



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

RECEIVED

October 25, 2012

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DIVISION OF AIR
RESOURCE MANAGEMENT

Roy S. Belden
Vice President
EFS Shady Hills LLC
800 Long Ridge Road
Stamford, Connecticut 06927

Re: Notice of Incompleteness for Proposed Florida Shady Hills Generating Station PSD Application

Dear Mr. Belden:

The U.S. Environmental Protection Agency has reviewed your greenhouse gas (GHG) Prevention of Significant Deterioration (PSD) permit application for the proposed Florida Shady Hills Generating Station expansion project (Project) that was received by the EPA on September 25, 2012, and determined that your application is incomplete at this time. The following information is needed from you so that the EPA can continue its completeness review.

1. The PSD application addresses the Project's applicability to the Endangered Species Act (ESA) and the National Historic Preservation Act (NHPA). In addition to these two Acts, all federal permits are potentially subject to the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) and the Coastal Zone Management Act (CZMA). Please address the applicability of the MSFCMA and the CZMA to the Shady Hills Project and the status of any necessary assessments performed and/or communications with the appropriate federal agencies.
2. Section 2.1.2.1 (page 11) of the application states "[i]t is the Project owner's understanding that for a peaking plant, the offtaker(s) will not dedicate firm natural gas transportation to the Project, and instead will operate the units on natural gas when interruptible natural gas transportation service is available." Based on the discussion in the application, the use of an interruptible natural gas service is the reason why the Project includes 750 to 1,000 hours per year of fuel oil operation as backup for natural gas. The application indicates it would be redefining the source to have the Project use only natural gas as the fuel source. However, since your application considers the use of an interruptible natural gas source, we do not understand why use of 100% non-interruptible natural gas would fundamentally redefine the source. Accordingly, such an option should be included as part of the top-down best available control technology (BACT) analysis. The option of 100% non-interruptible natural gas may still be eliminated under one of the other steps of the

BACT analysis. If the use of an interruptible natural gas source is fundamental to your project design, please provide additional information regarding the decision to use an interruptible natural gas source.

- 3. Section 2.1.2.2 (page 11) the application discusses the energy efficiency of various GE combustion turbines and indicates the GE Frame 7 turbine is used as a surrogate for the performance of similar F class turbines from other vendors. Footnote 4 references a BACT analysis from the proposed Puget Sound Energy project in Washington which includes a comparison of GE turbines as well as a Siemens 5000F4 (F-class turbine of similar size) and a Pratt and Whitney FT-8. Based on the Puget Sound Energy application, we see that the GE 7Fa.05 is slightly more energy efficient than the F-class turbines from the other vendors. However, the document is dated October 2011. Please verify that no new more efficient turbine models of similar size have become available since October 2011.**
- 4. Section 2.1.5.1 (page 23) indicates the proposed GHG BACT emission limits for the turbines were derived assuming a 5% design margin and a 3% turbine performance degradation margin. Please provide documentation or an explanation on how these margins were derived, why they are appropriate for the GE 7FA.05 turbines proposed for this Project, and why turbine degradation is assumed even at the very beginning of its use.**
- 5. Section 2.1.5.1 (page 24) lists the BACT emission limits for startup and shutdown events as 21 and 28 tons CO₂e per event while firing natural gas and fuel oil, respectively. Footnote 6 of Table 3 in the Appendix indicates these were calculated using an estimate of 338 and 339 million British thermal units (MMBtu)/event, respectively. So that the permit record will include the necessary calculations for the emissions from these events, please provide an explanation for how these emission factors were derived and an estimate of how long a startup and a shutdown event will last, as well as the anticipated number of startup and shutdown events that will occur in a year.**
- 6. Sections 2.2.1 and 2.3 (pages 28-30) discusses the BACT analysis for the emergency generator and fuel gas heater, respectively and provides calculations on how the emissions from each unit will be averaged to show compliance with the proposed BACT limits. For both of these emission units, BACT has been proposed as a ton per year limit on a "calendar year annual average"; however, BACT applies at all times and EPA intends to include BACT limits on a rolling/consecutive 12-month or 365-day total basis. If necessary, please provide revised calculations based on the use of a rolling total basis.**

Additionally, page 29 of Section 2.3 indicates the fuel gas heater will operate 8,760 hours per year (100% of the time); however, the turbines associated with this Project will be limited (as proposed) to a maximum of 3,390 hours per year of operation. Please provide an explanation for why the new fuel gas heater would need to operate 8,760 hours per year. If necessary, please provide updated emissions estimates and other relevant portions of the application based on the fuel gas heater operating fewer hours per year.

Your application is considered incomplete until this information is received, evaluated, and the EPA has determined that the application contains all the information needed for the EPA to

propose a permit decision. As the EPA continues review of your application, further information may be required for the EPA to continue processing your application and make a permit decision.

Please provide the requested additional information to the EPA by November 30, 2012. If more time is needed to respond to this request, please contact the EPA to discuss any additional time needed. If you have any questions please contact Ana M. Oquendo at (404) 562-9781 or quendo.ana@epa.gov.

Sincerely,



Gregg M. Worley
Chief
Air Permits Office

cc: Jeff Koerner, FDEP
Scott Osbourne, P.E., Golder Associates
David Larocca, Golder Associates