

Hopping Green & Sams

Attorneys and Counselors

080614

September 30, 2008

BY HAND-DELIVERY

Ann Cole
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399

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COMMISSION
CLERK

Re: Petition of JEA to Determine Need for Greenland Energy Center Combined
Cycle Conversion in Duval County
Docket No. _____

070614-EM

Dear Ms. Cole:

Enclosed for filing on behalf of JEA are the original and fifteen copies of the following:

- Petition of JEA to Determine Need for Greenland Energy Center Combined Cycle Conversion in Duval County; 09206-08
- Exhibit No. ___ (GEC-1), Greenland Energy Center Combined Cycle Conversion Project Need for Power Application; 09207-08
- Pre-filed Direct Testimony of Donald C. Gilbert with Exhibit Nos. ___ (DCG-1 and DCG-2); 09208-08
- Pre-filed Direct Testimony of Michael N. Lawson with Exhibit Nos. ___ (MNL-1, MNL-2 and MNL-3); "
- Pre-filed Direct Testimony of Mary Guyton-Baker with Exhibit No. ___ (MGB-1); "
- Pre-filed Direct Testimony of James T. Myers with Exhibit No. ___ (JTM-1); "
- Pre-filed Direct Testimony of John A. Worley with Exhibit No. ___ (JAW-1); "
- Pre-filed Direct Testimony of Richard J. Vento with Exhibit Nos. ___ (RJV-1, RJV-2 and RJV-3); "
- Pre-filed Direct Testimony of Myron R. Rollins with Exhibit Nos. ___ (MRR-1, MRR-2 and MRR-3); and "

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ECR	1
GCL	1
OPC	1
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- Pre-filed Direct Testimony of Bradley E. Kushner with Exhibit Nos. ___ (BEK-1 and BEK-2).

09208-58

Please acknowledge receipt and filing of the above by stamping the enclosed extra copy of the Petition and Testimony and return them to me. If you have any questions concerning this filing, please contact me at 425-2359.

Thank you for your assistance in connection with this matter.

Very truly yours,

HOPPING GREEN & SAMS, P.A.

By:


Gary V. Perko

Attorneys for JEA

GVP/dwg
Enclosures

Hopping Green & Sams

Attorneys and Counselors

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition to determine need for Greenland Energy Center Combined Cycle Conversion in Duval County by JEA.

DOCKET NO. 080614

FILED: September 30, 2008

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JEA'S PETITION TO DETERMINE NEED FOR GREENLAND ENERGY CENTER COMBINED CYCLE CONVERSION IN DUVAL COUNTY

JEA, by and through undersigned counsel, hereby petitions the Florida Public Service Commission ("Commission") pursuant to Section 403.519, Florida Statutes, and Rule 25-22.081, Florida Administrative Code, to determine the need for the proposed combined cycle conversion project at the Greenland Energy Center (GEC) in Duval County, Florida, and to file its order making that determination with the Department of Environmental Protection (DEP) pursuant to Section 403.507(2)(a)2., Florida Statutes. In support of this petition, JEA states:

Introduction

1. JEA submits this Petition and accompanying Need for Power Application in support of a proposed conversion of two natural gas-fired "simple cycle" combustion turbines to a 2x1 "combined cycle" configuration at the GEC generating station in Duval County, Florida. The proposed unit will ensure that JEA has an adequate supply of power to serve its customers' needs at a reasonable cost. JEA's evaluation of responses to competitive requests for proposals (RFPs), together with separate economic analyses presented in the Application, demonstrate the proposed unit is the most cost-effective alternative to meet JEA's power supply needs. JEA already utilizes demand side management (DSM) programs and renewable resources and is implementing a new, aggressive DSM portfolio that is projected to provide increased demand and energy savings. Even with the potential demand and energy reductions from potentially available conservation and renewable energy resources, JEA needs the proposed combined cycle

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conversion to reliably meet its customers' power supply requirements in the most cost-effective manner.

2. Accompanying this Petition is a detailed Need for Power Application that sets forth the information required by Rule 25-22.081, FAC. The Need for Power Application is incorporated by reference as Exhibit No. ___ (GEC-1) to this Petition. Contemporaneously with this Petition, JEA is submitting the pre-filed testimony of eight witnesses in support of this Petition and the Need for Power Application.

3. Pursuant to Section 403.5064, Florida Statutes, JEA, submitted a site certification application for the proposed unit to DEP and other agencies, including the Commission, on September 16, 2008.

Preliminary Information

4. The agency affected by this Petition is:

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

5. Petitioners' full name and address are:

JEA
21 West Church Street
Jacksonville, Florida 32202

6. All notices, pleadings and other communications required to be served on the petitioner should be directed to:

Gary V. Perko
Hopping Green & Sams, P.A.
123 S. Calhoun Street
Tallahassee, FL 32301

Primarily Affected Utility

7. JEA is a body corporate and politic created by the laws of the State of Florida and legally existing and engaged in the generation, transmission and distribution of electric power and is a valid applicant under the Florida Electrical Power Plant Siting Act (PPSA), Chapter 403, Part II, Florida Statutes.

8. JEA's electric service area covers all of Duval County and portions of Clay and St. Johns Counties, serving a total of approximately 400,000 customers. JEA owns and operates three generating plants and transmission and distribution facilities. A fourth power plant, the St. Johns River Power Park (SJRPP), is owned jointly by JEA and the Florida Power & Light Company (FPL) and operated by JEA. JEA and FPL are also joint owners of Unit 4 at Georgia Power Company's coal-fired Robert W. Scherer Plant (Plant Scherer), which is located in Macon, Georgia. In addition, JEA produces 1.2 MW from a methane-fueled generating facility at the Girvin Road Landfill. JEA's total summer net capacity is 3,370 MW, and its total available winter net capacity is 3,620 MW.

9. JEA is the "primarily affected utility" within the meaning of Rule 25-22.081, Florida Administrative Code. JEA's substantial interests will be affected by the Commission's decision on this Petition. If the Commission did not make an affirmative determination of need for the proposed new unit, there would be adverse impacts on JEA's system reliability and JEA's cost of generating electricity.

The Proposed Power Project

10. The proposed conversion will result in a high-efficiency, natural gas-fueled combined cycle unit, consisting of two combustion turbines and two heat recovery steam generators that will drive a steam turbine generator. The new unit will have a nominal net output

of 522 megawatts (MW) at average ambient temperature conditions. All of the generation capacity from the unit will be committed for sale to JEA's customers.

11. The combustion turbines currently under development at the GEC site will be served by the SeaCoast Gas Transmission, LLC, intrastate pipeline via a distribution lateral to the GEC site that is currently being engineered and is expected to be in place approximately two years prior than the expected commercial operation date of the GEC combined cycle. Therefore, the necessary natural gas pipeline infrastructure will be in place at the GEC site to accommodate the combined cycle conversion.

The Florida Electrical Power Plant Siting Act (PPSA)

12. The PPSA provides a "centrally coordinated, one-stop licensing process" for power plant projects. The PPSA provides a centralized process to ensure that all affected state and local agencies review a project before the Siting Board, consisting of the Governor and Cabinet, takes final action on the site certification application. The Commission's need determination is a critical step in the PPSA certification process. Along with the reports submitted by DEP and other agencies, the Commission's need determination allows the Siting Board to balance "the increasing demand for electrical power plants with the broad interests of the public." Section 402.502, Florida Statutes.

13. Section 403.519(3), Florida Statutes, sets forth the following criteria which the Commission must consider in making need determinations:

- the need for electric system reliability and integrity;
- the need for adequate electricity at a reasonable cost;
- the need for fuel diversity and supply reliability;
- whether the proposed plant is the most cost-effective alternative available;

- whether renewable energy sources and technologies, as well as conservation measures, are utilized to the extent reasonably available; and
- whether there are conservation measures taken by or reasonably available to the applicant or its members which might mitigate the need for the proposed plant.

Rule 25-22.081, Florida Administrative Code, sets forth specific information which each Need for Power Application must include to allow the Commission to address the statutory factors. The information required by Rule 25-22.081, Florida Administrative Code, as well as other relevant information is summarized below and discussed in detail in the accompanying Application.

The Need for the GEC Combined Cycle Conversion

14. The first step in determining need for electrical capacity is to develop a load forecast and then to compare that load forecast to net system capacity resources to determine how much, if any, additional capacity is needed to meet the utility's applicable reliability criteria or reserve margin. Available net system capacity resources consider existing generation resources, contractual power purchases and any reserves associated with partial requirements purchases, scheduled capacity additions and unit de-ratings, and scheduled unit retirements.

15. As discussed in Section 12.0 of the Need for Power Application, in the summer of 2012, JEA's reserve margin decreases to 9.6 percent, or 167 MW, below the capacity required to continue to reliably serve JEA's customers and maintain a 15 percent reserve margin. By the summer of 2013, the need for additional capacity needed to maintain a 15 percent reserve margin increases to 242 MW. A number of JEA's capacity and power purchase contracts are expiring, or nearing the end of their lifetime. By providing capacity necessary to meet JEA's growing

needs, the GEC combined cycle conversion will contribute to the reliability and integrity of JEA's electric system.

Analysis of Generating ("Supply Side") Alternatives

16. JEA has evaluated several supply-side technologies, either as alternatives to the GEC combined cycle conversion or as capacity resource options for installation following the proposed GEC combined cycle conversion. As part of that analysis, JEA evaluated renewable technologies, conventional technologies, and emerging technologies. Based on the results of production cost modeling of multiple economic scenarios, JEA identified the GEC combined cycle conversion as the most cost-effective alternative to meet the need for additional capacity.

17. Although JEA is not subject to the Commission's "Bid Rule," JEA has issued numerous requests for RFPs for conventional and renewable resources. The evaluations of the RFP responses indicated that none of the responses would be a cost-effective alternative to the GEC combined cycle conversion. As a result of these RFPs and other initiatives, JEA is evaluating renewable projects that may eventually be integrated into JEA's generating system.

Analysis of Non-Generating Alternatives

18. JEA's 2005 Demand-Side Management (DSM) plan was approved by the Commission on September 1, 2004. See Order No. PSC-O4-0768-PPA-EG issued in Docket No. 040030-EG. In its order approving the plan, the FPSC determined that there were no cost-effective conservation measures available for use by JEA. Nevertheless, JEA has voluntarily continued its historical programs, because it had determined that these programs were in the overall best interest of its customers.

19. Furthermore, in June 2006, JEA contracted with Summit Blue Consulting, LLC (Summit Blue), an independent firm that specializes in DSM program evaluation and development, to identify potential DSM programs for JEA. As part of this effort, Summit Blue and JEA developed an aggressive DSM portfolio that has been approved and funded by JEA's Board. Even with the energy and demand savings projected for the new DSM portfolio, however, the GEC combined cycle conversion is still needed to meet JEA's capacity requirements.

Environmental Benefits

20. The GEC Combined Cycle Unit will minimize environmental impacts by, among other things, using the most efficient and pollutant-preventing generating technology available. This concept has been incorporated with the selection of a combined cycle process utilizing advanced combustion turbines. Compared to more conventional simple cycle generating plants, combined cycle units have lower heat rates and, therefore, generate more electrical output (megawatts) per unit of fuel consumed. As a result, air pollutant emissions per megawatt output are minimized. Moreover, because the GEC combined cycle unit will be one of the highest efficiency plants in the state, it will displace generation from less efficient units with higher emission rates, including carbon dioxide (CO₂) emissions.

Adverse Consequences If GEC Conversion Is Not Built

21. Delaying the GEC combined cycle conversion would result in reduced reliability and higher costs to JEA's customers as well as increased emissions. If the proposed combined cycle conversion is delayed, JEA's summer reserve margin will fall to 9.6 percent in 2012, which is 167 MW below JEA's 15 percent reserve margin criterion. The impact of delaying the conversion of GEC to combined cycle configuration by 1 year (to 2013) and instead installing

alternative capacity to maintain reserve margin requirements in the summer of 2012 would be an increase in CPWC of approximately \$36.7 million.

22. The projected capacity deficit in the summer of 2012 represents a significant portion of the capacity that will be provided by the conversion of GEC to combined cycle. With a reserve margin below 15 percent in 2012, JEA's system will be exposed to decreased reliability if the GEC combined cycle conversion is delayed and no additional generating capacity is installed in its place.

Disputed Issues of Material Fact

23. JEA is not aware of any dispute regarding any of the material facts contained in this petition. In any event, JEA intends to prove in this proceeding that the proposed GEC combined cycle conversion satisfies the criteria set forth in Section 403.519, Florida Statutes, for an affirmative determination of need.

Statutes and Rules That Warrant Requested Relief

24. JEA is entitled to the determination of need requested in this Petition pursuant to Section 403.519, Florida Statutes, and Rule 25-22.080, Florida Administrative Code.

Conclusion

25. The proposed GEC combined cycle conversion will ensure that JEA has an adequate supply of power to serve its customers' growing needs at a reasonable cost. The competitive RFPs, together with separate economic analyses presented in the Need for Power Application, demonstrate the GEC combined cycle conversion project is the most cost-effective alternative to meet JEA's power supply needs. The addition of cost effective natural gas generation will further diversify JEA's fuel mix. The project will also enhance fuel diversity and

supply reliability by utilizing multiple natural gas supply options. JEA already utilizes reasonably available DSM programs and renewable resources. Even with potential demand and energy reductions that could be achieved from additional conservation and renewable energy initiatives that JEA is pursuing, the GEC combined cycle conversion project is JEA's least cost alternative to reliably meet its customers' power supply needs. Without the proposed unit, JEA's summer reserve margin will fall substantially below JEA's 15 percent reserve margin criterion.

Statement of Relief Requested

WHEREFORE, based upon the foregoing and the more detailed information in the Need for Power Application and pre-filed testimony submitted herewith, JEA respectfully requests that the Commission grant a favorable determination of need for the GEC combined cycle conversion project within the time limitations set forth in Rule 25-22.080, Florida Administrative Code.

Specifically, FMPA respectfully requests that:

(a) the Commission give notice of the commencement of the proceeding as required by Rule 25-22.080(2), Florida Administrative Code;

(b) the Commission schedule commencement of a hearing in this matter within 90 days of the filing of this Petition pursuant to Rule 25-22.080(2), Florida Administrative Code;

and

(c) the Commission determine there is a need for the proposed electrical power plant described in this petition, and file its order making such determination with the Florida Department of Environmental Protection pursuant to Section 403.507(2)(a)2., Florida Statutes.

RESPECTFULLY SUBMITTED this 30th day of September, 2008.

HOPPING GREEN & SAMS, P.A.

By: 

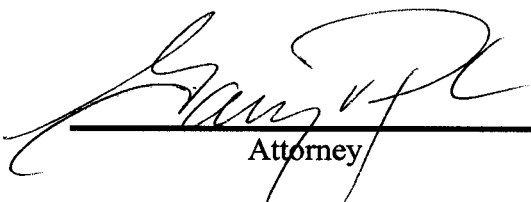
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(850) 224-8551 (fax)

Attorneys for JEA

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Petition for Determination of Need for An Electrical Power Plant in Duval County was served upon the following by hand delivery on this 30th day of September, 2008:

Jennifer Brubaker, Esq.
Supervising Attorney
Office of General Counsel
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850



Attorney