



GDS Associates, Inc.
Engineers and Consultants

RENEWABLE ENERGY RESOURCES ELIGIBILITY
GDS TEAM RECOMMENDATION
For Consideration By The
STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION

Date: 07/31/2013

Generation Unit and Contact Information:

Unit Name: Covanta West Enfield

Unit Owner: Covanta Maine, LLC

Unit Size (max. MW): 27.2 *Location (city, state):* West Enfield, ME

Commercial Operation Date: 11/01/1987

Contact Name, Numbers and Address: Ken Nydam, Business Manager,
Covanta Maine, LLC, 100 Recovery Way, Haverhill, MA 01835, Phone: (978)
241-3030, Fax: (978) 372-4280, Email: KNydam@covantaenergy.com

Backup: Mark Thibodeau, Facility Manager, Covanta Maine, LLC, 1231 Main
Road Route 2, West Enfield, ME 04493, Phone: (207) 732-4151, Fax: (207) 732-
4651 Email: MThibodeau@covantaenergy.com

Authorized Representative Name, Numbers and Address: Ken Nydam, Business
Manager, Covanta Maine, LLC, 100 Recovery Way, Haverhill, MA 01835, Phone:
(978) 241-3030, Fax: (978) 372-4280, Email: KNydam@covantaenergy.com

Application Received: Date: 07/01/12

Comments: Supplemental Information received 9/6/12, 11/14/12, 6/8/13, 7/3/13,
7/29/13 in response to Commission Consultant requests on 9/6/12, 11/30/12,
6/26/13

Type of Certification Requested:

☒ Standard Certification ☐ Prospective Certification (Declaratory Judgment)

Generation Type and Technology Information: *(check all that apply)*

- ☐ Repowered Project ☐ Incremental Generation ☐ Incremental Intermittent
☐ Customer-Sited or Off-Grid System (or associated aggregations)
☐ Generation Unit Located in Control Area Adjacent to NEPOOL:
☐ Solar ☐ Wind ☐ Ocean Thermal ☐ Geothermal ☐ Small Hydro
☒ Eligible Biomass ☐ Unlisted Biomass ☐ Biomass (fossil co-fired/multi-fuel)
☐ Fuel Cell (using an eligible renewable resource)

Recommendation:

☒ Approve (GIS Certification #: MSS445) ☐ Reject ☐ Public Hearing Needed

☐ Existing Renewable Energy Resource ☐ New Renewable Energy Resource
☒ Capable of Producing as Both Existing & New Renewable Energy Resource

Comments: Based on review of supplemental information provided by Covanta, 80% of the facility should be designated as New and 20% Existing. An additional memo is provided to explain the calculations and logic behind these New/Existing percentages

RENEWABLE ENERGY RESOURCES ELIGIBILITY
DETAILED GDS TEAM APPLICATION REVIEW RESULTS

(Template V5 – 11/15/11)

Date of Final Review: 7/31/2013

Note: Depending on the type of application (project vintage, type, location, fuel source, etc.) not all of these data items will be applicable.

- A. Renewable Energy Resource – Vintage *(see appropriate Sections of RES Regulations, Application Sections 3.1-3.9 and Appendix C)*:
- A.1 Generation Unit meets the definition of an Existing Renewable Energy Resource noted in RES Regulations Section 3.10 (first entering commercial operation before 12/31/1997). ☒ Yes ☐ No
Comments: Originally commissioned in 1987 - 11/01/87
- A.2 Generation from the Unit meets one of the definitions of New Renewable Energy Resource in RES Regulations Section 3.23. ☒ Yes ☐ No ☐ N/A
Comments: 3.23(v) - 80% New/20% Existing
- A.2.1 If Generation Unit is at a new site, adequate documentation is provided to ensure that it first entered commercial operation after December 31, 1997. ☐ Yes ☐ No ☒ N/A
Comments:
- A.2.2 If Generation Unit is at the site of an Existing Renewable Energy Resource, adequate documentation is provided to ensure that it first entered commercial operation after December 31, 1997 and that the Existing Renewable Energy Resource has been retired and replaced with such new Generation Unit. ☐ Yes ☐ No ☒ N/A
Comments:
- A.2.3 If a Repowered Generation Unit (as defined in Section 3.29 of the RES Regulations – complete replacement of Prime Mover, material increase in efficiency or material decrease in air emissions, and demonstration that at least 80% of resulting tax basis of the entire Generation Unit's plant and equipment is derived from capital expenditures made after December 31, 1997), adequate documentation is provided to ensure that the entire output of said unit first entered commercial operation after December 31, 1997 at the site of existing Generation Unit. ☐ Yes ☐ No ☒ N/A
Comments:
- A.2.4 If a multi-fuel facility, adequate documentation is provided to ensure that the renewable energy fraction of output from a Generation Unit in which an Eligible Biomass Fuel is first co-fired with fossil fuels after December 31, 1997. ☐ Yes ☐ No ☒ N/A

Comments:

A.2.5 If Incremental Output from a non-Intermittent Existing Renewable Energy Resource, adequate documentation is provided to ensure that such output is attributable to capital investments for efficiency improvements or additions of capacity that were demonstrably completed after December 31, 1997 and that are sufficient to, were intended to, and can be demonstrated to increase annual electricity output in excess of ten percent (10%) over a Historical Generation Baseline as determined per Section 3.23.v of the RES Regulations. ☒ Yes ☐ No ☐ N/A

Comments: Yes. Supplemental information provided on 11/14/12, 6/8/13 and 7/3/13 to help demonstrate compliance with this item. And 7/29/13 to confirm acceptance of 80/20% New/Existing

A.2.6 If Incremental Output from an Intermittent Existing Renewable Energy Resource, adequate documentation is provided to ensure that such output is attributable to capital investments for efficiency improvements or additions of capacity that were demonstrably completed after December 31, 1997 and that are sufficient to, were intended to, and can be demonstrated to increase annual electricity output in excess of ten percent (10%) over a Historical Generation Baseline as determined per Section 3.23.vi of the RES Regulations. ☐ Yes ☐ No ☒ N/A

Comments:

B. Eligible Customer-Sited/Off-Grid Generation Facility: ☐ Yes ☒ No
(see appropriate Sections of RES Regulations, Application Section 5 and Appendix D)

B.1 Adequate documentation provided to ensure that NEPOOL GIS Certificates are created by way of an aggregation of Generation Units, physically located in the State of Rhode Island, using the same generation technology (see RES Regulations Section 6.8.i). ☐ Yes ☐ No

Comments: N/A

B.2 Proposed Aggregation Agreement (as specified in Section 6.8.iii of the RES Regulations) is reasonable and complete. ☐ Yes ☐ No

Comments: N/A

B.2.1 Aggregation Agreement includes name and contact information of the aggregator owner. ☐ Yes ☐ No

Comments: N/A

B.2.2 Aggregation Agreement includes name and contact information and adequate evidence of qualifications of the Verifier to ensure that the Verifier will accurately and efficiently carry out its duties. ☐ Yes ☐ No

Comments: N/A

B.2.2.1 Additional evidence of Verifier qualifications requested and provided. ☐ Yes ☐ No ☐ N/A

Comments: N/A

B.2.3 Aggregation Agreement includes a declaration of any and all business or financial relations between aggregator and Verifier sufficient to ensure the independence of the Verifier in accordance with Section 6.8.iii.c of the RES Regulations (10% or more ownership in voting stock, or family officer/etc). ☐ Yes ☐ No

Comments: N/A

B.2.3.1 Aggregation Agreement includes statement indicating under what circumstances the Verifier would not be considered sufficiently independent of the individual Generation Unit, and that Generation Units not meeting this independence test would not be allowed to participate in the aggregation. ☐ Yes ☐ No

Comments: N/A

B.2.4 Aggregation Agreement identifies the type of technology that will be included in the aggregation and provides a statement that the aggregation will include only individual Generation Units that meet all the requirements of the RES Regulations (physical location, vintage, etc.). ☐ Yes ☐ No

Comments: N/A

B.2.5 Aggregation Agreement provides an adequate description of proposed operating procedures for the aggregation, by which the Verifier shall ensure that individual Generation Units in the aggregation comply with all eligibility requirements and that the NEPOOL GIS Certificates created accurately represent generation (see Section 6.8.iii.e of the RES Regulations). ☐ Yes ☐ No

Comments: N/A

B.2.5.1 At a minimum the proposed operating procedures include reasonable and sufficient details for:

- Determining that the Generation Unit exists and is in compliance with RES Regulations and Commission-approved Aggregation Agreement. ☐ Yes ☐ No
- Meter reading procedure that allows the Verifier to verify these readings (manual or remote, via the aggregators own system or an independent system) in a manner fully compliant with NEPOOL GIS Operating Rules regarding metering. ☐ Yes ☐ No

- Specifying how generation data will be entered into NEPOOL GIS to create Certificates. ☐ Yes ☐ No
- Documenting a procedure to verify independently that the GIS Certificates created for the aggregation are consistent with the meter readings. ☐ Yes ☐ No
- Correcting discrepancies in NEPOOL GIS Certificate generation identified by the Verifier. ☐ Yes ☐ No

Comments: N/A

B.2.6 Aggregation Agreement provides an adequate description of how the Verifier will be compensated for its services by the aggregator (in no instance is the Verifier is compensated in a manner linked to the number of NEPOOL GIS Certificates created by the aggregation). ☐ Yes ☐ No

Comments: N/A

C. Generation Unit Location (*see appropriate Sections of RES Regulations, Application Section 5 and Appendix E*):

C.1 Generation Unit is located in NEPOOL Control Area. ☒ Yes ☐ No

Comments: West Enfield, ME

C.1.1 Generation Unit is located in Rhode Island. ☐ Yes ☒ No

Comments: 45 15'12.78"N / 68 37'39.83"W

C.2 Generation Unit is located in a control area adjacent to NEPOOL and, in accordance with Section 5.1.ii of the RES Regulations, will apply the associated Generation Attributes to the RES only to the extent that the energy produced by the Generation Unit is actually delivered into NEPOOL for consumption by New England customers. ☐ Yes ☒ No

Comments:

C.2.1 Applicant acknowledges that satisfactory documentation (i.e., a report from neighboring Generation Attribute accounting system or an affidavit) must be provided to verify that Generation Attributes from a Generation Unit located in a control area adjacent to NEPOOL have not otherwise been, nor will be, sold, retired, claimed or represented as part of electrical energy output or sales, or used to satisfy obligations in jurisdictions other than Rhode Island (such assurances may consist of a report from a neighboring Generation Attribute accounting system or an affidavit from the Generation Unit) ☐ Yes ☐ No

Comments: N/A

C.2.2 Applicant acknowledges that energy delivered from such Generation Unit into NEPOOL will be verified by the following:

- A unit-specific bilateral contract for the sale and delivery of such energy into NEPOOL
- Confirmation from ISO that the energy was actually settled in the ISO Market Settlement System, and
- Confirmation through the North American Reliability Council tagging system that the import of the energy into NEPOOL actually occurred, or such other requirements as the Commission deems appropriate

☐ Yes ☐ No

Comments: N/A

- D. Eligible Fuel Source – Solar, Wind, Ocean Thermal, Geothermal, or Fuel Cell (using an eligible renewable resource) *(see appropriate Sections of RES Regulations and Application Section 2.4):* ☐ Yes ☒ No ☐ N/A
Comments: Biomass

- E. Eligible Fuel Source – Small Hydro Facilities *(see appropriate Sections of RES Regulations and Application Sections 2.5-2.6):* ☐ Yes ☒ No ☐ N/A

E.1 Aggregate capacity does not exceed 30 MW. ☐ Yes ☐ No
Comments: N/A

E.2 If “New Renewable Energy Resource”, applicant acknowledges that facility does not involve any new impoundment or diversion of water with an average salinity of 20 parts per thousand or less. ☐ Yes ☐ No
Comments: N/A

- F. Eligible Fuel Source – Biomass Facilities *(see appropriate Sections of RES Regulations, Application Sections 2.7 and Appendix F):* ☒ Yes ☐ No ☐ N/A

F.1 Generation Unit uses a biomass fuel source listed in RES Regulations Section 3.7. ☒ Yes ☐ No
Comments: Fuel Source plan included with application: The unit will use forest-derived biomass and eligible mill residues

F.2 If source is other than RES Regulations Section 3.7-listed, said source has been designated as “clean wood”. ☐ Yes ☐ No
Comments: N/A

F.3 Fuel Source Plan can reasonably be expected to ensure that only Eligible Biomass Fuels will be used, and in the case of co-firing ensure that only that proportion of generation attributable to an Eligible Biomass Fuel be eligible. ☒ Yes ☐ No
Comments: Inspection protocol to ensure that only "clean" wood will be accepted including visual inspection, screening, and random laboratory sampling.

Existing air permit requirements and occasional ash testing are also safeguards against the burning of anything but RI eligible biomass fuels.

F.3.1 Fuel Source Plan specifies the type of Eligible Biomass Fuel to be used. ☒ Yes ☐ No

Comments: Forest-derived biomass and mill residues from 30 to 35 suppliers.

F.3.2 If proposed fuel is "clean wood", Fuel Source Plan provides adequate substantiation as to why the fuel source should be considered a clean wood. ☐ Yes ☐ No ☒ N/A

Comments:

F.3.3 In the case of co-firing with a fossil fuel, Fuel Source Plan includes an adequate description of how such co-firing will occur and how the relative amounts of Eligible Biomass Fuel and fossil fuel will be measured, and how the eligible portion of generation output will be calculated (with such calculations based on the energy content of the proposed fuels used). ☐ Yes ☐ No ☒ N/A

Comments:

F.3.4 Fuel Source Plan includes an adequate description of what measures will be taken to ensure that only the Eligible Biomass Fuel is used (e.g., standard operating protocols or procedures that will be implemented at the Generating Unit, contracts with fuel suppliers, testing or sampling regimes). ☒ Yes ☐ No

Comments: Inspection protocol to ensure that only "clean" wood will be accepted including visual inspection, screening, and random laboratory sampling. Existing air permit requirements and occasional ash testing are also safeguards against the burning of anything but RI eligible biomass fuels.

F.3.5 Fuel Source Plan includes adequate assurance that the fuels stored at or brought to the Generation Unit will only be Eligible Biomass Fuels or fossil fuels used for co-firing. ☒ Yes ☐ No

Comments:

F.3.6 If proposed fuel includes recycled wood waste, Fuel Source Plan provides adequate documentation to ensure that such fuel meets the definition of Eligible Biomass Fuel and also meets material separation, storage, or handling standards acceptable to the Commission and furthermore consistent with the RES Regulations. ☐ Yes ☐ No ☐ N/A

Comments:

F.3.7 Applicant certifies that it will file all reports and other information necessary to enable the Commission to verify the on-

going eligibility of the renewable energy generators pursuant to Section 6.3 of the RES Regulations.

☒ Yes ☐ No ☐ N/A

Comments:

F.3.8 A copy of the Generation Unit's Valid Air Permit or equivalent authorization has been attached and the effective date and issuing state or jurisdiction has been identified.

☒ Yes ☐ No ☐ N/A

Comments: Maine Jurisdiction- Effective 8/5/01

G. Other Comments/Observations: See additional memo that documents existing/new percentage allocation calculations



GDS Associates, Inc.
Engineers and Consultants

M E M O R A N D U M

To: Nick Ucci, Dilip Shah

From: Scott Albert

Date: July 31, 2013

Cc: Bo Burditt

Subject: Covanta West Enfield (Docket #4340) – Existing/New Percentage Documentation

This memo is written to document the percentage new and existing allocation recommendations being made by GDS Associates for the Covanta West Enfield, ME Biomass Facility. Please refer to the following documents (copies attached) for additional information and details:

- 7/1/12 – Covanta Maine, LLC Application of Covanta West Enfield for Certification as no less than 90.55% and up to 90.98% Rhode Island New Renewable Energy Resource and between 9.45% and 9.02% Rhode Island Existing Renewable Energy Resource – Dated June 25, 2012 received by the Rhode Island Public Utilities Commission and assigned Docket #4340.
- 9/6/12 – Commission Consultant Request for Additional Information on % New / Existing Calculations
- 11/14/12 – Covanta Detailed Response to 9/6 Information Request
- 11/29/12 – Commission Consultant Internal Memo to PUC Staff
- 11/30/12 – Commission Consultant Reply to 11/14 Covanta Response and Request for Additional Information
- 6/8/13 – Covanta Full Response to 11/30 Additional Information Request
- 6/26/13 – Commission Consultant/Covanta Call and Additional Information Request
- 7/3/13 – Covanta Response to 6/26 Additional Information Request
- 7/5/13 – Calculation Spreadsheet Based on Covanta Replies (see Tab Answer D.1)
- 7/29/13 – Email from applicant confirming that 80% New and 20% Existing allocations are acceptable

Summary of Results/Recommendations:

Covanta's application requested between 90.55% and 90.98% of the Covanta West Enfield biomass facility be deemed eligible for treatment as a New Renewable Energy Resource in RI. This request was based on claimed "substantial upgrades in the reliability and efficiency of [the facility] between 200,216 MWh and 210,688 MWh over the Project's Historical Generation Baseline of 20,884 MWh." Also, post improvement MWh estimates were derived by the applicant using engineering calculations vs. actual operational data. Finally, it's important to note that Covanta's Historical Generation Baseline MWh value was based on the facility's

operation during that period as a “peaking” facility, although previously and subsequent to the Historical Generation Baseline period, the facility was/has been operating in a “baseload” mode.

Following review of Covanta’s responses to the Commission consultant’s supplemental information requests (dated 9/16/12, 11/30/12 and 6/26/13), we believe sufficient actual operations data are now in hand to make the following documented determination regarding percent New and Existing allocations for the Covanta West Enfield facility:

- Percent New = 80%
- Percent Existing = 20%

At issue is the appropriate average annual generation that occurred during the Historical Generation Baseline Period (1995-1997). The above percentages were based on an average annual generation (in MWh) during this period of 35,807 MWh per year. This average was calculated to recognize that actual operations during this period varied each year, with many months where the unit was not operating at all due to the facility’s then “peaking” status:

- 6,246 MWh was generated during 9 months of availability for operation in 1995
- 0 MWh was generated during 1996, and
- 56,414 MWh was generated during 12 month of availability for operation in 1997
- Resulting in 62,663 MWh generated over 21 months = 2,984 MWh/month
- Multiplying 2,984 MWh/month x 12 months/year = 35,807 MWh/year on a weighted average annualized basis
- To calculate % New, this result was then be compared against the average post-improvement generation which, according to Covanta-supplied records during the period 2006 through 2010, totaled 174,940 MWh $[(174,940-35,807)]/174,940=80\%$].

Within one of Covanta’s responses to the Commission consultant’s information requests they stated that “the Historical Generation Baseline can only be “the average annual electrical production from the Eligible Renewable Energy Resources, stated in megawatt-hours (MWhs), for the three calendar years 1995 through 1997...” Covanta went on to say that “Given how explicit the RI RES regulations are on this issue, no other number can be justified...” ← We disagree with this position, especially in light of the last sentence in paragraph 3.23(v) of the RES Regulations which reads:

“The determination of incremental production for purposes of this paragraph shall not be based on any operational changes at such facility not directly associated with the efficiency improvements or additions of capacity..”

As such, we recommend that the Commission apply some judgment (*i.e.*, a closer look at the monthly generation) and develop a *weighted* average annual generation value for this period, as opposed to a straight mathematical average annual generation value, to better reflect the facility’s actual operations during the Historical Generation Baseline period. The 80/20 percentage allocation noted earlier is the result of this weighted average approach. Using Covanta’s 3-year average approach yields 88% New and 12 % Existing [6,246 MWh in 1995, 0 MWh in 1996, and 56,414 MWh in 1997 = 62,663 MWh divided by the 3 year period = 20,888 MWh average per year].