

Appendix G-4

Preliminary Due Diligence List (Existing Renewable Resources)

For

2012

Request For Proposals (RFP)

For

***Long-Term, Supply Side, Baseload
Resources***

~~DRAFT~~

Entergy Services, Inc.

~~July 25,~~ August 28, 2012

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2012 Baseload RFP

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PRELIMINARY DUE DILIGENCE LIST (EXISTING RENEWABLE RESOURCES)

As part of the RFP, ESI has posted this Appendix G-4, which contains a list of preliminary due diligence requests. ESI ~~is requiring each Bidder who submits~~ will require Bidders who intend to submit a proposal(s) originating from an Existing Renewable Energy Resource (“RER”) to provide a comprehensive response to each request (to the extent question accordingly and as applicable to Bidder, the resource, or Bidder’s proposal). Failure to provide ~~the requested responses~~ such a response could negatively affect a proposal’s overall viability ranking ~~and, in exceptional cases and after consultation with the IM, could result in a Bidder’s proposal being deemed non-conforming and rejected from further consideration.~~

Bidders ~~submitting proposals~~ proposing should respond to each request below by 5:00 pm CPT on the Required Proposal Submission Time. The ~~RFP~~ Proposal Submission Template will not be used to collect the response to this Appendix G-4. Bidders are required to submit their response to the questions below in such a way that clearly identifies the question to which each response pertains, and to provide the response to the RFP Administrator by the applicable deadline.

1. Equipment

Plant and

- 1.1. Provide a Site Plan and General Arrangement Drawings that include the following information:
 - 1.1.1. Power Island
 - 1.1.2. Road and Rail Access to Site
 - 1.1.3. Fuel Supply and Transport
 - 1.1.4. Startup Fuel and Transport
 - 1.1.5. Other transportation infrastructure ~~(, where applicable (e.g. railroad,~~ waterways, highways, etc)
 - 1.1.6. Major one line diagrams
- 1.2. Provide a Station Description and Major Equipment List that includes (if applicable):
 - 1.2.1. Turbines
 - 1.2.2. Boiler Contract Data Sheet and Side Elevation Drawings
 - 1.2.3. Emissions control equipment
 - 1.2.4. P&ID’s of the Units
 - 1.2.5. Electrical Single Line Drawings
 - 1.2.6. Major Modifications to Units
 - 1.2.7. Instrumentation and Control System (DCS) and Updates
 - 1.2.8. Water Supply and Wastewater Discharge
 - 1.2.9. Fire Protection

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- 1.2.10. Fuel and Ash Handling Systems
- 1.2.11. Status of warranties, including expiration dates, for the major equipment
- 1.2.12. Plant Cooling System (wet, dry, hybrid), including annual plant water requirements

1.3. Provide the Plant Design Life

1.4. Provide the Operational Characteristics of the proposed resource:

- 1.4.1. Description of the various modes of operation of the generating unit
- 1.4.2. The minimum and maximum load range in each mode of operation
- 1.4.3. The maximum ramp rates over the load range for each mode of operation
- 1.4.4. The minimum run time
- 1.4.5. The minimum down time
- 1.4.6. Typical start-up MW and Fuel usage profile versus time for each type of start-up (hot, warm and cold)
- 1.4.7. Define hot, warm and cold start-up in terms of time off-line. ~~Provide the typical shutdown time~~
- 1.4.8. Provide the typical shutdown time
- 1.4.9. ~~1.4.8.~~ The MVar capability range of the generator (Include ‘as tested results’)
- 1.4.10. ~~1.4.9.~~ Is or will the unit be equipped with automatic generation control (“AGC”)? (applicable only if providing an option for enhanced dispatch)
- 1.4.11. ~~1.4.10.~~ What is the operating range of the unit under AGC? (applicable only if providing an option for enhanced dispatch)

2. Operations and Maintenance

2.1. ~~Timeline of entities in charge of operation and maintenance of the plant including any major sub-contractors~~ As requested in Section 20 of Appendix C, indicate whether the Bidder wishes to propose enhanced dispatch and/or curtailment flexibility.

2.1.1. Specify and describe the enhanced dispatch and/or curtailment right (or collection of dispatch and/or curtailment rights), and the impact on the proposal terms provided in the Proposal Submission Template.

2.2. Provide the following historical Electric Generating Statistics (~~COD~~ Commercial Operations Date (“COD”) through 2011):

- 2.2.1. Gross, Auxiliary, and Net Generation
- 2.2.2. Unit Heat Rate
 - 2.2.2.1. Summer (97 deg F, 56% RH) Min.-Max.
 - 2.2.2.2. Winter (68 deg F, 74% RH) Min.-Max.
 - 2.2.2.3. Max., 75%, 50%; Min. %

~~2.2.3. EFOR~~

2.2.3. ~~2.2.4.~~ Fuel Consumption, Costs, Historic Suppliers

~~2.2.4.1. Reagent and catalyst cost~~

2.2.4. ~~2.2.5.~~ Accredited unit capacity

2.2.5. ~~2.2.6.~~ Outage Event Summary

2.2.6. ~~2.2.7.~~ Capacity Factors

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- ~~2.2.7.~~ ~~2.2.8.~~ Service Hours
- ~~2.2.8.~~ ~~2.2.9.~~ Derate Causes, Time, and kWh
- ~~2.2.9.~~ ~~2.2.10.~~ History of Planned Outages
- ~~2.2.10.~~ ~~2.2.11.~~ Turbine Overhaul Cycle (Year) & Outage Time (Weeks)
- ~~2.2.11.~~ ~~2.2.12.~~ Reports from any boiler, turbine, or unit Performance Tests
- ~~2.2.12.~~ ~~2.2.13.~~ Number of Boiler and Turbine Cold and Hot Starts
- ~~2.2.13.~~ ~~2.2.14.~~ Outage Rates (~~forced, maintenance, planned, etc.~~), including:
- ~~2.2.15.~~ ~~Operating Factors~~

- ~~2.3.~~ ~~Provide the Project Fuel Costs (5 Years)~~
 - ~~2.2.13.1.~~ Equivalent Forced Outage Rate (“EFOR”)
 - ~~2.2.13.2.~~ Planned Maintenance Outage Rates

- ~~2.3.~~ ~~2.4.~~ Provide the following Inspection Reports:
 - ~~2.3.1.~~ ~~2.4.1.~~ Boilers
 - ~~2.3.1.1.~~ ~~2.4.1.1.~~ Boiler Inspection Reports from last Overhaul
 - ~~2.4.1.2.~~ ~~Boiler/SH/RH Tube Failure Metallurgical Reports~~
 - ~~2.4.1.3.~~ ~~Boiler/SH/RH Tube Chemical Analyses of Deposits~~
 - ~~2.3.2.~~ ~~2.4.2.~~ Turbines
 - ~~2.4.2.1.~~ ~~Turbine Blade Deposit Chemistry report~~
 - ~~2.3.2.1.~~ ~~2.4.2.2.~~ Rotor Boresonic Inspection Reports
 - ~~2.3.2.2.~~ ~~2.4.2.3.~~ Bearing Vibration Analysis & Predictive Maintenance Data
 - ~~2.3.2.3.~~ Turbine Inspection Report from last Overhaul
 - ~~2.3.3.~~ ~~2.4.3.~~ Generator Inspection Reports

- ~~2.4.~~ ~~2.5.~~ Provide the Site Spares Inventory for the Major Components including:
 - ~~2.4.1.~~ ~~2.5.1.~~ Turbines
 - ~~2.4.2.~~ ~~2.5.2.~~ Generators
 - ~~2.4.3.~~ ~~2.5.3.~~ Boiler
 - ~~2.4.4.~~ ~~2.5.4.~~ Other (Include BOP)

- ~~2.5.~~ ~~2.6.~~ Describe the Balance of Plant Routine, Predictive and Preventive Maintenance Activities/Programs

- ~~2.6.~~ Provide an organization chart that has the roles and responsibilities for those who support plant operations, environmental, regulatory compliance, and other major functions of the resource

- ~~2.7.~~ Provide the Capital Work Requests and Major Maintenance Expenditures for COD-through 2012

- ~~2.8.~~ Provide ~~the~~ planned major capital upgrades and projects for the Facility during the proposal term
 - ~~2.8.1.~~ Provide Capital Work Requests ~~and~~
 - ~~2.8.2.~~ Provide Major Maintenance Expenditures ~~for planned 2012—2017.~~

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- 2.9. Provide Fuel Specifications including Design Fuel and fuel analysis reports
- 2.10. Describe the Ash Disposal Plan (life of plant)
- 2.10.1. Provide annual projected bottom ash and fly ash production
- 2.11. Capacity-Related Benefits and/or Environmental Attributes (as requested in Appendix C – Section 13):
- 2.11.1. Describe any studies or other actions needed to qualify the Facility, or the portion allocated to Buyer, for capacity-related benefits and/or Environmental Attributes
- 2.11.2. Describe the status and any results of any such actions
- ~~2.12. Ancillary Services~~
- 2.12. ~~2.12.1. Indicate~~ As requested in Appendix C – Section 15, indicate whether the Facility is or will be capable of providing any ancillary services or Other Electrical Products to Buyer and, if so, which ones and the basis of that belief
- 2.13. If an option for enhanced dispatch is included with the proposal, describe the Spinning and Operating Reserve Capabilities and historic performance
- 2.14. ~~2.13.~~ Nameplate Capacity
- 2.14.1. ~~2.13.1. If~~ As requested in Appendix C – Section 9, if Bidder proposes to allocate to Buyer less than all of the nameplate capacity of the Facility, please describe in detail how Bidder intends to sub-divide the capacity (*e.g.*, by dedicating to Buyer certain generating units at the Facility), including
- 2.14.1.1. ~~2.13.1.1.~~ Proposed procedures for metering;
- 2.14.1.2. ~~2.13.1.2.~~ Tagging/scheduling with the Balancing Authority or similar action (if applicable);
- 2.14.1.3. ~~2.13.1.3.~~ Joint use of Common Facilities and
- 2.14.1.4. ~~2.13.1.4.~~ Settlement
- 2.15. ~~2.14.~~ Please provide the anticipated major maintenance schedule for the project by year for the ~~life of the project or~~ anticipated PPA proposal term ~~if not life of unit.~~
- 2.16. ~~2.15.~~ Other Commitments
- 2.16.1. ~~2.15.1.~~ If applicable, provide a detailed description of any and all existing or future commitments of energy, capacity and other capacity-related benefits, ancillary services and RECs and other environmental attributes of the RER, including any existing agreement with ESI or any Entergy Operating Company or, for any Bidder that is a QF, with any third party to fulfill an existing host load requirement

3. Transmission

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Transmission Interconnection

~~3.1. Description of Transmission and Interconnection Facilities~~

~~3.2. Description of switchyard protection schemes associated with the plant along with any historic operation of these schemes~~

~~3.1. 3.3. Maximum Generator/Facility Capability as studied in the~~ Provide Large Generator Interconnection ~~Study (P_{MAX} Value)~~ Agreement

~~3.4. Overview of Monitoring and Control Systems~~

~~3.5. Load Flow Study Summaries~~

~~3.5.1. Interconnection Study~~

~~3.5.2. Transmission Study~~

~~3.2. 3.6. Reliability~~

~~3.2.1. 3.6.1. List~~ Provide a list of issues affecting the grid relative to the operation (loss) of site generation (if applicable)

~~3.2.2. 3.6.2. List~~ Provide a list of issues affecting operation relative to the loss of local transmission (if applicable)

~~3.7. Provide Large Generator Interconnection Agreement~~

~~3.8. Does the unit have separate power flow metering equipment distinct from other units located at the plant site?~~

Transmission Service

~~3.3. 3.9. Whether~~ Discuss whether any transmission service requests are pending associated with the generating unit, and if so, whether a System Impact Study or Facility Study is available.

~~3.4. 3.10. List~~ Provide a list of any transmission rights currently granted, requested or planned to be requested from the plant along with any associated rollover rights and transmission credits.

~~3.5. For Off-System Resources, provide the~~ transmission service request number from OATI-OASIS as evidence of transmission service to the Entergy system.

~~3.6. 3.11. For Off System Resources, provide the costs~~ For Off-System Resources, indicate whether the Bidder has estimated costs and/or considered the expected costs within the proposal to obtain and provide all transmission service necessary for the Off-System Resource to deliver the offered amount of Capacity, energy and Other Electric Products to Buyer at the Energy Delivery Point, including, without limitation, all transmission upgrades or other improvements necessary to obtain such service.

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4. & Transportation

Fuel Supply

- 4.1. Please describe the current fuel supply arrangements ~~that have been procured or describe the plans for procuring fuel including the following details~~ in place and provide copies of any existing fuel agreements and amendments thereto, including:
- 4.1.1. Sources of supply
 - 4.1.2. Pricing terms
 - 4.1.3. Term of Contracts
 - 4.1.4. Firmness of Service
 - 4.1.5. Fuel replacement
 - 4.1.6. Counterparties
 - 4.1.7. Please ~~supply copies of any existing fuel agreements~~ describe future plans for procuring fuel to the extent it is expected to be different than current procurement strategies
- 4.2. ~~What~~ Please describe the current mode(s) of fuel transport ~~will~~ that currently supply the facility? , and provide copies of any existing transport agreements and amendments thereto.
- ~~4.2.1. Have transportation agreements been executed? If so, please a copy of the agreement(s). If not, when is this activity expected to be completed?~~
 - ~~4.2.1.~~ 4.2.2. For planned or executed transportation services, provide Provide the identity of the transporter, and the area of service.
 - 4.2.2. Please describe future transport arrangements to the extent they may be expected to change compared to current arrangements
- 4.3. Please describe any assurances planned in place in order to protect the facility from fuel curtailments during severe conditions such as hurricanes and other extreme weather conditions.
- 4.4. Define limitations of fuel delivery which may limit the operation of the generating facility between its minimum and maximum capabilities, to the extent the proposal includes an option for enhanced dispatch.
- 4.5. Define any applicable state and local taxes which apply to the fuel(s) ~~planned to be in~~ use at the facility.

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- 4.6. ~~If the generating facility consists of more than one generating unit, will each unit have separate fuel equipment?~~ Does the resource have dual fuel capability? If so, please describe and provide key contractual terms for such fuel arrangements.

5. al

Environment

- 5.1. What is the national Ambient Air Quality Standards (“NAAQS”) attainment status for the project region, on a pollutant basis for all criteria pollutants?
- 5.2. Provide a list of all current effective environmental permits/registrations, including any federal, state or municipal permits issued related to the Facility or site.
- 5.3. Describe any pending permit-renewal proceedings and any pending requests for permit modification. Define and describe any expected hurdles to permit re-issuance or permit modifications.
- 5.4. Provide a detailed overview of the environmental management procedures in place to manage compliance with both existing Permit Conditions (all media) and Federal & State proposed and newly promulgated regulations.
- 5.5. Define and describe the regulatory compliance plan for major environmental regulations (~~Including~~ As applicable and including but not limited to: Cross-State Air Pollution Rule (“CSAPR”); Mercury and Air Toxics Standards (“MATS”), Regional Haze; Reciprocating Internal Combustion Engines National Emission Standards for Hazardous Air Pollutants” (“RICE NESHAPS”); ~~and~~, Clean Water Act (“CWA”) 316b, etc.) proposed or promulgated with effective compliance dates that would be applicable to the facility and/or require the permitting of and future installation of control devices. Please provide installation and operating costs for all control devices that will be installed to meet regulatory requirements.
- 5.6. Describe the Facility environmental performance over the past five years (i.e., annual wastewater violations, excess air emissions unrelated to startup and shutdown, reportable spills and releases).
- 5.7. Describe the environmental attributes (and associated renewable portfolio standard or other renewable energy, emissions reduction or reporting rights program) for which its proposed RER is eligible as of the date of its proposal (the “Guaranteed Environmental Attributes”).

6. Information

Financial

- 6.1. Provide current ownership structure.

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- 6.2. Financial statements for the past three years for the Bidder and/or the Bidder's credit support provider; including balance sheet, income statement and cash flow along with the long-term debt structure. Any ratings (if available) from the major ratings agencies; (S&P, Moody's, and/or Fitch). Lien information that might impact the credit worthiness of the Bidder and/or the Bidder's credit support provider.
- 6.3. A list of any pending claims, actions, disputes or other proceedings currently pending or threatened against the project
- 6.4. Copies of all bankruptcy court orders, including the order discharging the project and debtor from the bankruptcy proceedings
- 6.5. Copies of project contracts not rejected during the bankruptcy proceedings and still in effect
- 6.6. Advise as to whether any project funds are subject to a constructive trust or equitable lien in favor of third parties (per ruling of bankruptcy court)

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Legend:	
<u>Insertion</u>	
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Padding cell	

Statistics:	
	Count
Insertions	87
Deletions	110
Moved from	5
Moved to	5
Style change	0
Format changed	0
Total changes	207