

December 1, 2014 133-87606

Via Electronic Delivery

Mr. David Read Florida Department of Environmental Protection Bob Martinez Center 2600 Blair Stone Road Tallahassee, Florida 32339-2400

RE: RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION PROJECT NO. 0890441-001-AC

GAS TURBINE COGENERATION SYSTEM

Dear Mr. Read:

Eight Flags Energy LLC (Eight Flags) and Golder Associates Inc. (Golder) received a request for additional information (RAI) dated November 12, 2014 from the Florida Department of Environmental Protection (FDEP) regarding the air construction permit application to construct a gas turbine cogeneration system. Each of FDEP's requests is answered below, in the same order as they appear in the RAI letter.

Comment 1. <u>Feed water input</u>: Please provide an estimate of the temperature and flow rate of feed water to Eight Flags for time periods with and without supplemental gas firing in the heat recovery steam generator:

Response: The temperatures and flow rate of feed water to Eight Flags for time periods with and without supplemental gas firing in the heat recovery steam generator are shown below. For reference purposes, the steam generation for each case is also shown

HRSG Operation	Feedwater Data	Steam Production
Full Firing (59°F ambient)	204,082 lb/hr 275 °F	200,000 lb/hr 406 °F
	192 psig	170 psig
Un-Fired (59°F ambient)	75,677 lb/hr 275 °F 182 psig	74,163 lb/hr 438 °F 170 psig
Full Firing (80°F ambient)	198,980 lb/hr 275 °F 192 psig	195,000 lb/hr 407 °F 170 psig
Un-Fired (80°F ambient)	74,561 lb/hr 275 °F 182 psig	73,070 lb/hr 440 °F 170 psig

Golder Associates Inc. 6026 NW 1st Place Gainesville, FL 32607 USA



Comment 2. <u>Anticipated bypass stack usage</u>: Please provide an estimate of the annual hours of operation during which exhaust from the gas turbine will be routed to the bypass stack, instead of the heat recovery steam generator.

Response: The normal operation of the gas turbine cogeneration system will be to always generate steam for sale to Rayonier Performance Fibers (RPF), and therefore to always route gas turbine exhaust gases through the HRSG. No steam can be generated if the gas turbine exhaust gases are routed through the bypass stack. Therefore, operation of the bypass stack will generally only occur under conditions of the HRSG being down for maintenance or repair, or when RPF is not able to accept any steam (which would be rare except during the annual shutdown). When taking into account RPF's projected down time and Eight Flags HRSG down time due to maintenance, it is estimated that the exhaust from the gas turbine will be routed to the bypass stack up to 288 hours per year on average.

Comment 3. Generator usage: The application states that an emergency generator may be a mobile unit, to be brought on-site as necessary. If it has been decided whether a mobile or stationary engine will be used, please provide this information. Additionally, the application refers to the engine as an emergency generator, though it states that usage of 500 hours per year was assumed for emissions estimates. However, 40 CFR 60, Subpart IIII, requires that an engine be used for less than 100 hours per year in non-emergency situations (with no limit on usage in emergency situations) to be classified as an emergency engine. Please clarify whether this should be considered an emergency engine or a non-emergency engine and provide corresponding updated emissions estimates if necessary.

Response: Eight Flags will use a mobile electric generator unit. The unit will be used for black starts and for emergency situations and will not be used during normal operations. In the application, 500 hours per year were assumed as an estimate of total maximum annual operation, with 400 hours per year for emergency events and 100 hours per year for non-emergency situations (black starts, testing, maintenance, etc.). The engine will be used for less than 100 hours per year for non-emergency situations, and therefore will meet the definition of emergency engine under 40 CFR 60, Subpart IIII.

Comment 4. <u>Project Schematic</u>: Please provide a schematic of the Eight Flags Energy project showing the power and steam relationships between Eight Flags Energy, Rayonier Performance Materials (RPF) and Florida Public Utilities (FPU).

Response: Figure 1 provides the schematic of the relationships between Eight Flags Energy, RPF and FPU as it pertain to power and steam interactions.

Comment 5. Existing Contracts: Please provide any existing contracts with regard to steam generation between Eight Flags Energy, LLC and RPF. Please provide any existing contracts with regard to power generation between Eight Flags Energy, LLC and RPF and FPU. If necessary, this information can be treated as confidential information by the Department.

Response: The agreement Contract for the Purchase of Electric Energy from a Renewable Generating Facility between FPU and RPF can be found in Attachment A. The Negotiated Power Purchase Agreement Contract Between FPU and Eight Flags can be found in Attachment B. Please note that some sections of the contracts have been redacted based on confidentiality clauses between the parties. It is asked that the Department treat both Attachment A and B as Confidential Business Information.



The Negotiated Steam Supply and Purchase Agreement between Eight Flags and RPF will be provided at a later date.

Thank you for your consideration of this information. If you have any questions, please do not hesitate to call me at (352) 336-5600.

Sincerely,

GOLDER ASSOCIATES INC.

David A. Buff, P.E., Q.E.P.

David a. Buff

Principal Engineer

Natalia Gonzalez, E.I. Project Engineer

cc: P. Mark Cutshaw, Eight Flags Energy Kevin Webber, Eight Flags Energy

Terry Cole, Gunster Richard Rachal, DEP NED

John Dawson, DEP

NG/DB

FIGURE 1 EIGHT FLAGS' POWER AND STEAM RELATIONSHIPS

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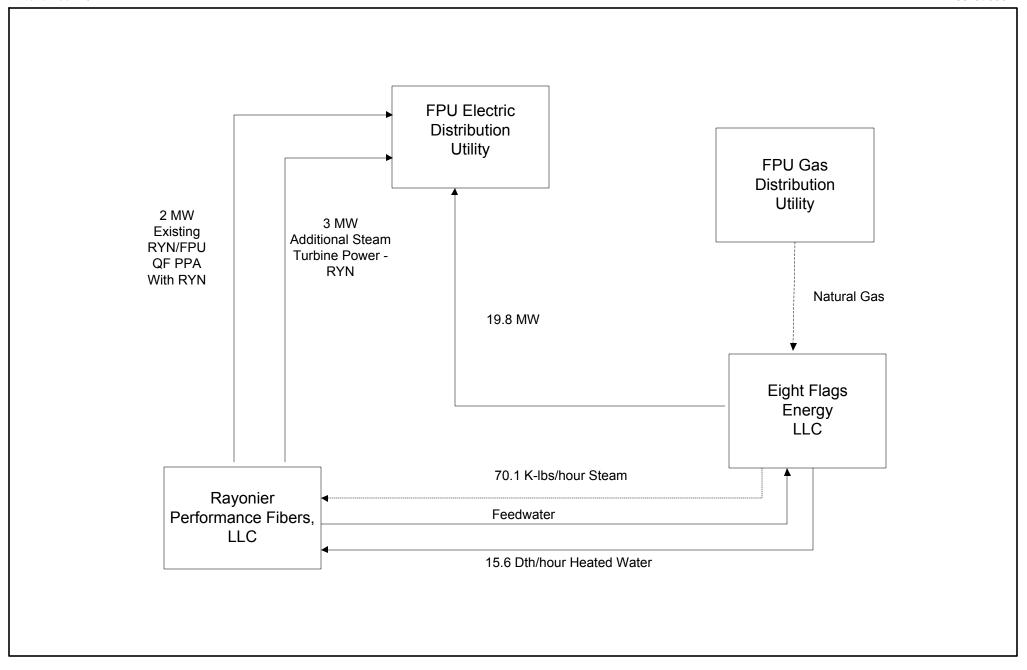


Figure 1. Eight Flags' Power and Steam Relationships FPU Cogeneration Facility, Nassau County, Florida

Source: Golder, 2014.

