coincident demand of individual Members. Over time, Seminole's price signals have contributed to the installation by the member/consumers of Seminole's Members of 237 MW of DSM or peak shaving capabilities in the form of load control switches, voltage control, and load management generation for peak shaving and local area reliability. Most of these DSM resources are dispatchable by Seminole and reduce Seminole's total system peaking generation requirements. These 237 MW of DSM installed on Seminole's system are reflected in Seminole's load forecast.

The impact of conservation efforts by the member/consumers of Seminole's Members are also reflected as load reductions (but not separately quantified) in the individual load forecasts of Members as well as Seminole's composite load forecast. Those impacts are captured in the variables used to forecast energy and demand. Therefore, forecasted energy and demand reflect not only historic conservation on Seminole's system, but also incremental conservation at the same rate of adoption.

Since Seminole's load forecast, which fully accounts for the historic conservation and DSM savings from existing programs, was used to assess Seminole's 2012 capacity need, Seminole's need for 1261 MW of additional capacity in 2012 to meet its reliability criteria captured the historic conservation and DSM efforts of Seminole's Members. Stated differently, Seminole needed 1261 MW of capacity in 2012 after fully accounting for all current conservation and DSM on Seminole's system. Even after full consideration of all existing conservation and DSM, Seminole still needed SGS Unit 3 plus an additional 500+ MW to meet its reliability criteria in 2012.

B. The Potential for Additional Conservation and DSM

It was readily apparent there was not sufficient, reasonably achievable DSM and conservation available to Seminole and its Members to meet Seminole's 2012 capacity need of 1261 MW or Seminole's base load capacity need of 750 MW. To meet Seminole's 1261 MW 2012 capacity need with DSM and conservation, Seminole's Members would have needed to add 1,097 MW of incremental DSM and conservation over the next six years, or 183 MW per year. (Because DSM and conservation reduce system load, they also reduce the amount of capacity needed as a reserve margin over and above that load. Thus, 1,097 MW of reduced load equals 1,261 MW of supply side resources (1,261 ÷ 1.15 = 1,097).) Such a dramatic increase in conservation and DSM was not plausible.

Initially, it must be recognized that Seminole is not a centralized, vertically integrated utility serving one unseparated service area. The Seminole system is comprised of ten Members with ten separate service territories of varying sizes spread throughout Florida. The Members have different levels of resources, different cost profiles and different customer characteristics. No uniform, "one size fits all" approach to DSM and conservation program and plan design could be followed by Seminole's Members. They would have to design, indeed they have designed, their respective DSM and conservation programs based upon their unique systems and customer characteristics. So, even if a similarly sized, centralized, vertically integrated utility with a system wide DSM and conservation plan could implement the amounts of incremental DSM and conservation needed by Seminole, it is doubtful that Seminole's Members, who do not enjoy the advantages of a centralized, vertically integrated organization with a uniform conservation and DSM plan in a single territory, could do so.

IX. ADVERSE CONSEQUENCES IF SGS UNIT 3 WERE NOT ADDED.

A. Adverse Effects on Seminole System Reliability

Over half of Seminole's generation portfolio consists of purchased power contracts. Contracts expiring in the time frame of the proposed unit addition combined with projected growth in our Member service areas left a deficiency of over 1200 MW in total capacity need by 2012. The proposed unit addition satisfies a significant portion of this total need. In the event SGS Unit 3 is not constructed timely and in the absence of alternative capacity resources to meet the identified need, Seminole will not meet its reliability criteria. This would leave Seminole's Members and their member/consumers without reliable wholesale service.

Similarly, without SGS Unit 3 being added in 2012 and in the absence of alternative capacity resources to meet the identified need, Seminole's reserve margin would be negative: it would have less than no reserves. Similarly, without SGS Unit 3 becoming operational in 2012, Seminole's EUE would be 1.2%, which would exceed Seminole's EUE standard of 1%. Failure to achieve its reliability criteria would mean Seminole's system reliability would be below acceptable standards. This, in turn, would cause an unacceptably high risk of consumer service interruptions.

Other alternatives could perhaps mitigate this potential reliability problem, but those alternatives are limited and expensive, and they come with their own reliability issues. Alternative coal options are impractical by 2012. That leaves gas combined cycle. The gas combined cycle option, whether self-build or purchased, has been shown to be far more costly to Seminole, its Members, and their member/consumers. Moreover, recent events

X. CONCLUSION

An affirmative determination of need for SGS Unit 3 is warranted. Seminole has implemented a rigorous and comprehensive process to determine its capacity needs and the most economic means of meeting those needs.

Seminole needed over 1,200 MW of capacity to meet its reliability criteria in 2012. Seminole's analyses show that 750 MW of that capacity should be base load capacity. SGS Unit 3 is needed by Seminole, its Members and their member/consumers to maintain system reliability and integrity, to provide adequate electricity at a reasonable cost, and to avoid an undue reliance upon natural gas. Seminole's analyses show that SGS Unit 3 is the most cost-effective means for Seminole, its Members and their member/consumers to meet a portion of their capacity need in 2012.

Seminole has considered a wide variety of alternatives to SGS Unit 3, including numerous market alternatives identified through a vigorous and open capacity solicitation. SGS Unit 3 is the most economical option by almost $500 million in PWRR. There is not sufficient, reasonably achievable conservation and DSM available to either Seminole or its Members that would avoid the need for SGS Unit 3 in 2012.

Finally, there would be serious adverse consequences to Seminole, its Members and their members/consumers and the communities they serve if an affirmative determination of need for SGS Unit 3 were not made.