PIERCE ATWOOD LLP

Ronald M. LaRocca

72 Pine Street
Providence, RI 02903

P 401.588.5113
F 401.588.5166
rlarocca@pierceatwood.com

pierceatwood.com

Admitted in: RI and MA

April 3, 2015

FIRST CLASS MAIL and ELECTRONIC FILE

Luly E. Massaro, Clerk
Division of Public Utilities and Carriers
89 Jefferson Blvd.
Warwick, Rhode Island 02888

Re: Covanta Maine, LLC - Docket No. 4497

Dear Ms. Massaro:

Enclosed please find nine copies of the Request For Declaratory Judgment for filing in the above-referenced docket. Also, please enter my appearance in this proceeding.

Please call me if you require further assistance with respect to this matter.

Thank you for your consideration.

Very truly yours,

Ronald M. LaRocca

RML/JMA/cdw
Enclosure
cc: Ken Nydam, New England Director, Covanta (electronic)
William P. Short, III (electronic)
James M. Avery, Esq., Pierce Atwood, LLP

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

PUBLIC UTILITIES COMMISSION

In Re: Covanta Maine, LLC	)	Docket No. 4497

APPEARANCE OF COUNSEL

In the above-referenced proceeding, I hereby appear for and on behalf of Covanta Maine, LLC.

Respectfully submitted,

Ronald M. LaRocca, Esq.
72 Pine Street
Providence, RI 02903
P 401.588.5113
F 401.588.5166
rlarocca@pierceatwood.com

Dated: April 3, 2015

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

PUBLIC UTILITIES COMMISSION

In Re: Covanta Maine, LLC	)	Docket No. 4497

REQUEST FOR DECLARATORY JUDGMENT

Pursuant to: (i) Section 6.2 of the Commission's Rules and Regulations Governing the Implementation of a Renewable Energy Standards ("RES Rules"); and (ii) Rule 1.10(c) of the Commission's Rules of Practice and Procedure, Covanta Maine, LLC ("Petitioner"), respectfully requests that the Commission:

(i) complete a "prospective review" or "preliminary determination" that certain information and analyses requested by the consultant retained by the Public Utilities Commission ("Commission") in the course of reviewing Petitioner's application for acceptance of its forest bio-mass-powered electric generating facility located in Jonesboro, Maine as a "New Renewable Energy Resource" pursuant to the Commission's RES Rules are beyond the proper scope of the Commission's RES Rules and irrelevant to the consideration of the application;

(ii) issue a final "statement of qualification" to Petitioner consistent with Petitioner's completed application; and

(iii) take such action as is necessary and appropriate in connection with the issuance of such statement of qualification.

1. Petitioner is the owner and operator of a 28.8 MW nameplate, forest bio-mass-powered-power electric generating plant located in Jonesboro, Maine (the "Plant").[1] The Plant

[1] The Plant's nameplate rating is 32 MWA. Assuming a 90% power factor, an equivalent nameplate rating is 28.8 MW. In public filings such as the Application, Covanta has claimed that the net generating capacity of the Plant is 27.5 MW. Petition Letter, p. 2, n. 3.

was originally completed in 1986 and commissioned in late 1987. Covanta Jonesboro LLC (f/k/a Indeck Maine Energy, LLC) was acquired by Petitioner's parent, Covanta Holding Corporation, in December 2008.

2. On March 27, 2014, Petitioner submitted a Renewable Energy Resources Eligibility Form with respect to the Plant to the Commission consistent with Section 39-26-1 et. seq. of the General Laws of Rhode Island (the "Application"). The Petitioner's submission letter and Application are provided as Attachment A to this Petition. The Application has been assigned docket number 4497.

3. Rule 6.0 of the RES Rules explains that the normal course for consideration of an application for certification of a "new" "Eligible Renewable Energy Resource" is through the issuance of a "statement of qualification" by the Commission in response to the submission of a completed application. The RES Rules also provide that applicants may seek a "prospective review" by submitting a Request for Declaratory Judgment pursuant to Rule 1.10(c) of the Commission's Rules of Practice and Procedure pursuant to which the Commission is required to "proceed under Section 6.1(i) through (iii) of the [RES Rules]."

4. The Application demonstrated that the Plant satisfied the requirements of Section 3.23(v) of the RES Rules that define a "New Renewable Energy Resource." A new Renewable Energy Resource is defined, inter alia, to mean the "incremental output in any Compliance Year over the Historical Generation Baseline" for an "Existing Renewable Energy Resource," provided that such resource was "certified by the Commission pursuant to Rule 6.0 to have demonstrable completed capital investments after December 31, 1997 attributable to the energy efficiency improvements . . . that are sufficient to, were intended to, and can be demonstrated to increase electricity output in excess of ten percent (10%)." Section 3.23(v) also provides that operational changes "not directly associated with the efficiency improvements" are not to be considered in evaluating satisfaction of this requirement.

5. The Application demonstrates that Petitioner has fully satisfied the requirements to qualify nearly the full level of its updated output as a "New Renewable Energy Resource." Specifically, the Application explained that the Plant has operated since 1987, albeit with serious and inherit design flaws that became apparent immediately upon operation. The design flaws resulted in "excessive downtime" and numerous, frequent repairs. The Petitioner's Application and the Independent Engineer's Affidavit (Attachment B; Exhibit E to the original affidavit submission contained confidential financial statements that are not relevant to this request and, therefore, have been omitted from the filing) submitted thereafter at the request of GDS Associates (the "Commission's Consultant") describe in extensive detail, the comprehensive capital investment program completed at the Plant commencing in 2004. These investments addressed the original design flaws at the Plant with the clear goal and intention to increase the Plant's "annual electricity output." Indeed, the Plant's capacity factors and availability in pre-2004 periods were as low as 61% and 47%, respectively, while more recent figures are 78% and 89%, respectively. Application, p. 5, n. 12. For the Commission's convenience, the Petitioners provided substantial detail on the nature, cost, accounting treatment and expected useful life of each of these investments. These recent investments have had a material and positive effect on the Plant's electrical output.

6. Pursuant to an email dated September 11, 2014, the Commission's Consultant requested additional information from Petitioner with respect to its Application in the form of an independent engineer's report requesting that Petitioner "document an estimate" of the Plant's "historical generation baseline" assuming, hypothetically, that the Plant had been operated in an unspecified, but more economically attractive environment supporting base-load operation, "given [the Plant's] atypical technical limitations and a reasonable O&M expenditure to overcome therein, consistent with standard industry practice (in which incremental O&M expenditures are made up until the point that they would be uneconomic)." The Commission's Consultant email dated 9/11/14 (Attachment C). The Commission's Consultant's email acknowledges that actual

generation at the Plant averaged only 7,884 MWh per year during the "Historical Generation Baseline," which, pursuant to Section 3.14 of the RES Rules is properly calculated as "the average annual electrical production" of the particular resource "for the three calendar years 1995 through 1997." The Commission's Consultant, however, goes on to suggest, without citation or support, that the Petitioner is somehow obligated to present to the Commission necessarily speculative and hypothetical information are on a wide range of factors including: (i) the Plant's theoretical production had different market and revenue conditions existed in the Historical Generation Baseline period; and (ii) some unspecified presentation on "operational decisions made not to run" the Plant during the Historic Generation Baseline period.

7. The Petitioner respectfully suggests that the information requested by the Commission's Consultant is wholly beyond the proper scope of the Commission's review of an application for treatment as a "New Renewable Energy Resource." The Commission's review of the output portion of such an application is limited only to: (i) a determination of such unit's "incremental output in any Compliance Year over the Historical Generation Baseline;" and (ii) a determination that the applicant "demonstrably completed capital investments after December 31, 1996" attributable to efficiency improvements or capacity additional that are merely shown to be "sufficient by, were intended to, and can be demonstrated to increase annual electricity output in excess of ten percent (10%) and, further, that incremental production is not associated with "operational" changes at such facility not directly associated with "any efficiency improvements or capital additions (emphasis added). RES Rules 3.23(v). Theoretical market or economic conditions are entirely irrelevant to defining or describing operational changes at the facility, which would typically include maintenance practices, fuel use and similar factors.

8. The Petitioner's original and supplemental filing have presented all the requisite information necessary for the Commission to complete its determination. The Plant's Historical Generation Baseline average output is 7,884 MWh. The Application demonstrates that as a

result of the extensive capital investments at the plant, approximately 97% of the Plant's recent production should qualify as "New" production with the balance qualifying as "existing" production. The Petitioner presented calculations that the theoretical annual output at the Plant was between 213,216 MWh and 223,668 MWh.[2] Applying the Historical Generation Baseline of 7,884 MWh results in "new" production between 96% ((213,216 MWh – 7,884 MWh) ÷ 213,216 MWh) and 97% ((223,668 MWh – 7,884 MWh) ÷ 223,668 MWh). See Petition Letter, p. 2.[3]

9. The Petitioner has clearly demonstrated that the capital investments increased annual production in excess of the RES Rules' relatively low threshold of ten percent (10%). Importantly, the Commission should recognize that its rules are already rigorous with respect to biomass facilities such as the Plant. In order to "pass" as "new," a facility operator must present evidence of relevant capital investments and tie such investments to performance with such applicant effectively being penalized for its operation in the Historic Generation Baseline period. This standard is substantially different than for a "repowered" unit, as a reflection of the facts that biomass plants would all eventually make capital investments, a fact certainly known to the Commission and the Working Group at the time of the adoption of the RES Rules.

10. The Commission's Consultant's request that Petitioner somehow develop an estimate of how market conditions affected production during this Historical Generation Baseline is wholly contrary to the RES Rules, inconsistent with the factors expressly relied upon by the Working Group and would result in bad policy.

First, Rule 3.23(v) only permits an adjustment for "operational changes at such facility" (emphasis added). The Commission's Consultant's request to consider an alternative "revenue

[2] The average annual generation for the five-year period of September 2005 through August 2010 was 166,538 MWh. This information was conveyed to the Commission's Consultant prior to his September 11, 2011 e-mail (Attachment D).

[3] Using the requisite formula but with the average annual generation for the five-year period of September 2005 through August 2010 results in a "new" percentage of 95% ((166,538 MWh – 7,884 MWh) ÷ 166,537 MWh). See Attachment D.

environment" with different funding sources and even a comparison to experience at other comparable facilities is nowhere mentioned in the Commission's RES Rules. In re Providence Water Supply Board's Application to Change Rate Schedules, 989 A.2d 110, 116 (R.I. 2010) (quoting Gem Plumbing & Heating Co. v. Rossi, 867 A.2d 796, 811 (R.I.2005) ("When the language of a statute is clear and unambiguous, we must enforce the statute as written by giving the words of the statute their plain and ordinary meaning.").[4] Regional market, price and revenue conditions are simply not necessarily any indication of operational changes at the Jonesboro Plant. Any delay to or inappropriate adjustment to the Petitioner's Application by reason of the need to produce and consider the irrelevant analyses requested by the Commission's Consultant will have a material and adverse effect upon the Petitioner.

Second, the consideration of theoretical or hypothetical market condition evidence will result highly speculative and unpredictable findings in terms of Petitioner's request and future applications of other parties. The Commission's Consultant is, in essence, unilaterally re-opening the well-facilitated Working Group and regulatory process that resulted in the RES Rules. The Commission applied a highly facilitated and broad-based process in developing refined recommendations for the RES Rules. The Petitioner respectfully suggests that this process not be unilaterally disregarded or discarded.

Third, the application of the Commission's Consultant's "theory" could have a substantial and adverse effect on the RES market. The analysis could effectively "erase" the Historical Generation Baseline. This test might, in some circumstances, result in an inappropriate "flooding" of the RES market. For the reasons stated above, the Commission should only apply

[4] Legislative rules or regulations should be construed in the same manner as statutes:
Henry v. Earhart, 553 A.2d 124, 129 (R.I. 1989) ("Here the General Assembly expressly delegated rule-making authority to the commissioner . . . and to promulgate rules and regulations to carry out the intent of the chapter . . . . Thus the regulations may be classified as legislative rules that, if valid, are as binding on a court as a valid statute.").

the clear language of the RES Rules (as colored, at most, by the reports and draft regulations prepared by the Working Group facilitated by Raab Associates).[5]

Accordingly, Petitioner respectfully requests that the Commission: (i) issue a declaratory judgment finding that Rule 3.23(v) does not permit the consideration of the generic or market conditions reflected in the Commission's Consultant's information request to the Petitioner and find that Petitioner's Application, as supplemented, provides all necessary information for the Commission to determine the Plant's output eligible for treatment as a New Renewable Energy Resource; and (ii) complete and issue its certification of Petitioner's Eligibility of Renewal Energy Resources for the Plant in the amount of at least 96% of the Plant's current output; and (iii) take such other action as is necessary and appropriate consistent with these requests.

Respectfully submitted,

COVANTA MAINE, LLC

By:_____

Ronald M. LaRocca, RI Bar #7982
Pierce Atwood LLP
72 Pine Street
Providence, RI 02903
(401) 490.3426
rlarocca@pierceatwood.com

Dated: April 3, 2015

[5] The Petitioner respectfully submits that this petition is fully supported by the consideration of only the plain language of the RES Rules. The Petitioner is prepared, to the extent deemed necessary or appropriate, to provide documentation, minutes and draft regulations prepared by the Working Group in the course of developing the RES Rules as well as the testimony or affidavits of Working Group participants in support of this petition.

ATTACHMENT A

Submission Letter and Application

COVANTA MAINE, LLC
100 Recovery Way
Haverhill, Massachusetts 01835
(978) 241-3030; ((978) 372-4280
knydam@covanta.com

March 27, 2014

Rhode Island Public Utilities Commission
Attn: Renewable Energy Resources Eligibility
89 Jefferson Boulevard
Warwick, Rhode Island 02888

Re: Application of Covanta Jonesboro for Certification as no less than 96% and up to 97% Rhode Island New Renewable Energy Resource and between 4% and 3% Rhode Island Existing Renewable Energy Resource, respectively

Dear Sir:

Attached please find an application for certification by the Rhode Island Public Utilities Commission (the "Commission") of the Covanta Jonesboro ("Jonesboro," the "Project" or the "Facility") of Covanta Maine, LLC ("Covanta") as no less than 96% and up to 97% Rhode Island New Renewable Energy Resource and between 4% and 3% Rhode Island Existing Renewable Energy Resource, respectively (the "Application"). [1]

In December 2008, Covanta Holding Corporation, through an indirect wholly-owned subsidiary (Covanta), purchased the Project from Indeck Maine Energy, L.L.C. ("Indeck"). Covanta is a Delaware limited liability company with its principal place of business at 1231 Main Road, Route 2, West Enfield, Maine 04493 while Covanta Holding Corporation has its principal place of business at 445 South Street, Morristown, New Jersey 07960. Shortly after the purchase by Covanta, Indeck was dissolved and in early 2011 Ridgewood Power Management, the operator of Indeck from 1999 through 2008, ceased operations and was also dissolved.[2]

Covanta Holding Corporation, through its subsidiaries, provides waste and energy services in the Americas, Europe, and Asia. It engages in the development, ownership, and operation of infrastructure for the conversion of waste to energy. The company also involves in waste disposal and renewable energy production businesses, as well as independent power production business. As of December 31, 2013, it owned, invested, and/or operated 54 energy

[1] This application covers only Jonesboro and not its sister facility, Covanta West Enfield ("West Enfield"). References to Indeck Maine Energy refer generally to both biomass plants and accounting records, unless specified, refer to both biomass plants

[2] With these dissolutions and the cessation of operations, neither Indeck records nor Ridgewood personnel are necessarily available to provide detailed records of plant operations of or the capital expenditures made to West Enfield between 1995 and 2008.

generation facilities, which use various fuels, including municipal solid waste, wood waste, landfill gas, water, natural gas, coal, and heavy fuel-oil. In addition, the company owns or operates waste procurement business; landfills for ash disposal; and various waste transfer stations. Covanta Holding Corporation was founded in 1960 and is headquartered in Morristown, New Jersey. Additional information on Covanta Holding Corporation may be found at www.covantaenergy.com.

For purposes of responding to inquiries regarding the application, persons should contact the following:

Primary Contact

Ken Nydam
Business Manager
Covanta Maine, LLC
100 Recovery Way
Haverhill, Massachusetts 01835
(978) 241-3030 Office
(978) 372-4280 Fax
knydam@covanta.com

Secondary Contact

Peter Williams
Chief Engineer
Covanta Maine, LLC
62 Whitneyville Road, Route 1A
Jonesboro, Maine 04648
(207) 434-6500 Office
(207) 434-6810 Fax
pwilliams@covanta.com

Jonesboro is a 28.8 MW[3] nameplate, forest biomass-fired power plant located near the Town of Jonesboro in Washington County, Maine. At a 90% capacity factor, the station has an estimated annual gross production of between 221,100 MWh[4] and 231,552 MWh.[5] Its most recent air permit was issued in September 5, 2001 and conditionally renewed on March 16, 2006. The Project has been in continuous compliance with its air permit since commencing operations in November 1987.

Covanta is filing this application with the Commission after having done a substantial review of the records of the Project. That review showed that in early part of the last decade, Indeck Maine Energy, L.L.C. ("Indeck") substantially upgraded the reliability and efficiency of Indeck Jonesboro (now Covanta Jonesboro) between 213,216 MWh and 223,668 MWh over the Project's Historical Generation Baseline of 7,884 MWh.[6] Accordingly, Covanta is claiming that no less 96% and up to 97% of the generation of Jonesboro qualifies as a New Renewable Energy Resource.

Jonesboro only operates today due to numerous and extensive capital improvements performed on the Facility since 1997, principally after 2003. Had these capital improvements not been made, Jonesboro would not be operating because its operating, maintenance and fuel

[3] The generator nameplate is actually 32 MWA. Assuming a 90° power factor, an equivalent nameplate rating is 28.8 MW. In public filings Covanta has claimed that the net generating capacity of the Facility is 27.5 MW.
[4] 27.5 MW times 8,040 hours equal 221,100 MWh.
[5] 28.8 MW times 8,040 hours equal 231,552 MWh.
[6] The Jonesboro Historical Generation Baseline for the years 1995 to 1997 was 7,884 MWh per year. Annual production numbers are available upon request.

expenses would easily exceed its revenues, including those revenues that it receives from the sale of Massachusetts Class I Renewable Generation Attributes, Connecticut Class II Renewable Energy Certificates and Maine Class I Renewable Resource Certificates.

The root cause of Jonesboro operational problems can be traced to its first-of-a-kind design. Simply put, Jonesboro along with its sister plant, Covanta West Enfield ("West Enfield"), was the first commercial scale, circulating fluidized bed ("CFB") boiler built in the United States. It was a proof-of-concept facility built to prove that better efficiency and emissions could be obtained over conventional combustion boilers. Unfortunately, this initial design had many flaws. Later CFB designs were modified to eliminate these design flaws. While some of these design flaws may appear small, it is the shear number of these flaws and their collective impact that practically drove West Enfield into shutdown and surely would have driven Jonesboro if these capital expenditures had not been made.

The largest changes between current CFBs to the Jonesboro CFB is height of the boiler, about 20-30 feet taller which provide lower gas velocities and removal of the external bed media returns to the furnace and proper U-beam configuration. U-beams are Babcock & Wilcox's primary particle (sand) separation design. The Jonesboro design permitted too much sand to carry-over and to sandblast literally the superheater tubes, economizer tubes, multi-cyclone dust collector and air heater tubes until such time as tube and O_2 leaks occurred. This poor design dramatically reduced the availability at high capacity factors which reduced the availability factor of the boiler. The solution for newer design CFBs was to raise the height of the boiler which resulted in lower furnace gas velocities which let gravity pull the sand back into the fluidized bed and utilizing proper U-beam configurations coupled with a water-cooled design. Since increasing the boiler height is not an option for Jonesboro, a different solution or, more accurately, a series of different solutions had to be found.

Two of the major changes to the boiler were the proper placement of U-beams in the top of the boiler to minimize sand from carrying over into the backpass and eroding the multi-cyclone, air heater, economizer and superheater tubes. The second major change was to install new superheater tubes in the backpass that were designed to survive the continual sandblasting from the sand carryover. Had not both of these design modifications been made, the sand would quickly erode the multi-cyclone dust collector, air heater, economizer and superheater tubes, causing numerous, recurring tube leaks.[7] At one point, the West Enfield facility was shutting down for tube leaks monthly, losing a week of production or more with every shutdown.[8] Remaining revenues simply could not keep pace with expenses. As can be seen from the table on the following page, by 2004 the negative cash flow was well in excess of a million dollars per facility per year.

[7] In fact, the extent of the improvements was so extensive that Indeck obtained an amendment to its Maine DEP air permit in March 2004

[8] Jonesboro was spared this fate since the decision was made to start up West Enfield first, work out the problems with West Enfield and then start up Jonesboro.

Covanta Maine, LLC
Selected Accounting Data[9]
($ Thousands)

Year	2002	2003	2004	2005	2006	2007	Totals
Revenues -							
Power	$5,238	$5,093	$8,604	$21,535	$18,921	$21,421	$80,812
RECs	2,008	4,500	6,179	12,283	14,618	14,420	54,009
Totals	7,246	9,593	14,784	33,818	33,539	35,841	134,822
Net Income	(2,471)	(1,422)	(2,954)	4,942	1,827	2,419	2,342
Net Cash Flow From Operations	(881)	(853)	(5,184)	1,305	5,796	3,236	3,419

A lesser expense, but just as critical to increasing capacity and availability factors, was the redesign of the L-Valve liners and expansion joints. The L-Valves maintain the circulating bed sand from the U-beams and returns the sand to the lower furnace to complete the circulating bed loop. If this circulation of sand is not maintained, the unit will quickly shutdown due to the loss of sand circulation.

Jonesboro has been in commercial operation since late 1987. Its generation history can be broken into five parts – one period for 1987 until 1990 when the facility was used as base-load facility, a second period of 1990 until 1995 when the facility was used as a peaking facility, a third period of 1995 until 1997 when the facility was shut down, a fourth period from 1997 until mid-year 2004 when the facility was again used as a peaking facility and a fifth period from May 2004 until the present when the facility was operated in a base-load matter and used to satisfy the requirements of the Massachusetts RPS. As previously explained, the facility had serious design flaws with its boiler. These flaws were first noticed during its first operating period and were one of the reasons that the plant was shifted to peaking operations in the early 1990s. With an above-market contract, the plant was a prime candidate for a contract repurchased and, once accomplished, the plant was shut down since it was not economical to operate. When the New England electricity markets were deregulated between 1997 and 2001, the plant was re-opened and was used as a peaking facility since that was the only way for the plant to be operated economically.

With the high energy and capacity prices in early 2001 and the prospect for the establishment of the RPS program in Massachusetts in late 2001, it was decided to return to service the West Enfield plant as a base load facility in early June 2001.[10] With a few months, it became evident that, despite attempts to operate at generation at the maximum capacity of the

[9] Nearly all 2002 and 2003 revenues and net income are attributed to West Enfield operations, about 63% of 2004 revenues and net income are attributed are attributed to West Enfield operations; thereafter, revenues and net income are roughly 50% attributed to West Enfield operations.

[10] The decision was largely based upon the difference in the cost and availability of fuel at each facility. Jonesboro is located on the seacoast, where within 25 miles of the plant approximately 40% of the area is ocean. West Enfield, on the other hand, is surrounded on all sides for miles by large tracts of forested lands. Thus, the supply and cost of biomass is greater and lower, respectively, at West Enfield.

turbine-generator, the boiler and backpass tubes was being severely eroded by the sand that was being carried over. By January 2003, the West Enfield boiler had reached a point where it was seriously considered shutting down West Enfield and mothballing both plants. That fate was averted when the owners agreed to commit millions of dollars of additional funds as well as arranged $6.0 million loan from Commerce Bank (now TD Bank) guaranteed by the Finance Authority of Maine. Those funds provided the bulk of the moneys for a substantial capital improvement program that started in late 2003 and continued on into 2009 for both facilities.

In late 2003, it was decided to return to service the Jonesboro facility by mid-year 2004, making only some of the improvements to Jonesboro that were had been made to West Enfield.[11] At that point a multi-year capital improvement to Jonesboro began with certain capital improvements being performed only after they had been installed and observed at West Enfield before they were implemented at Jonesboro. Essentially, West Enfield became the "test site" for the Jonesboro capital improvements. Consequently, Jonesboro did not suffer from the multi-year struggle to achieve both high capacity factors and availabilities as did West Enfield.

As previously noted, the Jonesboro facility was completed in 1986 and commissioned in late 1987. The facility has a potential generation capacity of 27.5 MW. The Facility includes a first generation circulating fluidized bed boiler designed by Babcock & Wilcox in 1986 that exhibited numerous inherent design flaws from day one of its operations. As previously mentioned, West Enfield was the "test site" for the Jonesboro improvements. The lessons learned at West Enfield were applied to Jonesboro. In addition, due the knowledge that what had previously failed or lead to an upset condition at West Enfield, plant staff operated Jonesboro in a manner that minimized the stress put on the boiler and other critical parts of the facility. Consequently, Jonesboro did not suffer the low availabilities and capacity factors[12] of West Enfield's before its refurbishments beginning in April 2004.

Since July 2005, investments in new equipment and facilities have allowed Jonesboro to achieve 12-month capacity factors and availabilities up to 78% and 89%, respectively. These expenditures were necessary to make the Facility economically viable, otherwise Jonesboro would have followed the path of West Enfield for the period of 2001 through April 2004. These investments total $4.051 million for the Jonesboro Facility.[13] Importantly, none of these investments were routine maintenance projects – all reflect investments in equipment or facilities with a useful life of at least 3 years and in most cases in excess of 7 years.

Of the $4.051 million[14] of expenditures,[15] the following projects can be identified as key contributors to Covanta's success in increasing the availability and capacity factors of the Jonesboro Facility:

[11] The higher cost expenditures required longer leads times due to design and off-site fabrication.
[12] In certain pre-May 2004 periods, West Enfield had capacity factors and availabilities as low as 61% and 47%, respectively.
[13] In addition, nearly another $3 million in capital expenditures were spent on balance-of-plant items.
[14] Approximately $4.1 million was spent on similar expenditures for West Enfield during the same time frame.
[15] None of these costs include any labor costs attributed to Plant Staff that worked on the installation of these capital improvements. Nor are any costs of the improvement of other non-boiler related equipment included in this figure, such as balance of plant equipment.

- Superheater materials upgrade/replacement and design changes beginning in 2006 enabled the increase in capacity factor and availability. These changes in design and materials upgrades cost $2.210 million.[16]

- U-beam design and configuration changes from 2006 through 2010 to improve flue gas/sand separation and performance to increase life of superheaters, convection pass waterwalls, economizer tubes, multi-cyclone separators and air heater equipment. These changes in design configuration cost $1.353 million.[17]

- L-Valve materials upgrade and redesign of expansion joints in 2008 to improve the circulation of sand. These changes in design and materials cost $0.077 million.[18]

- Air Heater materials upgrade and sacrificial metals design changes in 2008 increased the reliability thus improving the capacity and availability factors. These changes cost $0.178 million.[19]

- Multi-cyclone materials upgrade and design changes beginning in 2006, extending the useful life of the equipment from 3 years to 6 years to date and still in service. These changes cost $0.233 million.[20]

Without these expenditures, totaling $4.051 million, the facility would not be operating and generating base load renewable energy, capable of providing clean energy for 20,000 Rhode Island homes.

In the course of preparing this application, Covanta located the audited financial statements for Indeck Maine Energy, L.L.C. ("Indeck"),[21] covering the period of 2001 through 2007.[22] Each of these statements was prepared by independent accountants and the audit was conducted in accordance with auditing standards generally accepted in the United States of America. While there is no discussion of the accounting treatment of these expenditures, each financial statement contains the following discussion of the accounting treatment of plant and equipment:

> "Plant and equipment, consisting principally of a power generating facility, is stated at cost less accumulated depreciation. **Renewals and betterments that increase the useful lives of the assets are capitalized.** Repair and maintenance expenditures are expensed as incurred."

[16] Approximately $2.006 million was spent on similar expenditures for West Enfield during the same time frame.
[17] Approximately $1.559 million was spent on similar expenditures for West Enfield during the same time frame.
[18] Approximately $0.231 million was spent on similar expenditures for West Enfield during the same time frame.
[19] Approximately $0.186 million was spent on similar expenditures for West Enfield during the same time frame.
[20] Approximately $0.134 million was spent on similar expenditures for West Enfield during the same time frame.
[21] Indeck Maine Energy was the owner of the facilities from November 1, 1996 until December 22, 2008. Thereafter, Covanta Energy became the owner of the facilities.
[22] Copies of these financial statements were filed with the Commission in Docket #4340. For 2008, no audited financial statements were prepared since the facilities had been sold ten days prior to year-end.

Given the third-party review of Indeck's accounting records and the standards to which those records are reviewed, Covanta believes that the Commission should accept accounting records as evidence of qualified renewals and betterments expenditures as capital expenditures. Furthermore, the treatment of renewals and betterments by the plant personnel that prepared the list of capital expenditures, whether owned by Indeck or Covanta, is consistent with the aforementioned accounting treatment.

As shown in the following table, a review of the Indeck Maine Energy audited accounting records show that the net value of plant and equipment was slightly more than $3.3 million at year-end 2002. By year-end 2007, the net value of plant and equipment has increased to slightly more than $9.5 million, for a $6.2 million increase (net of additional depreciation expense of another $1.9 million), a 188% increase in just six years.[23] Adding back the depreciation taken during this period, expenditures on plant and equipment were $8.1 million, for a 245% increase over the $3.3 million at the end of 2002. Thus, over six years, Indeck made capital improvements to the facilities that constituted a percentage well in excess of the 100% of the Net Plant and Equipment cost of the facilities as of the start of 2002.

Covanta Maine, LLC
Selected Accounting Data
($ Thousands)

Year	2001	2002	2003	2004	2005	2006	2007	2008	Total
Capitalized Expenditures	395	483	158	693	2,834	2,697	1,517	922	8,229
Net Plant & Equipment[24]		3,463	3,376	3,809	6,577	8,650	9,545	No Data	

While the accounting records from 2002 through 2007 are not precise enough to determine what portion of the $8.2 million of capitalized expenditures were related to either plant, Covanta believes that it is safe to say that the capital expenditures made Covanta Jonesboro during this time exceeded the 2002 book basis of the Jonesboro facility, even if none of the book value is assumed to be related to Covanta West Enfield.

To summarize, after 1997, Indeck and Covanta made significant capital expenditures to Jonesboro. Had these capital improvements not been made, the facility would have ceased operations by the end of last decade due to a combination of reduced generation and increasing per unit operating and maintenance costs. With these improvements, Jonesboro was not only able to stay operational but also increased production. An analysis of the potential production of Jonesboro indicates that upwards to 97% of the facility should qualify as New production and the balance as Existing production for the Rhode Island Renewable Energy Standard.

[23] For 2006 and 2007, book depreciation expenses were $0.466 million and $0.622 million, respectively.
[24] With the sale of the biomass plants to Covanta Energy, LLC on December 22, 2008, Indeck did not prepare audited financial statement for 2008. The 2008 Capital Expenditures are from Indeck's general ledger accounts.

Upon your review of our application, if you have any questions on comments, please do not hesitate to contact either Peter Williams or myself.

Sincerely yours,

Ken Nydam

attachments

cc: Peter Williams
William P. Short III

LISTS OF ATTACHMENTS

Application for Certification of Covanta Jonesboro, dated March 31 2014

Massachusetts DOER Certification BM-1002-02 Issued July 2, 2002

Connecticut DPUC Order (Docket 03-12-83) Issued February 9, 2005

Maine Public Utilities Commission Order (Docket 2010-00210) Issued June 17, 2013

Indeck Maine Energy, L.L.C's Jonesboro Maine Department of Environmental Protection's Findings of Fact and Order Part 70 Air Emission License A-127-70-A-1[25]

Indeck Maine Energy, L.L.C's Jonesboro Maine Department of Environmental Protection's Findings of Fact and Order Part 70 Air Emission License A-127-70-B-A[26]

Indeck Maine Energy, L.L.C.'s Financial Statements for the years ended December 31, 2003, 2002 and 2001[27]

Indeck Maine Energy, L.L.C.'s Financial Statements for the years ended December 31, 2004, 2003 and 2002

Indeck Maine Energy, L.L.C.'s Financial Statements for the years ended December 31, 2005, 2004 and 2003

Indeck Maine Energy, L.L.C.'s Financial Statements for the years ended December 31, 2006 and 2005

Indeck Maine Energy, L.L.C.'s Financial Statements for the years ended December 31, 2007 and 2006

2008 Form 10-K Ridgewood Electric Power Income Fund IV

Covanta Jonesboro's Biomass Fuel Source Plan 2009-2013[28]

Covanta Jonesboro's Plant Availability Improvements 2006-2013

[25] At http://www.maine.gov/dep/ftp/AIR/licenses/titlev/a127ai.pdf a copy of Covanta Jonesboro's current Maine DEP Air Permit may be obtained.
[26] At http://www.maine.gov/dep/ftp/AIR/licenses/titlev/a127ba.pdf, a copy of Covanta Jonesboro's current Maine DEP Air Permit may be obtained.
[27] Items in **Blue and Bold** were previously filed with the Commission in Docket #4340; accordingly, they have not been filed in this proceeding.
[28] Items in **Red and Bold** are deemed commercially sensitive information by Covanta. Upon the Commission issuing a protective order, Covanta will file these documents with the commission under seal

RIPUC Use Only	
Date Application Received:	__ __/__ __/__ __
Date Review Completed:	__ __/__ __/__ __
Date Commission Action:	__ __/__ __/__ __
Date Commission Approved:	__ __/__ __/__ __

GIS Certification #:

MSS # 446

RENEWABLE ENERGY RESOURCES ELIGIBILITY FORM

The Standard Application Form
Required of all Applicants for Certification of Eligibility of Renewable Energy Resource
(Version 7 – June 11, 2010)

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
Pursuant to the Renewable Energy Act
Section 39-26-1 et. seq. of the General Laws of Rhode Island

NOTICE:
When completing this Renewable Energy Resources Eligibility Form and any applicable Appendices, please refer to the State of Rhode Island and Providence Plantations Public Utilities Commission Rules and Regulations Governing the Implementation of a Renewable Energy Standard (RES Regulations, Effective Date: January 1, 2006), and the associated RES Certification Filing Methodology Guide. All applicable regulations, procedures and guidelines are available on the Commission's web site: www.ripuc.org/utilityinfo/res.html. Also, all filings must be in conformance with the Commission's Rules of Practice and Procedure, in particular, Rule 1.5, or its successor regulation, entitled "Formal Requirements as to Filings."

• Please complete the Renewable Energy Resources Eligibility Form and Appendices using a typewriter or black ink.

• Please submit one original and three copies of the completed Application Form, applicable Appendices and all supporting documentation to the Commission at the following address:

Rhode Island Public Utilities Commission
89 Jefferson Blvd
Warwick, RI 02888
Attn: Renewable Energy Resources Eligibility

In addition to the paper copies, electronic/email submittals are required under Commission regulations. Such electronic submittals should be sent to: Luly E. Massaro, Commission Clerk at lmassaro@puc.state.ri.us

• In addition to filing with the Commission, Applicants are required to send, electronically or electronically and in paper format, a copy of the completed Application including all attachments and supporting documentation, to the Division of Public Utilities and Carriers and to all interested parties. A list of interested parties can be obtained from the Commission's website at www.ripuc.org/utilityinfo/res.html.

• Keep a copy of the completed Application for your records.

• The Commission will notify the Authorized Representative if the Application is incomplete.

• Pursuant to Section 6.0 of the RES Regulations, the Commission shall provide a thirty (30) day period for public comment following posting of any administratively complete Application.

• Please note that all information submitted on or attached to the Application is considered to be a public record unless the Commission agrees to deem some portion of the application confidential after consideration under section 1.2(g) of the Commission's Rules of Practice and Procedure.

• In accordance with Section 6.2 of the RES Regulations, the Commission will provide prospective reviews for Applicants seeking a preliminary determination as to whether a facility would be eligible prior to the formal certification process described in Section 6.1 of the RES Regulations. Please note that space is provided on the Form for applicant to designate the type of review being requested.

• Questions related to this Renewable Energy Resources Eligibility Form should be submitted in writing, preferably via email and directed to: Luly E. Massaro, Commission Clerk at lmassaro@puc.state.ri.us

SECTION I: Identification Information

1.1 Name of Generation Unit (sufficient for full and unique identification):
Covanta Jonesboro

1.2 Type of Certification being requested (check one):
X Standard Certification ❑ Prospective Certification (Declaratory Judgment)

1.3 This Application includes: (Check all that apply)[1]

❑ APPENDIX A: Authorized Representative Certification for Individual Owner or Operator
X APPENDIX B: Authorized Representative Certification for Non-Corporate Entities Other Than Individuals
X APPENDIX C: Existing Renewable Energy Resources
❑ APPENDIX D: Special Provisions for Aggregators of Customer-sited or Off-grid Generation Facilities
❑ APPENDIX E: Special Provisions for a Generation Unit Located in a Control Area Adjacent to NEPOOL
X APPENDIX F: Fuel Source Plan for Eligible Biomass Fuels

1.4 Primary Contact Person name and title:
Ken Nydam, Business Manager

1.5 Primary Contact Person address and contact information:
Address: **Covanta Maine, LLC**
100 Recovery Way
Haverhill, Massachusetts 01835
Phone: **(978) 241-3030** Fax: **(978) 372-4280**
Email: **knydam@covanta.com**

1.6 Backup Contact Person name and title:
Peter Williams, Chief Engineer

1.7 Backup Contact Person address and contact information:
Address: **Covanta Maine, LLC**
62 Whitneyville Road, Route 1A
Jonesboro, Maine 04648
Phone: **(207) 434-6500** Fax: **(207) 434-6810**
Email: **pwilliams@covantaenergy.com**

[1] Please note that all Applicants are required to complete the Renewable Energy Resources Eligibility Standard Application Form and all of the Appendices that apply to the Generation Unit or Owner or Operator that is the subject of this Form. Please omit Appendices that do not apply.

1.8 Name and Title of Authorized Representative (*i.e.*, the individual responsible for certifying the accuracy of all information contained in this form and associated appendices, and whose signature will appear on the application):

Ken Nydam, Business Manager

Appendix A or B (as appropriate) completed and attached? **X** Yes ❑ No ❑ N/A

1.9 Authorized Representative address and contact information:
Address: **Covanta Maine, LLC**
100 Recovery Way
Haverhill, Massachusetts 01835
Phone: **(978) 241-3030** Fax: **(978) 372-4280**
Email: **knydam@covanta.com**

1.10 Owner name and title:
Ken Nydam, Business Manager

1.11 Owner address and contact information:
Address: **Covanta Maine, LLC**
100 Recovery Way
Haverhill, Massachusetts 01835
Phone: **(978) 241-3030** Fax: **(978) 372-4280**
Email: **knydam@covanta.com**

1.12 Owner business organization type (check one):
❑ Individual
❑ Partnership
❑ Corporation
X Other: **Delaware Limited Liability Company**

1.13 Operator name and title: **Peter Williams, Chief Engineer**

1.14 Operator address and contact information:
Address: **Covanta Maine, LLC**
62 Whitneyville Road, Route 1A
Jonesboro, Maine 04648
Phone: **(207) 434-6500** Fax: **(207) 434-6810**
Email: **pwilliams@covanta.com**

1.15 Operator business organization type (check one):
❑ Individual
❑ Partnership
❑ Corporation
X Other: **Delaware Limited Liability Company**

SECTION II: Generation Unit Information, Fuels, Energy Resources and Technologies

2.1 ISO-NE Generation Unit Asset Identification Number or NEPOOL GIS Identification Number (either or both as applicable): **MSS # 446**

2.2 Generation Unit Nameplate Capacity: **28.8 MW (@ 90% Power factor)**

2.3 Maximum Demonstrated Capacity: **24.630 MW (2010 CELT Report)**

2.4 Please indicate which of the following Eligible Renewable Energy Resources are used by the Generation Unit: (Check ALL that apply) – *per RES Regulations Section 5.0*

- ❑ Direct solar radiation
- ❑ The wind
- ❑ Movement of or the latent heat of the ocean
- ❑ The heat of the earth
- ❑ Small hydro facilities
- X Biomass facilities using Eligible Biomass Fuels and maintaining compliance with all aspects of current air permits; Eligible Biomass Fuels may be co-fired with fossil fuels, provided that only the renewable energy fraction of production from multi-fuel facilities shall be considered eligible.
- ❑ Biomass facilities using unlisted biomass fuel
- ❑ Biomass facilities, multi-fueled or using fossil fuel co-firing
- ❑ Fuel cells using a renewable resource referenced in this section

2.5 If the box checked in Section 2.4 above is "Small hydro facilities", please certify that the facility's aggregate capacity does not exceed 30 MW. – *per RES Regulations Section 3.32*

❑ ← check this box to certify that the above statement is true

X N/A or other (please explain) _____

_____

2.6 If the box checked in Section 2.4 above is "Small hydro facilities", please certify that the facility does not involve any new impoundment or diversion of water with an average salinity of twenty (20) parts per thousand or less. – *per RES Regulations Section 3.32*

❑ ← check this box to certify that the above statement is true

X N/A or other (please explain) _____

_____

2.7 If you checked one of the Biomass facilities boxes in Section 2.4 above, please respond to the following:

A. Please specify the fuel or fuels used or to be used in the Unit:
Forest Biomass and, possibly in the future, biosolids

B. Please complete and attach Appendix F, Eligible Biomass Fuel Source Plan.
Appendix F completed and attached? X Yes ❑ No ❑ N/A

2.8 Has the Generation Unit been certified as a Renewable Energy Resource for eligibility in another state's renewable portfolio standard?

X Yes ❑ No If yes, please attach a copy of that state's certifying order.

Copy of State's certifying order attached? X Yes ❑ No ❑ N/A

SECTION III: Commercial Operation Date

Please provide documentation to support all claims and responses to the following questions:

3.1 Date Generation Unit first entered Commercial Operation: **1 1** / **0 1** / **8 7** at the site.

If the commercial operation date is after December 31, 1997, please provide independent verification, such as the utility log or metering data, showing that the meter first spun after December 31, 1997. This is needed in order to verify that the facility qualifies as a New Renewable Energy Resource.

Documentation attached? ❑ Yes ❑ No X N/A

3.2 Is there an Existing Renewable Energy Resource located at the site of Generation Unit?

X Yes
❑ No

3.3 If the date entered in response to question 3.1 is earlier than December 31, 1997 or if you checked "Yes" in response to question 3.2 above, please complete Appendix C.

Appendix C completed and attached? X Yes ❑ No ❑ N/A

3.4 Was all or any part of the Generation Unit used on or before December 31, 1997 to generate electricity at any other site?

❑ Yes
X No

3.5 If you checked "Yes" to question 3.4 above, please specify the power production equipment used and the address where such power production equipment produced electricity (attach more detail if the space provided is not sufficient):

_____

_____

_____

SECTION IV: Metering

4.1 Please indicate how the Generation Unit's electrical energy output is verified (check all that apply):

X ISO-NE Market Settlement System
❑ Self-reported to the NEPOOL GIS Administrator

❑ Other (please specify below and see Appendix D: Eligibility for Aggregations):

_____

Appendix D completed and attached? ❑ Yes ❑ No X N/A

SECTION V: Location

5.1 Please check one of the following that apply to the Generation Unit:

X Grid Connected Generation
❑ Off-Grid Generation (not connected to a utility transmission or distribution system)
❑ Customer Sited Generation (interconnected on the end-use customer side of the retail electricity meter in such a manner that it displaces all or part of the metered consumption of the end-use customer)

5.2 Generation Unit address:

62 Whitneyville Road, Route 1A, Jonesboro, Maine 04648

5.3 Please provide the Generation Unit's geographic location information:

A. Universal Transverse Mercator Coordinates: _____

B. Longitude/Latitude: **44°40'43.95"N / 67°32'48.49"W**

5.4 The Generation Unit located: (please check the appropriate box)

X In the NEPOOL control area
❑ In a control area adjacent to the NEPOOL control area
❑ In a control area other than NEPOOL which is not adjacent to the NEPOOL control area ← *If you checked this box, then the generator does not qualify for the RI RES – therefore, please do not complete/submit this form.*

5.5 If you checked "In a control area adjacent to the NEPOOL control area" in Section 5.4 above, please complete Appendix E.

Appendix E completed and attached? ❑ Yes ❑ No X N/A

SECTION VI: Certification

6.1 Please attach documentation, using one of the applicable forms below, demonstrating the authority of the Authorized Representative indicated in Section 1.8 to certify and submit this Application.

Corporations

If the Owner or Operator is a corporation, the Authorized Representative shall provide **either**:

(a) Evidence of a board of directors vote granting authority to the Authorized Representative to execute the Renewable Energy Resources Eligibility Form, **or**

(b) A certification from the Corporate Clerk or Secretary of the Corporation that the Authorized Representative is authorized to execute the Renewable Energy Resources Eligibility Form or is otherwise authorized to legally bind the corporation in like matters.

Evidence of Board Vote provided? ❑ Yes ❑ No X N/A

Corporate Certification provided? ❑ Yes ❑ No X N/A

Individuals

If the Owner or Operator is an individual, that individual shall complete and attach APPENDIX A, or a similar form of certification from the Owner or Operator, duly notarized, that certifies that the Authorized Representative has authority to execute the Renewable Energy Resources Eligibility Form.

Appendix A completed and attached? ❑ Yes ❑ No X N/A

Non-Corporate Entities

(Proprietorships, Partnerships, Cooperatives, etc.) If the Owner or Operator is not an individual or a corporation, it shall complete and attach APPENDIX B or execute a resolution indicating that the Authorized Representative named in Section 1.8 has authority to execute the Renewable Energy Resources Eligibility Form or to otherwise legally bind the non-corporate entity in like matters.

Appendix B completed and attached? X Yes ❑ No ❑ N/A

6.2 Authorized Representative Certification and Signature:

I hereby certify, under pains and penalties of perjury, that I have personally examined and am familiar with the information submitted herein and based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties, both civil and criminal, for submitting false information, including possible fines and punishment. My signature below certifies all information submitted on this Renewable Energy Resources Eligibility Form. The Renewable Energy Resources Eligibility Form includes the Standard Application Form and all required Appendices and attachments. I acknowledge that the Generation Unit is obligated to and will notify the Commission promptly in the event of a change in a generator's eligibility status (including, without limitation, the status of the air permits) and that when and if, in the Commission's opinion, after due consideration, there is a material change in the characteristics of a Generation Unit or its fuel stream that could alter its eligibility, such Generation Unit must be re-certified in accordance with Section 9.0 of the RES Regulations. I further acknowledge that the Generation Unit is obligated to and will file such quarterly or other reports as required by the Regulations and the Commission in its certification order. I understand that the Generation Unit will be immediately de-certified if it fails to file such reports.

Signature of Authorized Representative:

SIGNATURE: _____ DATE: 3/27/2014

Business Manager
(Title)

GIS Certification #:
MSS # 446

APPENDIX B
(Required When Owner or Operator is a Non-Corporate Entity Other Than An Individual)

STATE OF RHODE ISLAND
PUBLIC UTILITIES COMMISION

RENEWABLE ENERGY RESOURCES ELIGIBILITY FORM
Pursuant to the Renewable Energy Act
Section 39-26-1 et. seq. of the General Laws of Rhode Island

RESOLUTION OF AUTHORIZATION

Resolved: that Ken Nydam, named in Section 1.8 of the Renewable Energy Resources Eligibility Form as Authorized Representative, is authorized to execute the Application on the behalf of Covanta Maine, LLC, the Owner or Operator of the Generation Unit named in section 1.1 of the Application.

SIGNATURE: K D Nydam DATE: 3/27/2014

State: NH
County: Rockingham

(TO BE COMPLETED BY NOTARY) I, Lynn A. Boursier as a notary public, certify that I witnessed the signature of the above named Ken Nydam, and that said person stated that (he)/she is authorized to execute this resolution, and the individual verified (his)/her identity to me, on this date: March 27, 2014

SIGNATURE: Lynn a. Boursier DATE: March 27, 2014

My commission expires on: December 19, 2017 NOTARY SEAL:

LYNN A. BOURSIER, Notary Public
My Commission Expires December 19, 2017

GIS Certification #:
MSS # 446

APPENDIX C
(Revised 6/11/10)
(Required of all Applicants with Generation Units at the Site of Existing Renewable Energy Resources)

STATE OF RHODE ISLAND
PUBLIC UTILITIES COMMISION

RENEWABLE ENERGY RESOURCES ELIGIBILITY FORM
Pursuant to the Renewable Energy Act
Section 39-26-1 et. seq. of the General Laws of Rhode Island

If the Generation Unit: (1) first entered into commercial operation before December 31, 1997; or (2) is located at the exact site of an Existing Renewable Energy Resource, please complete the following and attach documentation, as necessary to support all responses:

C.1 Is the Generating Unit seeking certification, either in whole or in part, as a New Renewable Energy Resource? X Yes ❑ No

C.2 If you answered "Yes" to question C.1, please complete the remainder of Appendix C. If you answered "No" and are seeking certification entirely as an Existing Renewable Energy Resource, you do NOT need to complete the remainder of Appendix C.

C.3 If an Existing Renewable Energy Resource is/was located at the site, has such Existing Renewable Energy Resource been retired and replaced with the new Generation Unit at the same site? ❑ Yes X No

C.4 Is the Generation Unit a Repowered Generation Unit (as defined in Section 3.29 of the RES Regulations) which uses Eligible Renewable Energy Resources and which first entered commercial operation after December 31, 1997 at the site of an existing Generation Unit? ❑ Yes X No

C.5 If you checked "Yes" to question C.4 above, please provide documentation to support that the entire output of the Repowered Generation Unit first entered commercial operation after December 31, 1997.

C.6 Is the Generation Unit a multi-fuel facility in which an Eligible Biomass Fuel is first co-fired with fossil fuels after December 31, 1997? ❑ Yes X No

C.7 If you checked "Yes" to question C.6 above, please provide documentation to support that the renewable energy fraction of the energy output first occurred after December 31, 1997.

C.8 Is the Generation Unit an Existing Renewable Energy Resource other than an Intermittent Resource (as defined in Sections 3.10 and 3.15 of the RES Regulations)? X Yes ❑ No

C.9 If you checked "Yes" to question C.8 above, please attach evidence of completed capital investments after December 31, 1997 attributable to efficiency improvements or additions of capacity that are sufficient to, were intended to, and can be demonstrated to increase annual electricity output in excess of ten percent (10%). As specified in Section 3.23.v of the RES Regulations, the determination of incremental production shall not be based on any operational changes at such facility **not directly** associated with the efficiency improvements or additions of capacity.

Please provide the single proposed percentage of production to be deemed incremental, attributable to the efficiency improvements or additions of capacity placed in service after December 31, 1997. Please make this calculation by comparing actual electrical output over the three calendar years 1995-1997 (the "Historical Generation Baseline") with the actual output following the improvements. The incremental production above the Historical Generation Baseline will be considered "New" generation for the purposes of RES. Please give the percentage of the facility's total output that qualifies as such to be considered "New" generation.

C.10 Is the Generating Unit an Existing Renewable Energy Resource that is an Intermittent Resource? ❑ Yes X No

C.11 If you checked "Yes" to question C.10 above, please attach evidence of completed capital investments after December 31, 1997 attributable to efficiency improvements or additions of capacity that are sufficient to, were intended to, and have demonstrated on a normalized basis to increase annual electricity output in excess of ten percent (10%). The determination of incremental production shall not be based on any operational changes at such facility **not directly** associated with the efficiency improvements or additions of capacity. In no event shall any production that would have existed during the Historical Generation Baseline period in the absence of the efficiency improvements or additions to capacity be considered incremental production. Please refer to Section 3.23.vi of the RES Regulations for further guidance.

C.12 If you checked "Yes" to C.10, provide the single proposed percentage of production to be deemed incremental, attributable to the efficiency improvements or additions of capacity placed in service after December 31, 1997. The incremental production above the Historical Generation Baseline will be considered "New" generation for the purposes of RES. Please make this calculation by comparing actual monthly electrical output over the three calendar years 1995-1997 (the "Historical Generation Baseline") with the actual

output following the improvements on a normalized basis. Please provide back-up information sufficient for the Commission to make a determination of this incremental production percentage.

For example, for small hydro facilities, please use historical river flow data to create a monthly normalized comparison (e.g. average MWh produced per cubic foot/second of river flow for each month) between actual output values post-improvements with the Historical Generation Baseline. For solar and wind facilities, please use historical solar irradiation, wind flow, or other applicable data to normalize the facility's current production against the Historical Generation Baseline.

C.13 If you checked "no" to both C.3 and C.4 above, please complete the following:

a. Was the Existing Renewable Energy Resource located at the exact site at any time during calendar years 1995 through 1997? X Yes ❑ No

b. If you checked "yes" in Subsection (a) above, please provide the Generation Unit Asset Identification Number and the average annual electrical production (MWhs) for the three calendar years 1995 through 1997, or for the first 36 months after the Commercial Operation Date if that date is after December 31, 1994, for each such Generation Unit.

c. Please attach a copy of the derivation of the average provided in (b) above, along with documentation support (such as ISO reports) for the information provided in Subsection (b) above. Data must be consistent with quantities used for ISO Market Settlement System.

GIS Certification #:
MSS # 446

APPENDIX F
(Revised 6/11/10)
Eligible Biomass Fuel Source Plan
(Required of all Applicants Proposing to Use An Eligible Biomass Fuel)

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISION
Part of Application for Certificate of Eligibility
RENEWABLE ENERGY RESOURCES ELIGIBILITY FORM
Pursuant to the Renewable Energy Act
Section 39-26-1 et. seq. of the General Laws of Rhode Island

Note to Applicants: Please refer to the RES Certification Filing Methodology Guide posted on the Commission's web site (www.ripuc.org/utilityinfo/res.html) for information, templates and suggestions regarding the types and levels of detail appropriate for responses to specific application items requested below. Also, please see Section 6.9 of the RES Regulations for additional details on specific requirements.

The phrase "Eligible Biomass Fuel" (per RES Regulations Section 3.7) means fuel sources including brush, stumps, lumber ends and trimmings, wood pallets, bark, wood chips, shavings, slash, yard trimmings, site clearing waste, wood packaging, and other clean wood that is not mixed with other unsorted solid wastes[2]; agricultural waste, food and vegetative material; energy crops; landfill methane[3] or biogas[4], provided that such gas is collected and conveyed directly to the Generation Unit without use of facilities used as common carriers of natural gas; or neat bio-diesel and other neat liquid fuels that are derived from such fuel sources.

In determining if an Eligible Biomass Generation Unit shall be certified, the Commission will consider if the 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. Certification will not be granted to those Generation Units with fuel source plans the Commission deems inadequate for these purposes.

[2] Generation Units using wood sources other than those listed above may make application, as part of the required fuel source plan described in Section 6.9 of the RES Regulations, for the Commission to approve a particular wood source as "clean wood." The burden will be on the applicant to demonstrate that the wood source is at least as clean as those listed in the legislation. Wood sources containing resins, glues, laminates, paints, preservatives, or other treatments that would combust or off-gas, or mixed with any other material that would burn, melt, or create other residue aside from wood ash, will not be approved as clean wood.

[3] Landfill gas, which is an Eligible Biomass Fuel, means only that gas recovered from inside a landfill and resulting from the natural decomposition of waste, and that would otherwise be vented or flared as part of the landfill's normal operation if not used as a fuel source.

[4] Gas resulting from the anaerobic digestion of sewage or manure is considered to be a type of biogas, and therefore an Eligible Biomass Fuel that has been fully separated from the waste stream.

This Appendix must be attached to the front of Applicant's Fuel Source Plan required for Generating Units proposing to use an Eligible Biomass Fuel (per Section 6.9 of RES Regulations).

F.1 The attached Fuel Source Plan includes a detailed description of the type of Eligible Biomass Fuel to be used at the Generation Unit.

Detailed description attached? X Yes ❑ No ❑ N/A
Comments: **See attached description**

F.2 If the proposed fuel is "other clean wood," the Fuel Source Plan should include any further substantiation to demonstrate why the fuel source should be considered as clean as those clean wood sources listed in the legislation.

Further substantiation attached? ❑ Yes ❑ No X N/A
Comments: _____

F.3 In the case of co-firing with ineligible fuels, the Fuel Source Plan must include a description of (a) how such co-firing will occur; (b) how the relative amounts of Eligible Biomass Fuel and ineligible fuel will be measured; and (c) how the eligible portion of generation output will be calculated. Such calculations shall be based on the energy content of all of the proposed fuels used.

Description attached? ❑ Yes ❑ No X N/A
Comments: _____

F.4 The Fuel Source Plan must provide a description of what measures will be taken to ensure that only the Eligible Biomass Fuel are used, examples of which may include: standard operating protocols or procedures that will be implemented at the Generation Unit, contracts with fuel suppliers, testing or sampling regimes.

Description provided? X Yes ❑ No ❑ N/A
Comments: **See attached description**

F.5 Please include in the Fuel Source Plan an acknowledgement that the fuels stored at or brought to the Generation Unit will only be either Eligible Biomass Fuels or fossil fuels used for co-firing and that Biomass Fuels not deemed eligible will not be allowed at the premises of the certified Generation Unit. And please check the following box to certify that this statement is true.

X ← check this box to certify that the above statement is true
❑ N/A or other (please explain) _____

F.6 If the proposed fuel includes recycled wood waste, please submit documentation 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.

Documentation attached? ❑ Yes ❑ No X N/A
Comments: _____

F.7 Please certify that you 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. Specifically, RES Regulations Section 6.3(i) states that Renewable Energy Resources of the type that combust fuel to generate electricity must file quarterly reports due 60 days after the end of each quarter on the fuel stream used during the quarter. Instructions and filing documents for the quarterly reports can be found on the Commissions website or can be furnished upon request.

X ← check this box to certify that the above statement is true
❑ N/A or other (please explain) _____

F.8 Please attach a copy of the Generation Unit's Valid Air Permit or equivalent authorization.

Valid Air Permit or equivalent attached? X Yes ❑ No ❑ N/A
Comments: **See attached description**

F.9 Effective date of Valid Air Permit or equivalent authorization:

0 9 / 0 5 / 0 1

F.10 State or jurisdiction issuing Valid Air Permit or equivalent authorization: **Maine**

Mr. Daniel V. Gulino, Senior VP and General Counsel
Ridgewood Power Management, LLC
947 Linwood Avenue
Ridgewood, NJ 07450

RE: RPS Eligibility Decision
Indeck Jonesboro [BM-1002-02]

July 3, 2000

Dear Mr. Gulino,

On behalf of the Division of Energy Resources (the Division), I am pleased to inform you that your Application for Statement of Qualification pursuant to the Massachusetts Renewable Energy Portfolio Standard (RPS) Regulations, 225 CMR 14.00, is hereby approved. The Division finds that the Generation Unit meets the requirements for eligibility as a New Renewable Generation Unit pursuant to 225 CMR 14.05. Qualification of this Generation Unit is, however, subject to the following provisions:

1. Owner/Operator must submit to DOER any revisions to the Part 70 Air Emission License issued by Maine DEP within ten calendar days of issuance.
2. Owner/Operator must notify DOER within 30 days of receipt of any Notice of Violation of any of the emission limits contained in the Maine Part 70 Air Emission License. DOER reserves the right to notify the NE-GIS Administrator to void the Massachusetts RPS-eligible attribute for certificates produced by the Generation Unit during the period of violation.
3. Owner/Operator must submit to DOER copies of reports required by Standard Conditions 33.C. and 34.A.1., 2., 7., B. and C. of the Maine Part 70 Air Emission License at the same time that such reports are submitted to Maine DEP.
4. The NOx emission limit contained in the Generation Unit's Air Emission License (0.3 pounds per million Btu) is less stringent than the limit contained in emission rates for comparable biomass units as prescribed by the Massachusetts Department of Environmental Protection during 1/1/90 – 12/31/97, which was 0.175 pounds per million Btu. Therefore, the Owner/Operator must notify DOER if the Generation Unit exceeds 0.175 pounds per million Btu, averaged over any calendar month. Notification shall be included in the reports specified in provision 3 above. If DOER finds that the Generation Unit did exceed the 0.175 pounds per million Btu limit, averaged over a given calendar month, it shall notify the NE-GIS Administrator to void the Massachusetts RPS-eligible attribute for certificates produced by the Generation Unit during that month.

5. The Generation Unit's Historical Generation Rate is determined to be 7,884.4 MWh.

Each Massachusetts New Renewable Generation Unit is assigned a unique Massachusetts RPS Identification Number (MA RPS ID#). The MA RPS ID # stated on the Statement of Qualification must be included in all correspondence with the Division. Indeck Jonesboro's MA RPS ID# is: BM-1002-02.

The Division wishes to remind you of the notification requirements for changes in eligibility status contained in 225 CMR 14.06(3). The Owner or Operator of the Generation Unit shall submit notification of such changes to the Division no later than five days following the end of the month during which such changes were implemented.

Sincerely,

Robert Sydney
General Counsel

Encl.(1): Statement of Qualification

COMMONWEALTH OF MASSACHUSETTS
OFFICE OF CONSUMER AFFAIRS AND BUSINESS REGULATION
DIVISION OF ENERGY RESOURCES
Statement of Qualification

Pursuant to the Renewable Energy Portfolio Standard
225 CMR 14.00

This Statement of Qualification, provided by the Massachusetts Division of Energy Resources, signifies that the Generation Unit identified below meets the requirements for eligibility as a New Renewable Generation Unit, pursuant to the Renewable Energy Portfolio Standard 225 CMR 14.05, as of the approval date of the Application for Statement of Qualification, this __2nd__ day of __July__ 2002.

Authorized Representative's Name and Address:	Mr. Daniel V. Gulino, Senior VP and General Counsel Ridgewood Power Management, LLC 947 Linwood Avenue Ridgewood, NJ 07450
Name of Generation Unit:	Indeck Jonesboro

Qualification of this Generation Unit is subject to the following provisions:

1. Owner/Operator must submit to DOER any revisions to the Part 70 Air Emission License issued by Maine DEP within ten calendar days of issuance.

2. Owner/Operator must notify DOER within 30 days of receipt of any Notice of Violation of any of the emission limits contained in the Maine Part 70 Air Emission License. DOER reserves the right to notify the NE-GIS Administrator to void the Massachusetts RPS-eligible attribute for certificates produced by the Generation Unit during the period of violation.

3. Owner/Operator must submit to DOER copies of reports required by Standard Conditions 33.C. and 34.A.1., 2., 7., B. and C. of the Maine Part 70 Air Emission License at the same time that such reports are submitted to Maine DEP.

4. The NOx emission limit contained in the Generation Unit's Air Emission License (0.3 pounds per million Btu) is less stringent than the limit contained in emission rates for comparable biomass units as prescribed by the Massachusetts Department of Environmental Protection during 1/1/90 – 12/31/97, which was 0.175 pounds per million Btu. Therefore, the Owner/Operator must notify DOER if the Generation Unit exceeds 0.175 pounds per million Btu, averaged over any calendar month. Notification shall be included in the reports specified in provision 3 above. If DOER finds that the Generation Unit did exceed the 0.175 pounds per million Btu limit, averaged over a given calendar month, it shall notify the NE-GIS Administrator to void the Massachusetts RPS-eligible attribute for certificates produced by the Generation Unit during that month.

5. The Generation Unit's Historical Generation Rate is determined to be 7,884.4 MWh.

Statement of Qualification
Page 2

ISO-NE Generation Unit Asset Identification Number or NE-GIS Identification Number:

0446

This New Renewable Generation Unit is assigned a unique Massachusetts RPS Identification Number. Please include MA RPS ID #s on all correspondence with the Division.

MA RPS ID #: BM-1002-02

Pursuant to 225 CMR 14.06, the Owner or Operator of the New Renewable Generation Unit is responsible for notifying the Division of any change in eligibility status, and the Division may suspend or revoke this Statement of Qualification if the Owner or Operator of a New Renewable Generation Unit fails to comply with 225 CMR 14.00.

_____ Date: _____

Robert F. Sydney
General Counsel
Division of Energy Resources

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC UTILITY CONTROL
TEN FRANKLIN SQUARE
NEW BRITAIN, CT 06051

DOCKET NO. 03-12-83 APPLICATION OF INDECK MAINE ENERGY, LLC FOR QUALIFICATION OF INDECK JONESBORO AS A CLASS II RENEWABLE ENERGY SOURCE

February 9, 2005

By the following Commissioners:

Anne C. George
Jack R. Goldberg
John W. Betkoski, III

DECISION

I. INTRODUCTION

A. SUMMARY

In this Decision, the Department of Public Utility Control determines that the Indeck Jonesboro generating facility qualifies as a Class II renewable energy source as a biomass facility and assigns it Connecticut Renewable Portfolio Standard (RPS) Registration Number CT00073-03.

B. BACKGROUND OF THE PROCEEDING

By application dated December 23, 2003, Indeck Maine Energy, L.L.C. requested that the Department of Public Utility Control (Department) determine that the Indeck Jonesboro generation facility qualifies as a Class II renewable energy source.

Indeck Jonesboro is a biomass facility located in Jonesboro, Maine. Indeck Jonesboro began commercial operation on November 1, 1987 and has a nameplate capacity of 27MW.

C. CONDUCT OF THE PROCEEDING

There is no statutory requirement for a hearing, no person requested a hearing, and none was held.

D. PARTICIPANTS IN THE PROCEEDING

The Department recognized Indeck Maine Energy, L.L.C., c/o Ridgewood Power Management, LLC, 947 Linwood Avenue, Ridgewood, New Jersey 07450, and the Office of Consumer Counsel, Ten Franklin Square, New Britain, Connecticut 06051, as participants in this proceeding.

II. DEPARTMENT ANALYSIS

Pursuant to Connecticut General Statutes (C.G.S.) §16-1(a)(27), as amended by Public Act 03-135, An Act Concerning Revisions To The Electric Restructuring Legislation "Class II renewable energy source" includes energy derived from a biomass facility that began operation before July 1, 1998, provided the average emission rate for such facility is equal to or less than .2 pounds of nitrogen oxides per million BTU of heat input for the previous calendar quarter.

As provided in the application, Indeck Jonesboro is a biomass facility located on Route 1A in Jonesboro, Maine. Indeck Jonesboro is currently owned by Indeck Maine Energy, L.L.C. The vast majority of the biomass consumed in the Indeck facilities comes from forest biomass produced in the state of Maine, harvested under the rules and regulations promulgated by the State of Maine and its agencies. Application, Section 8, comments. According to a letter and spreadsheet submitted by Indeck Maine Energy, L.L.C, the nitrogen oxides emissions were 0.103lbs/mmbtu for third quarter 2004 generation. These emissions are below the .2lbs/mmbtu standard set in §C.G.S.16-1(a)(27). The Department in a letter dated October 26, 2004, reminds registered and approved Connecticut RPS eligible biomass facilities that they must file with the Department at the end of each calendar quarter an affidavit that the average emission rate of such facility is equal to or less than the threshold level for qualification along with supporting documentation. The Department will strictly enforce this requirement and any facility that fails to file such information will have its Connecticut RPS Generator eligibility registration decertified. All Connecticut RPS biomass facilities are required to file the above referenced affidavit along with supporting documentation that adequately displays the average emission rate in pounds of nitrogen oxides per million BTU of heat input for the previous calendar quarter. Please refer to your docket number when submitting quarterly filings. The Department has set the following dates for filing emission affidavits and supporting documentation:

Quarter 1 Emissions---Must be received by Department no later than June 1st.
Quarter 2 Emissions---Must be received by Department no later that September 1st.
Quarter 3 Emissions---Must be received by Department no later than December 1st.

Quarter 4 Emissions---Must be received by Department no later than March 1st.

Indeck Jonesboro has a nameplate capacity of 27MW and began operation in 1987. According to ISO New England's (ISO-NE) Seasonal Claimed Capability (SCC) Report dated 1/01/2005, Indeck Jonesboro is a biomass electric generating facility.

Based on the foregoing, the Department determines that Indeck Jonesboro qualifies as a Class II renewable energy facility.

III. FINDINGS OF FACT

1. Indeck Jonesboro is a biomass facility located in West Enfield, Maine.
2. Indeck Jonesboro is currently owned by Indeck Maine Energy, L.L.C.
3. Indeck Jonesboro began operation on November 1, 1987.
4. Indeck Jonesboro has a total combined nameplate capacity of 27 megawatts.
5. Indeck Jonesboro is required to file its nitrogen oxides emissions on a quarterly basis.
6. Indeck Jonesboro is registered with ISO-NE as a biomass facility.

IV. CONCLUSION

Based on the evidence submitted, the Department finds that Indeck Jonesboro qualifies as a Class II renewable generation source pursuant to C.G.S §16-1(a)(27).

The Department assigns each renewable generation source a unique Connecticut RPS registration number. Indeck Jonesboro's Connecticut RPS registration number is CT00073-03.

The Department's determination in this docket is based on the information submitted by Indeck Maine Energy, L.L.C. The Department may reverse its ruling or revoke the Applicant's registration if any material information provided by the Applicant proves to be false or misleading. The Department reminds Indeck Maine Energy, L.L.C. that it is obligated to notify the Department within 10 days of any changes to any of the information it has provided to the Department.

V. ORDERS

1. Indeck Jonesboro is required to file quarterly affidavits and supporting documentation of its nitrogen oxides emissions on the quarterly filing schedule provided above.

DOCKET NO. 03-12-83 APPLICATION OF INDECK MAINE ENERGY, LLC FOR QUALIFICATION OF INDECK JONESBORO AS A CLASS II RENEWABLE ENERGY SOURCE

This Decision is adopted by the following Commissioners:

Anne C. George

Jack R. Goldberg

John W. Betkoski, III

CERTIFICATE OF SERVICE

The foregoing is a true and correct copy of the Decision issued by the Department of Public Utility Control, State of Connecticut, and was forwarded by Certified Mail to all parties of record in this proceeding on the date indicated.

Louise E. Rickard
Acting Executive Secretary
Department of Public Utility Control

February 14, 2005
Date

STATE OF MAINE
PUBLIC UTILITIES COMMISSION

Docket No. 2010-00210

June 17, 2013

COVANTA ENERGY
Request for Certification for RPS Eligibility

ORDER GRANTING NEW RENEWABLE RESOURCE CERTIFICATION

WELCH, Chairman; LITTELL and VANNOY, Commissioners

I. SUMMARY

The Covanta Energy biomass facility in Jonesboro, Maine is granted certification as a Class I new renewable resource that is eligible to satisfy Maine's new renewable resource portfolio requirement pursuant to Chapter 311 § 3(B) of the Commission rules.

II. BACKGROUND

A. New Renewable Resource Portfolio Requirement

During its 2007 session, the Legislature enacted an Act To Stimulate Demand for Renewable Energy (Act). P.L. 2007, ch. 403 (codified at 35-A M.R.S.A. § 3210(3-A)). The Act added a mandate that specified percentages of electricity that supply Maine's consumers come from "new" renewable resources.[1] Generally, new renewable resources are renewable facilities that have an in-service date, resumed operation or were refurbished after September 1, 2005. The percentage requirement starts at one percent in 2008 and increases in annual one percent increments to ten percent in 2017, unless the Commission suspends the requirement pursuant to the provisions of the Act.

As required by the Act, the Commission modified its portfolio requirement rule (Chapter 311) to implement the "new" renewable resource requirement. *Order Adopting Rule and Statement of Factual and Policy Basis,* Docket No. 2007-391 (Oct. 22, 2007). The implementing rules designated the "new" renewable resource

---

[1] Maine's electric restructuring law, which became effective in March 2000, contained a portfolio requirement that mandated that at least 30% of the electricity to supply retail customers in the State come from eligible resources, which are either renewable or efficient resources. 35-A M.R.S.A. § 3210(3). The Act did not modify this 30% requirement.

requirement as "Class I"[2] and incorporated the resource type, capacity limit, and the vintage requirements as specified in the Act. The rules thus state that a new renewable resource used to satisfy the Class I portfolio requirement must be of the following types:

- fuel cells;
- tidal power;
- solar arrays and installations;
- wind power installations;
- geothermal installations;
- hydroelectric generators that meet all state and federal fish passage requirements; or
- biomass generators, including generators fueled by landfill gas.

In addition, except for wind power installations, the generating resource must not have a nameplate capacity that exceeds 100 MW. Finally, the resource must satisfy one of four vintage requirements. These are:

1) renewable capacity with an in-service date after September 1, 2005;

2) renewable capacity that has been added to an existing facility after September 1, 2005;

3) renewable capacity that has not operated for two years or was not recognized as a capacity resource by the ISO-NE or the NMISA and has resumed operation or has been recognized by the ISO-NE or NMISA after September 1, 2005; or

4) renewable capacity that has been refurbished after September 1, 2005 and is operating beyond its useful life or employing an alternate technology that significantly increases the efficiency of the generation process.[3]

The implementing rules (Chapter 311, § 3(B)(4)) establish a certification process that requires generators to pre-certify facilities as a new renewable resource

---

[2] The "new" renewable resource requirement was designated as Class I because the requirement is similar to portfolio requirements in other New England states that are referred to as "Class I." Maine's pre-existing "eligible" resource portfolio requirement is designated as Class II.

[3] The 125th Maine State Legislature amended 35-A M.R.S.A. § 3210, sub-section 2, B-4, to provide additional guidance on the meaning of the term refurbish. The new language states that "'to refurbish' means to make an investment in equipment or facilities, other than for routine maintenance and repair, to renovate, reequip or restore the renewable capacity resource." P.L. 2011, ch. 413, § 1.

under the requirements of the rule and provides for a Commission determination of resource eligibility on a case-by-case basis.[4] The rule contains the information that must be included in a petition for certification and specifies that the Commission shall provide an opportunity for public comment if a petitioner seeks certification under vintage categories 2, 3 and 4. Finally, the rule specifies that the Commission may revoke a certification if there is a material change in circumstance that renders the generation facility ineligible as a new renewable resource.

B. Petition for Certification

On June 24, 2010, Covanta Maine LLC (Covanta), a subsidiary of Covanta Energy, filed a petition to certify its biomass facility located in Jonesboro, Maine (Facility) as a Class I renewable resource. The facility is a 27.5 MW circulating fluidized bed plant combusting wood chips, bark, tree limbs and tops, mill residue, and other forest-related biomass and was commissioned in 1987. Covanta sought Class I certification under Section 3(B)(3)(d), the refurbishment vintage category, of Chapter 311 of the Commission rules. In response to a June 30, 2010 request by Staff for additional information, Covanta provided, on July 12, 2010, a detailed list of the major refurbishment projects. In addition, at the request of Staff, Covanta provided, on October 18, 2010, information regarding the accounting treatment of the listed projects.[5]

On November 12, 2010, the Commission issued an Order denying Class I certification on the premise that while the facility was operating beyond its previous useful life, it had not been refurbished. The Commission noted, in its decision that the level of refurbishment investment, relative to the overall value of the facility, was below 25%. Covanta appealed the Commission decision to the Law Court.

On June 5, 2012, the Maine Supreme Judicial Court issued its decision in the case *Covanta Maine, LLC v. Public Utilities Commission*, 2012 ME 74 (Covanta Decision). The Court remanded the case, stating that the Commission improperly denied certification, as the "statute does not require any minimum investment threshold, and imposing this requirement on Covanta was an error of law." *Covanta Decision*, 2012 ME 74, ¶ 16. The Court stated that the Commission must "make this determination by examining the nature and character of the expenditures without any quantitative requirement related to the amount spent or the ratio of the expenditures to the total value of the facility" *Covanta Decision*, 2012 ME 74, ¶ 17 and must "evaluate the

---

[4] In the *Order Adopting Rule* at 6, the Commission noted that a request for certification can be made at any time so that a ruling can be obtained before a capital investment is made in a generation facility.

[5] Covanta purchased this plant and a nearly identical plant located in West Enfield, Maine for a combined price of $52 million from co-owners Ridgewood Maine, LLC and Indeck Energy Services, Inc. in December, 2008, and does not have access to the accounting records prior to the purchase.

expenditures to determine whether they were made for the purpose of repair or maintenance or for investment in equipment of facilities." *Covanta Decision*, 2012 ME 74, ¶19.

On August 14, 2012, Covanta filed an Amended Petition for consideration with the Commission. The Amended Petition states that the original facility had many design flaws that have been, and continue to be, rectified and improved. Since September 1, 2005, Covanta stated that it expended approximately $6 million to implement major U-beam and T-beam design changes and refurbishments; a complete replacement of the majority of the convection pass waterwalls and the superheaters; total replacement of the bed letdown valves and screws; a major design change to the Facility's ash system; a substantial generator-turbine refurbishment in 2007; and significant electrical upgrades to the Facility's battery systems, programmable logic controllers, and motor protection relays. Covanta provided additional information on the character of the claimed refurbishment investments on February 12, 2013 and April 12, 2013 in response to Staff information requests. In additional comments filed in February, Covanta stated additional investments at Jonesboro include expansion of the fuel yard in 2010 and replacement of the stack in 2011.

The Commission provided interested persons with an opportunity to comment on the amended Covanta petition. The Commission received no comments.

III. DECISION

After considering Covanta's Amended Petition and the additional information provided by Covanta in response to Staff's questions, we find that Covanta's Jonesboro Facility has been refurbished and is operating beyond its useful life pursuant to Chapter 311, section 3(B)(3)(d), and therefore qualifies as a Maine Class I New Renewable Resource. There is no question in this proceeding that the Facility is operating beyond its useful life. The issue before us is whether the Facility has been refurbished within the meaning of the statute.

Covanta's Amended Petition seeks certification under the refurbishment prong of the vintage criteria contained in Chapter 311, section 3(B)(3)(d). This refurbishment prong is also contained in the definition of "New" as applied to any renewable capacity resource in 35-A, MRSA § 3210(2)(B-4). The refurbishment prong defines a new renewable resource as a generation facility that:

> has been refurbished after September 1, 2005 and is operating beyond its previous useful life or is employing an alternate technology that significantly increases the efficiency of the generation process.

This prong is a two part test that requires the Commission to first determine whether the facility has been "refurbished," and then to determine whether the facility is operating beyond its previous useful life or employing an alternate technology that significantly increases the efficiency of the generation process.

To clarify the meaning of refurbishment, the Legislature subsequently enacted an amendment to the refurbishment prong of the vintage requirement. Pursuant to the statutory amendment, "to refurbish" means "to make an investment in equipment or facilities, other than for routine maintenance and repair, to renovate, reequip or restore the renewable capacity resource." 35-A M.R.S.A. § 3210(2)(B-4).[6]

As stated by the Maine Law Court, the purpose of the refurbishment provision is to encourage the preservation of older existing renewable generation facilities by creating an incentive for owners to make the investments necessary to preserve and extend the useful lives of these older facilities. *Covanta Decision,* 2012 ME 74, ¶ 16.

Pursuant to the Law Court's analysis in Covanta, in the course of making its determination regarding whether there has been a refurbishment, the Commission must consider the nature and character of the expenditures to determine whether they were made for the purpose of repair or maintenance or for investment in equipment or facilities. Id. at ¶¶ 17, 19. The Court stated that the Commission must "make this determination by examining the nature and character of the expenditures without any quantitative requirement as to the amount spent or the ratio of the expenditures to the total value of the facility" Id. at ¶ 17.The Commission's practice in assessing whether a generation facility has been refurbished is to examine a variety of factors, including, but not limited to, the condition of the facility prior to the investments and the nature of the expenditures to determine whether they appear to be related to routine maintenance and repair. While the Law Court found that the Commission must make a determination on refurbishment "by examining the nature and character of the expenditures without any quantitative requirement related to the amount spent or the ratio of the expenditures to the total value of the facility," Id. at ¶ 17, the Commission still reviews the magnitude of post-September 1, 2005 expenditures as part of our determination regarding the character of the investment and whether the investment is more in the nature of routine maintenance and repair or refurbishment.

The Law Court noted that while tax accounting treatment "is not dispositive in deciding whether an expenditure is a repair or maintenance item or a

---

[6] The Commission interprets this language as making "explicit the Commission's existing practice of disregarding investments made for routine maintenance and repair when looking at whether a facility has been refurbished." *Verso Bucksport LLC Request for Certification for RPS Eligibility*, Docket No. 2011-102, Order Granting New Renewable Resource Certification at 7, fn. 10 (Nov. 23, 2011).

refurbishment investment," it also made clear that it is a factor that the Commission can consider when making its determination as to whether an expenditure was related to maintenance or refurbishment. Id. at ¶ 18. Accordingly, we arrive at our final determination through an examination of the nature and character of the expenditures, of which tax treatment is one, but not the sole, indicator.

Expenditures that have been expensed for tax purposes are more likely to be related to maintenance and repair than refurbishment. Covanta argues in its amended petition that "considerations used by accountants and auditors in treating certain expenditures as capitalized or expensed has absolutely nothing to do with the purposes of the Maine RPS or whether the expenditures actually constitutes a refurbishment that extends the useful life of the Facility within the meaning of the RPS statute." Covanta Amended Petition at 17. However, in its 2010 annual report, Covanta states that, "[a]dditions, improvements and major expenditures are capitalized if they increase the original capacity or extend the remaining useful life of the original asset more than one year. Maintenance repairs and minor expenditures are expensed in the period incurred." Moreover, a November, 2010 Internal Revenue Service (IRS) guide (Capitalization v Repairs – Audit Technique Guide), makes clear that amounts incurred to add value or substantially prolong the useful life of plant or equipment or adapt it to a new or different use must be capitalized and that amounts incurred for incidental repairs and maintenance are not capital expenditures.

Covanta indicated that it does not have tax records available to it for the period prior to when it assumed ownership of the Facility in 2009. The records produced by Covanta for 2009 and 2010 indicate that the only investments at the Jonesboro Facility that were capitalized for tax purposes in 2009 were related to the convection pass waterwall, primary and secondary superheaters, the U-beams, and the stack replacement projects. In the absence of actual records for the period between September 1, 2005 and 2009, we presume that investments of a similar nature were also likely capitalized. Accordingly, the U-beam investment in 2006 and furnace and convection waterwall investments in 2008 were likely capitalized. However, in examining the other claimed refurbishment expenditures (such as expenditures to maintain the Facility's electrical system), and without any countervailing tax records to suggest otherwise, we find these to be in the nature of maintenance or repair expenditures rather than refurbishment expenditures.[7]

---

[7] The nature of the turbine overhaul conducted in 2007, whether it was capitalized or not, does not constitute a refurbishment investment for the same reason that the turbine overhaul conducted at the ReEnergy Fort Fairfield Facility does not constitute a refurbishment (see *ReEnergy Fort Fairfield LLC Request for Certification for RPS Eligibility*, Docket No. 2011-374, Order Granting New Renewable Resource Certification (June 14, 2013) (ReEnergy Order)). Turbine overhauls, even major overhauls, unless resulting in clear refurbishment of the turbine generator (e.g., replacement of the turbine rotor and governor, see *Verso Bucksport LLC Request for Certification for RPS Eligibility*, Docket No. 2011-102, Order Granting New Renewable

The U-beam replacements made in 2006 and 2009 at the Jonesboro Facility[8] were conducted to rectify what Covanta claims is a design flaw that causes the U-beams, which in other facilities may last much longer, to only have an expected life of about five years. Thus, replacing the U-beams has become a regularly required investment at this facility, with an expected useful life of around five years, even when utilizing new and purportedly improved arrangements and materials at each repair. The now routine nature of this investment at this facility, while perhaps non-routine in another context at another facility, suggests to us that replacement of the U-beams is in the nature of major routine maintenance or repair[9] rather than refurbishment. We therefore find that the periodic U-beam replacement at Jonesboro does not constitute a refurbishment.

The remaining capital expenditures at the Jonesboro Facility are the replacement of the convection pass waterwalls, primary and secondary superheaters, and the stack. We find f these expenditures, in aggregate, are substantial enough to constitute "an investment in equipment or facilities, other than for routine maintenance and repair, to renovate, reequip, or restore the renewable capacity resource." Specifically, replacement of the majority of the convection pass waterwalls and the superheaters, combined with replacement of the Facility's stack,[10] constitutes refurbishment of the Jonesboro Facility.

For these reasons, we grant certification of Covanta's Jonesboro biomass facility as a Class I new renewable resource eligible to satisfy Maine's new renewable resource portfolio requirement pursuant to Chapter 311, § 3(B) of the Commission rules.

Resource Certification at 7 (Nov. 23, 2011)), constitute extended routine maintenance. Commissioner Vannoy does not join this finding and would also include the turbine overhaul as a refurbishment investment (for the same reason discussed in the ReEnergy Order at 16).

[8] The U-beams at this facility have been replaced at various times prior to 2006 as well (February 6, 2013 Affidavit of Ken Nydam at 3).

[9] Commissioners Welch and Littell view the periodic U-beam expenditures as being akin to substantial routine maintenance, similar in concept to major turbine overhauls. Commissioner Vannoy does not view the periodic U-beam expenditures as akin to major turbine overhauls, but rather as expenditures that have become an expected repair. Under either interpretation, the U-beams do not constitute a refurbishment.

[10] The Facility's stack had not yet been replaced or been proposed to be replaced when we initially denied the Jonesboro Facility as a refurbished facility eligible for Maine Class I certification.

Dated at Hallowell, Maine, this 17th day of June, 2013.

BY ORDER OF THE COMMISSION

/s/ Harry Lanphear
Harry Lanphear
Administrative Director

COMMISSIONERS VOTING FOR: Welch
Littell
Vannoy

NOTICE OF RIGHTS TO REVIEW OR APPEAL

5 M.R.S. § 9061 requires the Public Utilities Commission to give each party to an adjudicatory proceeding written notice of the party's rights to review or appeal of its decision made at the conclusion of the adjudicatory proceeding. The methods of review or appeal of PUC decisions at the conclusion of an adjudicatory proceeding are as follows:

1. Reconsideration of the Commission's Order may be requested under Section 11(D) of the Commission's Rules of Practice and Procedure (65-407 C.M.R. 110) within **20** days of the date of the Order by filing a petition with the Commission stating the grounds upon which reconsideration is sought. Any petition not granted within **20** days from the date of filing is denied.

2. Appeal of a final decision of the Commission may be taken to the Law Court by filing, within **21** days of the date of the Order, a Notice of Appeal with the Administrative Director of the Commission, pursuant to 35-A M.R.S. § 1320(1)-(4) and the Maine Rules of Appellate Procedure.

3. Additional court review of constitutional issues or issues involving the justness or reasonableness of rates may be had by the filing of an appeal with the Law Court, pursuant to 35-A M.R.S. § 1320(5).

Note: The attachment of this Notice to a document does not indicate the Commission's view that the particular document may be subject to review or appeal. Similarly, the failure of the Commission to attach a copy of this Notice to a document does not indicate the Commission's view that the document is not subject to review or appeal.

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	)	

After review of the Initial Part 70 License application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A, Section 344 and Section 590, the Department finds the following facts:

I. Registration

A. Introduction

FACILITY	Indeck Maine Energy, L.L.C. –Jonesboro (IMEJ)
LICENSE NUMBER	A-127-70-A-I
LICENSE TYPE	Initial Part 70 License
SIC CODES	4911
NATURE OF BUSINESS	Electrical power generation
FACILITY LOCATION	Route 1A, Jonesboro, Maine
DATE OF LICENSE ISSUANCE	September 5, 2001
LICENSE EXPIRATION DATE	September 5, 2006

B. Emission Equipment

The following emission units are addressed by this Part 70 License:

EMISSION UNIT ID	UNIT CAPACITY	UNIT TYPE
Boiler 1	361.5 MMBtu/hr	Wood fired boiler
Diesel Generator	2.54 MMBtu/hr	Emergency Generator
Diesel Fire Pump	1.9 MMBtu/hr	Emergency Fire Pump

IMEJ has additional insignificant activities not listed in the emission equipment table above, but can be found in the application submitted in February of 1998.

C. Application Classification

The application for IMEJ does not include the licensing of increased emissions or the installation of new or modified equipment; therefore the license is considered to be an Initial Part 70 License issued under Chapter 140 of the Department's regulations for a Part 70 source.

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**2**	

II. EMISSION UNIT DESCRIPTION

Process Description

The IMEJ Jonesboro plant consists of a fuel handling system, circulating fluidized bed (CFB) wood fired boiler with a multi-cyclone followed by an electrostatic precipitator.

Biomass fuel (bark and wood chips, hereinafter referred to only as wood chips) are received from enclosed trailer vans and off loaded by hydraulic-dumper lifts into a receiving hopper. The wood is belt conveyed through a magnetic separator and a disc screen classifier. Any oversize wood is "hogged" to wood size specifications. The chips are conveyed to the fuel yard where a front-end loader is used to manage the storage pile and to feed the chip reclaimer.

The reclaimed chips are conveyed to a fuel metering bin located at the front of the boiler. Fuel is fed to the boiler by four parallel trains consisting of a triple screw metering feeder, a rotary seal valve and an injector screw feeder. The chips enter a bed of refractory sand which is fluidized by the combustion air. The mixing action of the sand promotes efficient combustion.

Propane is used to heat the primary air, which raises the fluidized bed temperature to that required to ignite the main fuel. Primary and overfire air are supplied by a single forced draft fan and are heated in a tubular heater.

Combustion gasses from the boiler pass through a multi-cyclone followed by an electrostatic precipitator (ESP) and vent through a 136' AGL stack.

Ash from all collection points except the bed drain and the ESP hoppers is re-injected pneumatically into the boiler. Ash from the bed drain is collected by a mechanical (screw) system and stored in a one cubic yard dumpster. Ash from the ESP is stored in a 30 cubic-yard silo which vents to a baghouse. Ash from the silo is wetted before discharge to enclosed transport vehicles. Ash is disposed of in accordance with Department rules.

The chip storage pile does not exceed 40' above ground level (AGL) in height and is not a point of concern for fugitive particulate matter (PM) emissions due to the chip size and the high moisture content of the chips. When necessary, the pile surface is wetted to prevent fugitive PM emissions from exceeding 5% opacity.

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**3**	

A. Boiler 1

Boiler 1 is a Babcock & Wilcox model CFB-0002 circulating fluidized bed boiler, manufactured in 1985 and installed in 1986 with a maximum design heat input capacity of 361.5 MMBtu/hr. The boiler is wood fired and uses propane for startup and flame stabilization. Boiler 1 is subject to the provisions of NSPS requirement 40 CFR Part 60, Subpart Db. Boiler 1 serves a generator with a maximum generating capacity of approximately 27 MW.

The operation and maintenance of a multiple centrifugal cyclone separator followed by an electrostatic precipitator (ESP) are used to control particulate emissions from Boiler 1. IMEJ shall operate, at a minimum, the number of ESP chambers and number of fields per chamber that operated during the most recent demonstration of compliance with the licensed particulate emission limits.

A continuous emissions monitoring system (CEMS) is used at IMEJ to demonstrate compliance with NO_x emission rates. A continuous opacity monitor (COM) is used to demonstrate compliance with opacity requirements. An oxygen (O_2) CEM is used to measure diluent oxygen of the flue gas.

Streamlining

1. 40 CFR Part 60.43b(c)(1), (f), (g) and MEDEP Regulations Chapter 103 regulate particulate matter (PM). However, Best Practical Treatment (BPT) in the current license is more stringent.

2. MEDEP Chapter 101 is applicable for visible emissions. However, 40 CFR Part 60.43b(f) and BPT in the current license are more stringent.

Periodic Monitoring

Stack testing for particulate matter emission rates once every two years.

Propane use record keeping.

Electrostatic Precipitator (ESP) primary and secondary voltages and currents shall be recorded as periodic monitoring for particulate matter emissions.

Documentation that the NO_x CEM is continuously accurate, reliable and operated in accordance with Chapter 117, 40 CFR Part 51 Appendix P, and 40 CFR Part 60 Appendices B and F.

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**4**	

Demonstrated NO_x and opacity limits through CEM, periodic monitoring and COM data provides reasonable assurance the CO and VOC emission limits are being met.

C. Miscellaneous Emissions Units

Miscellaneous emission units include the following: A 2.536 MMBtu/hr Emergency Diesel Generator and a 1.902 MMBtu/hr Diesel Fire Pump.

Streamlining

Chapter 101, Section 2(C) is applicable for visible emissions; however, the BPT opacity limit is more stringent.

Periodic Monitoring

Periodic monitoring shall consist of record keeping which includes records of fuel use through purchase receipts indicating amount (gallons) and percent sulfur by weight (documented through supplier fuel receipts) for the diesel units.

Based on the type and amount of fuel for which the diesel units were designed, and operating in a manner consistent with good pollution control practices, it is unlikely the diesel unit will exceed opacity limits. Therefore, periodic monitoring by the source for opacity in the form of visible emission testing in accordance with 40 CFR Part 60, Appendix A, Method 9 is not required. However, neither the EPA nor the state is precluded from performing its own testing and may take enforcement action for any violations discovered.

D. General Process Sources

General processes at IMEJ include the receiving hopper, conveyors, wood chipper and transfer points.

Periodic Monitoring

Based on best management practices, it is unlikely the fugitive emission sources will exceed the opacity limits. Therefore, periodic monitoring for opacity in the form of visible emissions is not required. However, neither the EPA nor the state is precluded from performing its own testing and may take enforcement action for any violations discovered.

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**5**	

E. Fugitive Emissions

Fugitive particulate matter sources at IMEJ include material stockpiles and roadways.

Periodic Monitoring
Based on best management practices and wetting roads and storage piles with water when appropriate, it is unlikely the fugitive emission sources will exceed the opacity limits. Therefore, periodic monitoring for opacity in the form of visible emission is not required. However, neither the EPA nor the state is precluded from performing its own testing and may take enforcement action for any violations discovered.

F. Facility Emissions

The following total licensed annual emissions for the facility are based on the following raw materials used. All usages are based on a 12 month rolling total.

- Boiler #1 wood use of 170,968 tons per year (8,500 Btu/lb, 5.56% moisture, or equivalent) based on firing 8,040 hours per year.
- Boiler #1 Propane use of 250,000 gallons per year of propane.
- Emergency Diesel Generator fuel use of 9,188 gallons per year of diesel fuel (0.05% sulfur by weight) based on 500 hours per year of operation.
- Diesel Fire Pump fuel use of 6,891gallons per year of diesel fuel (0.05% sulfur by weight) based on 500 hours per year of operation.

(all based on a 12 month rolling total)

Total Allowable Annual Emissions for the Facility
(used to calculate the license fee)

Pollutant	Tons/Year
PM	45.1
PM_{10}	45.1
SO_2	44.4
NO_x	249.9
CO	249.9
VOC	145.8

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**6**	

III. AIR QUALITY ANALYSIS

A. Overview

A combination of screening and refined modeling was performed to show that the applicant, in conjunction with other sources, would not cause or contribute to violations of Maine Ambient Air Quality Standards (MAAQS) for SO_2, PM_{10}, NO_2, and CO or Class I and Class II increments for SO_2, PM_{10} and NO_2.

B. Model Inputs

The ISCST3 model, in the simple terrain mode, using sequential meteorological data and a network of receptor grids, was used along with the Valley subroutine of the SCREEN3 model (SCREEN3-VALLEY) to address standards in all areas. In addition, the SCREEN3 model was used to calculate cavity impacts.

All modeling was performed in accordance with all applicable requirements of the Maine Department of Environmental Protection, Bureau of Air Quality (MEDEP-BAQ) and the United States Environmental Protection Agency (USEPA).

A valid 5-year hourly meteorological off-site database was used in the refined modeling. The primary wind data was collected at a height of 13 meters at the Bangor MEDEP-BAQ meteorological site during the 5-year period 1985-1989. Bangor FAA wind data was used to fill in missing Bangor MEDEP-BAQ wind data. Bangor FAA surface temperature data was used. Hourly cloud cover, ceiling height and surface wind speed data also from the Bangor FAA were used to calculate stability. Hourly mixing heights were derived from Caribou NWS surface and upper air data.

Stack parameters for the applicant are listed in Table IV-1. The modeled stack at the applicant's facility is less than the respective formula GEP stack height, therefore, the applicant's stack was modeled with the appropriate algorithms as required. Because the applicant's stack height is less than H + 0.5L (where H is the height of the controlling structure and L is the lesser of the height or maximum projected width of that structure), a SCREEN3 cavity analysis was also performed.

Table IV-1. Stack Parameters

Facility/ Stack	Stack Base Elev. (m)	Stack Ht. (m)	GEP Stack Ht. (m)	Stack Dia. (m)	UTM E (km)	UTM N (km)
Indeck, Jonesboro						
Main Stack	42.67	41.45	80.12	2.74	615.200	4948.100

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	7	

Emission parameters for the applicant's facility are listed in Table IV-2. For the purpose of determining NO_2 and PM_{10} impacts, all NO_x and PM emissions were conservatively assumed to convert to NO_2 and PM_{10}, respectively.

Table IV-2. Emission Parameters

Facility / Stack	Averaging Period(s)	SO_2 (g/s)	PM_{10} (g/s)	NO_2 (g/s)	CO (g/s)	Temp (K)	Stack Vel. (m/s)
Indeck, Jonesboro Main Stack Operating Load Scenarios							
Maximum (100%)	All	1.39	1.36	13.70	15.90	408.16	12.80
Typical (75%)	All	1.04	1.02	10.28	11.93	408.16	9.60
Minimum (50%)	All	0.70	0.68	6.85	7.95	408.16	6.40

C. Applicant's modeled impacts

A SCREEN3 cavity analysis was performed for the applicant's facility. Results show the applicant's cavity impacts (0.0 $\mu g/m^3$) are below all applicable significance levels and therefore below any applicable MAAQS and any Class I or Class II increment.

Sequential ISCST3 modeling, in the simple terrain mode, using all five (5) years (1985-89) of meteorological data was performed for the maximum, typical (75% of maximum operating case emission and stack velocity) and minimum (50% of maximum operating case emission and stack velocity) operating cases for the applicant alone. In addition, all receptors with elevations above the applicant's stack top elevation were remodeled using SCREEN3-VALLEY.

Results are summarized in Table IV-3 for simple terrain receptors and Table IV-4 for receptors above the applicant's stack top elevation. Significance levels were exceeded only for 24-hour SO_2, 24-hour PM_{10} and annual NO_2 averaging periods in simple terrain and for the annual NO_2 averaging period in terrain above the applicant's stack top elevation. No further analysis was required for all other pollutant/terrain combinations whose impacts were below the respective significance levels.

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**8**	

TABLE IV-3. Maximum Indeck, Jonesboro Alone Predicted Simple Terrain Impacts

Pollutant/ Averaging Period	ISCST3 Maximum Impact ($\mu g/m^3$)	Operating Load Case	Receptor UTM-E (km)	Receptor UTM-N (km)	Receptor Elevation (m)	Significance Level ($\mu g/m^3$)
SO_2 3-hr	18.75	100%	614.875	4947.875	54.86	25
SO_2 24-hr	**6.46**	100%	614.875	4947.875	54.86	5
SO_2 Annual	0.42	50%	615.875	4947.875	54.86	1
PM_{10} 24-hr	**6.32**	100%	614.875	4947.875	54.86	5
PM_{10} Annual	0.41	50%	615.875	4947.875	54.86	1
NO_2 Annual	**4.13**	50%	615.875	4947.875	54.86	1
CO 1-hr	314.97	50%	614.875	4947.875	54.86	2000
CO 8-hr	115.4	100%	614.875	4947.875	54.86	500

TABLE IV-4. Maximum Indeck, Jonesboro Alone Predicted Impacts on Terrain Above Stack Top Elevation.

Pollutant/ Averaging Period	Maximum Impact ($\mu g/m^3$)	MODEL/ Operating Load Case	Receptor UTM-E (km)	Receptor UTM-N (km)	Receptor Elevation (m)	Significance Level ($\mu g/m^3$)
SO_2 3-hr	2.28	ISC* 100%	619.090	4953.280	91.44	25
SO_2 24-hr	0.45	S3V# 100%	619.070	4953.500	103.63	5
SO_2 Annual	0.15	S3V# 100%	619.070	4953.500	103.63	1
PM_{10} 24-hr	0.44	S3V# 100%	619.070	4953.500	103.63	5
PM_{10} Annual	0.14	S3V# 100%	619.070	4953.500	103.63	1
NO_2 Annual	**1.43**	S3V# 100%	619.070	4953.500	103.63	1
CO 1-hr	65.22	ISC* 100%	604.990	4954.398	141.12	2000
CO 8-hr	14.56	S3V# 100%	619.070	4953.500	103.63	500

Note:
Valley subroutine of the SCREEN3 Model
* ISCST3

D. Combined Source Modeling

Because modeled impacts from the applicant's facility were greater than significance levels for 24-hour SO_2, 24-hour PM_{10} and annual NO_2 averaging periods, other sources not explicitly included in the modeling analysis must be accounted for by using representative background concentrations for the area. Background values were determined in conjunction with the MEDEP-BAQ, Field Services Division for the rural Eastern Maine area. These background values are listed in Table IV-5.

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	9	

TABLE IV-5. Background Concentrations (µg/m³)

Pollutant	Averaging Period	Background	Date
SO_2	24-hr	29	1989[1]
PM_{10}	24-hr	42	6/11/94[2]
NO_2	Annual	11	1995[3]

Notes:
1 Dedham - Bald Mountain
2 Baileyville (Background site).
3 Cape Elizabeth TLSP site.

MEDEP-BAQ determined that no other sources in the area had a significant concentration gradient in the applicant's significant impact area, therefore only conservative background concentrations were required to be added to the applicant's impacts in the final compliance demonstration for MAAQS. Table IV-6 summarizes maximum combined source impacts in simple, intermediate and complex terrain. All combined 24-hour SO_2, 24-hour PM_{10} and annual NO_2 averaging period impacts from the applicant's facility and other sources including background were below the respective MAAQS.

Table IV-6. Maximum Combined Source Predicted Impacts

Pollutant/ Averaging Period	Maximum Impact (µg/m³)	Receptor UTM-E (km)	Receptor UTM-N (km)	Receptor Elevation (m)	Back-ground (µg/m³)	Max Total Impact (µg/m³)	MAAQS (µg/m³)
SO_2 24-hr	6.46	614.875	4947.875	54.86	29	**35.46**	230
PM_{10} 24-hr	6.32	614.875	4947.875	54.86	42	**48.32**	150
NO_2 Annual	4.13	615.875	4947.875	54.86	11	**15.13**	100

E. Class II Increment

No other sources were included in the Class II increment analysis along with the applicant. Results in Table IV-7 show compliance with Class II increments by a wide margin.

Table IV-7. Maximum Combined Source Predicted Increment

Pollutant/ Averaging Period	Maximum Impact (µg/m³)	Receptor UTM-E (km)	Receptor UTM-N (km)	Receptor Elevation (m)	Class II Increment (µg/m³)
SO_2 24-hr	6.46	614.875	4947.875	54.86	91
PM_{10} 24-hr	6.32	614.875	4947.875	54.86	30
NO_2 Annual	4.13	615.875	4947.875	54.86	25

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**10**	

F. Class I Increment

The applicant's facility maximum 24-hour SO_2, 24-hour PM_{10} and annual NO_2 increment impacts were assessed for the following Class I areas using ISCST3 and SCREEN3-VALLEY models:

- Moosehorn National Wildlife Refuge Edmunds Division (MNWR1) 28.3 km NE
- Moosehorn National Wildlife Refuge Baring Division (MNWR2) 43.7 km NE.
- Acadia National Park (ANP) 49.2 km SW
- Roosevelt Campobello International Park (RCIP) 53.4 km NE

For each Class I area, one receptor was used in the modeling analysis located at the closest point in the Class I area to the applicant's facility. The elevation of each receptor was conservatively set to the highest elevation in the Class I area for the ISCST3 model runs and the higher of the plume centerline minus 10 meters elevation or highest elevation in the Class I area for the SCREEN3-VALLEY model. All terrain in the RCIP and MNWR1 Class I areas were below stack top elevation therefore only the ISCST3 model was used in those areas.

Table IV-8 summarizes modeled impacts from the applicant's facility alone in Class I areas. All 24-hour SO_2, 24-hour PM_{10} and annual NO_2 averaging period Class I increment impacts were 4% of the Class I increment in the ISCST3 sequential modeling analysis. Only annual NO_2 increment impacts in MNWR2 and ANP Class I areas were above the 4% levels in the SCREEN3-VALLEY modeling analysis. Because SCREEN3-VALLEY is a screening technique and the impacts are slightly above the 4% levels, it is expected that a refined complex terrain model would be below the 4% level in all Class I areas from the applicant's facility emissions. Therefore, MEDEP-BAQ is convinced that emissions from the applicant's facility will not cause or contribute to any Class I increment violations.

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**11**	

Table IV-8. Maximum Increment Consumption in Class I Areas, µg/m³.

Pollutant/ Averaging Period	CLASS I Area	Applicant Alone Class I Increment ISCST3 Impact	ISCST3 % of std	SCREEN3 (Valley) Impact	SCREEN3 (Valley) % of std	Class I Increment Standards
SO_2 24-hr	MNWR1	0.15	3.1%	na	na	5
	MNWR2	0.11	2.1%	0.07	1.5%	
	ANP	0.05	1.0%	0.06	1.3%	
	RCIP	0.08	1.7%	na	na	
PM_{10} 24-hr	MNWR1	0.15	1.9%	na	na	8
	MNWR2	0.10	1.3%	0.07	0.9%	
	ANP	0.05	0.6%	0.06	0.8%	
	RCIP	0.08	1.0%	na	na	
NO_2 Annual	MNWR1	0.092	3.7%	na	na	2.5
	MNWR2	0.087	3.5%	**0.236**	**9.5%**	
	ANP	0.017	0.7%	**0.199**	**7.9%**	
	RCIP	0.065	2.6%	na	na	

Note:
na Not applicable

G. Summary

In summary, a demonstration has been shown that the applicant's facility in its current and future configuration will not cause or contribute to a violation of any MAAQS or any Class I or Class II increment.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that emissions from this sources:

- will receive Best Practical Treatment;
- will not violate applicable emissions standards
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants the Part 70 License A-127-70-A-I pursuant to MEDEP Chapter 140 and the preconstruction permitting requirements of MEDEP Chapter 115 and subject to the standards and special conditions below.

All federally enforceable and State-only enforceable conditions in existing air licenses previously issued to IMEJ pursuant to the Department's preconstruction permitting requirements in Chapters 108 or 115 have been incorporated into this Part 70 license, except for such conditions that MEDEP has determined are obsolete, extraneous or otherwise environmentally insignificant, as explained in the findings of fact accompanying this permit. As such the conditions in this license supercede all previously issued air license conditions.

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**12**	

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in Chapter 115 for making such changes and pursuant to the applicable requirements in Chapter 140.

For each standard and special condition which is state enforceable only, state-only enforceability is designated with the following statement: **Enforceable by State-only**.

STANDARD CONDITIONS

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emission units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions and this license;
(Title 38 MRSA §347-C)

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 140;

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both;

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request; **Enforceable by State-only**

(5) The licensee shall pay the annual air emissions license fee to the Department, calculated pursuant to Title 38 MRSA §353;

(6) The Part 70 license does not convey any property rights of any sort, or any exclusive privilege;

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**13**	

(7) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions;
(40 CFR §60.11(d))

(8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request or in accordance with other provisions of this license;

(9) The licensee shall comply with all terms and conditions of the air emission license. The submission of notice of intent to reopen for cause by the Department, the filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for the renewal of a Part 70 license or amendment shall not stay any condition of the Part 70 license.

(10) All terms and conditions are enforceable by EPA and citizens under the CAA unless specifically designated as state enforceable.

(11) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license;

(12) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

(a) perform stack testing under circumstances representative of the facility's normal process and operating conditions:

(i) within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring, or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions;

(ii) to demonstrate compliance with the applicable emission standards; or

(iii)pursuant to any other requirement of this license to perform stack testing.

(b) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emissions testing; and

(c) submit a written report to the Department within thirty (30) days from the date of test completion.

Enforceable by State-only

(13) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicates emissions in excess of the applicable standards, then:

(a) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

(b) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there where intervening days during which no violation occurred or that the violation was not continuing in nature; and

(c) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on a interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

Enforceable by State-only

(14) Notwithstanding any other provision in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
(40 CFR §60.11(g))

(15) Compliance with the conditions of this Part 70 license shall be deemed compliance with any Applicable requirement as of the date of license issuance and is deemed a permit shield, provided that:

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**15**	

(a) Such Applicable and state requirements are included and are specifically identified in the Part 70 license, except where the Part 70 license term or condition is specifically identified as not having a permit shield; or

(b) The Department, in acting on the Part 70 license application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the Part 70 license includes the determination or a concise summary, thereof.

Nothing in this section or any Part 70 license shall alter or effect the provisions of Section 303 of the CAA (emergency orders), including the authority of EPA under Section 303; the liability of an owner or operator of a source for any violation of Applicable requirements prior to or at the time of permit issuance; or the ability of EPA to obtain information from a source pursuant to section 114 of the CAA.

(16) The licensee shall retain records of all required monitoring data and support information for a period of at least six (6) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Part 70 license.

(17) The licensee shall maintain records of all deviations from license requirements. Such deviations shall include, but are not limited to malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emission unit itself that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next working day, whichever is later, of such occasions and shall report the probable cause, corrective action, and any excess emissions in the units of the applicable emission limitation;

(18) Upon the written request of the Department, the licensee shall establish and maintain such records, make such reports, install, use, and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

(19) The licensee shall submit quarterly reports of any required monitoring as required by the Department. All instances of deviations from Part 70 license requirements must be clearly identified in such reports. All required reports must be certified by a responsible official.

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**16**	

(20) The licensee shall submit a compliance certification to the Department and EPA at least annually, or more frequent if specified in the Applicable requirement by the Department. The compliance certification shall include the following:

(a) The identification of each term or condition of the Part 70 license that is the basis of the certification;

(b) The compliance status;

(c) Whether compliance was continuous or intermittent;

(d) The method(s) used for determining the compliance status of the source, currently and over the reporting period; and

(e) Such other facts as the Department may require to determine the compliance status of the source;

(21) The Part 70 license shall be reopened for cause by the Department or EPA, prior to the expiration of the Part 70 license, if:

(a) Additional Applicable requirements under the CAA become applicable to the Part 70 major source with a remaining Part 70 license term of 3 or more years. However, no opening is required if the effective date of the requirement is later than the date on which the Part 70 license is due to expire, unless the original Part 70 license or any of its terms and conditions has been extended pursuant to Chapter 140;

(b) Additional requirements (including excess emissions requirements) become applicable to the Title IV source under the acid rain program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the Part 70 license;

(c) The Department or EPA determines that the Part 70 license contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms of conditions of the Part 70 license; or

(d) The Department or EPA determines that the Part 70 license must be revised or revoked to assure compliance with the Applicable requirements.

The licensee shall furnish to the Department within a reasonable time any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the Part 70 license or to determine compliance with the Part 70 license.

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**17**	

(22) No license revision or amendment shall be required, under any approved economic incentives, marketable licenses, emissions trading, or other similar programs or processes for changes that are provided for in the Part 70 license.

SPECIAL CONDITIONS

(23) Permit Shield for Non-Applicable Requirements

The following requirements have been specifically identified as not applicable based upon information submitted by the licensee in an application dated July 8, 1996.

	SOURCE	CITATION	DESCRIPTION	BASIS FOR DETERMINATION
a.	Boiler #1	40 CFR Parts 72 and 74	Acid Rain Provisions	IMEJ is exempt from the Acid Rain program.
b.	Boiler #1	40 CFR Part 60.45(j)	Compliance and performance test methods and procedures for sulfur dioxide.	IMEJ fires only propane as its secondary fuel.
c.	Boiler #1	40 CFR Part 60.44b	There is no NSPS NO_x limit if the affected facility has an annual capacity factor less than 10% for oil firing in combination with firing wood.	Boiler 1 has an annual capacity factor less than 10% for waste oil firing.
d.	Boiler #1	40 CFR Part 60.42b	Standard for sulfur dioxide.	Boiler #1 does not fire coal or oil.
e.	Boiler #1	Chapter 117	Source Surveillance RATA Requirements	The timeframe for a RATA to be perform has been altered due to these units being peaking units.
f.	Emergency Diesel Generator	Chapter 103, Section 2(B)(4)(c)	Particulate emission limit for fuel burning equipment < 3.0 MMBtu/hr.	Not applicable, unit is < 3.0 MMBtu/hr.
g.	Diesel Fire Pump	Chapter 103, Section 2(B)(4)(c)	Particulate emission limit for fuel burning equipment < 3.0 MMBtu/hr.	Not applicable, unit is < 3.0 MMBtu/hr.

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**18**	

(24) Boiler 1

A. Boiler 1 steam production shall be limited to 240,000 #/hr, at 1450 psig, averaged over a 2 hour period. IMEJ shall monitor and record steam flow continuously for Boiler #1. Note, "continuously" is defined as: Equally spaced data points with at least one data point for each successive 15 minute period. A minimum of three evenly spaced data points constitutes a valid hour.

The Steam Flow monitor (parametric monitor) must record accurate and reliable data. If the parameter monitor is recording accurate and reliable data less than 98% of the source-operating time within any quarter of the calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the parameter monitor was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.
[MEDEP Chapter 140, BPT]

B. The maximum heat input capacity from propane in Boiler #1 when firing propane for boiler start-up and flame stabilization shall not exceed 30.0 MMBtu/hr (320gal/hr). The flow rate shall be recorded hourly either by transmitter or manually. The maximum 12-month rolling total of propane fired in Boiler #1 shall not exceed 250,000 gallons.
[MEDEP Chapter 140, BPT]

C. Emissions from Boiler 1 shall not exceed the following limits when firing wood and/or propane:

Pollutant	lb/MMBtu	Origin and Authority
PM	0.03	MEDEP Chapter 140, BPT
PM_{10}	0.03	MEDEP Chapter 140, BPT
NO_x	0.30	MEDEP Chapter 138, NO_x RACT

NO_x: The 0.30 lb/MMBtu limit is based on a 24-hour daily block average, via CEM. A 24-hour block average shall be defined as midnight to midnight. In accordance with Chapter 138 § 3(O), periods of startup, shutdown, equipment malfunction and fuel switching shall not be included in determining 24-hour daily block arithmetic average emission rates. IMEJ shall maintain the NO_x CEM in accordance with Chapter 117. The CEM shall meet the monitoring requirements Condition (33). Boiler #1 shall be equipped with an oxygen (O_2) CEM that meets the criteria Condition (33).
[MEDEP Chapter 138, NO_x RACT]

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**19**	

D. Lb/hr emissions from Boiler 1 shall not exceed the following limits: [MEDEP Chapter 140, BPT]

Pollutant	lb/hour
PM	10.8
PM_{10}	10.8
SO_2	11.0
NO_x	108.45
CO	62.2
VOC	36.2

PM, PM_{10}, SO_2, NO_x, CO and VOC: Lb/hr limits are on a one (1) hour average and shall be demonstrated upon request by a stack test in accordance with this license and the following stack test methods:

PM and PM_{10} - 40 C.F.R. Part 60, App. A, Method 5
SO_2 - 40 C.F.R. Part 60, App. A, Method 6
NOx - 40 C.F.R. Part 60, App. A, Method 7
CO - 40 C.F.R. Part 60, App. A, Method 10
VOC - 40 C.F.R. Part 60, App. A, Method 25

E. Emissions from Boiler 1 shall vent to Stack 1 which shall be at least 136 feet AGL and represent at least 51.7% of the formula GEP stack height. [MEDEP Chapter 140, BPT]

F. Particulate matter (PM, PM_{10}) emissions from Boiler 1 shall be controlled by the operation and maintenance of a multiple centrifugal cyclone separator followed by an electrostatic precipitator (ESP).

IMEJ shall operate, at a minimum, the number of ESP chambers and number of fields per chamber that operated during the most recent demonstration of compliance with the licensed particulate emission limits. Data for the following points in the ESP shall be recorded once per day during operation:

1) Primary and secondary voltages on each field
2) Primary and secondary current on each field

[MEDEP Chapter 140, BPT]

Upon written notification to the Department, and in accordance with the Bureau of Air Quality's Air Emission Compliance Test Protocol, IMEJ may perform additional particulate emission testing to demonstrate compliance with alternative operating scenarios, but under no circumstances shall IMEJ be relieved of its obligation to meet its licensed emission limits.
[MEDEP Chapter 140, BPT]

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**20**	

G. **NO_x Emissions.**

IMEJ shall emit no more than 249.9 tons of NO_x per 12 month rolling total.

IMEJ shall determine the annual NO_x emissions from Boiler 1 as follows:

NO_x lb/MMBtu = (NO_x ppm) X (20.9) / (20.9 - % O_2) X
(1.194×10^{-7}) X (9240)

The NO_x ppm and percent O_2 are from the CEM. The (1.194×10^{-7}) is the conversion factor for ppm NO_x from 40 CFR Part 60, Method 19. The 9240 is the F factor for wood from 40 CFR Part 60, Method 19.

NO_x TPY = (NO_x lb/MMBtu) X (Boiler Heat Rate/megawatt) X
megawatts generated / 2000

NO_x lb/MMBtu is from the CEM.
Boiler Heat Rate is from Babcock & Wilcox as accepted by Plant Owners.
Megawatts generated will be from Bangor Hydro Electric's metering.

H. IMEJ shall operate Boiler 1 such that the opacity does not exceed 20% over a six minute average except for one six minute period per hour of not more than 27%, subject to the exemptions listed in MEDEP Chapter 101, Section 3(E) and 40 CFR Part 60.43b(g).

I. Compliance with the opacity limit shall be demonstrated by means of a continuous opacity monitoring system (COM). The COM shall be installed, certified and maintained in accordance with Condition (33). [MEDEP Chapter 140, BPT]

J. Boiler 1 is subject to 40 CFR Part 60 Subparts A and Db and IMEJ shall comply with the notification and record keeping requirements of 40 CFR Part 60.7.

40 CFR Part 60 Subpart Db requires maintaining records of the amount of each fuel combusted each day and calculation of annual capacity factor individually for wood and propane for each semiannual period. IMEJ shall maintain monthly fuel use records and determine an annual capacity factor on a 12 month rolling average basis with a new annual capacity calculated at the end of each calendar month.
[MEDEP Chapter 140, BPT]

Propane use shall be recorded hourly to demonstrate compliance.
[MEDEP Chapter 140, BPT]

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**21**	

K. Waste Oil.

IMEJ may use up to 500 gallons per year of waste oil in Boiler 1. Only waste oil generated on–site that meets the Department's criteria for specification or off-specification waste oil may be burned. IMEJ shall maintain records of the amount of waste oil burned in Boiler 1 on a 12 month rolling basis.
[MEDEP Chapter 140, BPT]

L. Should wind action on the wood chips pile result in visible emissions in excess of 5% opacity, the chips shall be controlled to eliminate visible emissions in excess of 5% opacity on a six (6) minute average.
[MEDEP Chapter 140, BPT] **Enforceable by State Only**

(25) Preventative Maintenance Log
A log for Boiler 1 shall be maintained showing preventative maintenance actions being performed.
[MEDEP Chapter 140, BPT] **Enforceable by State Only**

(26) General Process Sources
Visible emissions from any general process source (including chippers and wood chip handling) shall not exceed an opacity of 20% on a 6 minute block average basis, except for no more than one (1) six (6) minute block average in a 1 hour period.
[MEDEP Chapter 140, BPT]

(27) Fugitive Emissions
Potential sources of fugitive PM emissions, including material stockpiles, roadways and ash, shall be controlled by wetting with water, with calcium chloride, or other methods as approved by the Bureau of Air Quality, to prevent visible emissions in excess of 10% on a 6 minute block average basis, except for no more than one (1) six (6) minute block average in a 1 hour period.

[MEDEP Chapter 140, BPT]

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**22**	

(28) Miscellaneous Emission Units

Emission Unit	Origin and Authority	Requirement Summary
Emergency Diesel Generator	Chapter 101, Section 2(A), Chapter 140, BPT	Visible emissions shall not exceed an opacity of 30 percent on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period
Diesel Fire Pump	Chapter 101, Section 2(A), Chapter 140, BPT	Visible emissions shall not exceed an opacity of 30 percent on a six (6) minute block average basis, for no more than two (2) six (6) minute block averages in a 3-hour period

(29) Emergency Diesel Generator

Emergency Diesel Generator shall be limited to 500 hours per year of operation (9,188 gallons of fuel), firing 0.05% sulfur (documented through supplier fuel records) diesel fuel, based on a 12 month rolling total. Hours of operation and fuel use records for the emergency diesel generator shall be kept through purchase receipts indicating gallons and percent sulfur by weight.

A log documenting the dates, times and reason of operation for the generator shall be kept.

[MEDEP Chapter 140, BPT]

(30) Diesel Fire Pump

The Diesel Fire Pump shall be limited to 500 hours per year of operation (6,891 gallons of fuel), firing 0.05% sulfur (documented through supplier fuel records) diesel fuel, based on a 12 month rolling total. Hours of operation and fuel use records for the emergency diesel fire pump shall be kept through purchase receipts indicating gallons and percent sulfur by weight.

A log documenting the dates, times and reason of operation for the fire pump shall be kept.

[MEDEP Chapter 140, BPT]

(31) **Stack Testing** [MEDEP Chapter 140, BPT]

A. All stack testing programs shall comply with all of the requirements of Condition 24(D), the MEDEP Compliance Test Protocol and with 40 CFR Part 60, as appropriate.

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**23**	

B. IMEJ shall conduct particulate matter testing on Boiler #1 and demonstrate compliance with emission standards within the first 3 years of the date of signature of this license.

C. IMEJ shall conduct a one-time VOC test during the first particulate matter stack test on Boiler #1. Data from this test will be utilized to determine if a more stringent VOC emission rate is appropriate.
Enforceable by State Only

(32) **Units Containing Ozone Depleting Substances**
When repairing or disposing of units containing ozone depleting substances, the licensee shall comply with the standards for recycling and emission reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioning units in Subpart B. An example of such units include refrigerators and any size air conditioner that contain CFCs.
[40 CFR, Part 82, Subpart F]

(33) **CEMS, COMS, and Parameter Monitors**
The CEMS, COMS, and parameter monitors required by this license shall be the primary means of demonstrating compliance with emission standards set by this Order, statute, state or federal regulation, as applicable. IMEJ shall comply with the following: [MEDEP Chapter 140, BPT]

A. **Performance Specifications** [MEDEP Chapter 117]
All CEMS and COMS shall meet the sampling and performance criteria specified in 40 CFR Part 51 Appendix P, and shall be operated in accordance with 40 CFR Part 60 Appendix B and F and Chapter 117 of the Department's regulations.

1. If the continuous emission monitoring system for the gaseous emissions is recording accurate and reliable data less than 90% of the source-operating time within any quarter of the calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the CEMS was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.

2. If the continuous opacity monitoring system is recording accurate and reliable data less than 95% of the source-operating time within any quarter of the calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the continuous emission monitoring system was not recording accurate and

reliable data during that quarter unless the licensee can demonstrate to the satisfaction so the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.

3. Conduct Relative Accuracy Testing (RATA) and/or Performance Audits in accordance with Chapter 117 of the Department's regulations unless the unit has not had 168 unit operating hours, as defined in Part 72, in a quarter then that quarter shall be excluded in determining the deadline for the next RATA. If the RATA has not been completed by the end of the eighth calendar quarter since the quarter of the last RATA, then the RATA must be completed within a 720 unit operating hour grace period following the end of the eighth successive elapsed calendar quarter, or the data from the CEMS will become invalid.

   IMEJ shall perform a cylinder gas audit (CGA) in accordance with 40 CFR Part 60, Appendix F if Boiler #1 was run during the quarter. CGA's may be conducted at any load. Upon request of IMEJ, DEP may waive the requirement in Chapter 117 that notice be provided 10 days in advance of a CGA and the requirement in Chapter 117 and 40 CFR Part 60, Appendix F that CGA's must be conducted no less than 60 days apart.

4. Develop and maintain an updated quality assurance plan for all CEMS and COMS in accordance with 40 CFR Part 60 Appendix F and Chapter 117 of the Department's regulations.

B. **Recordkeeping** [MEDEP Chapter 117 and Chapter 140, BPT]
For all of the continuous emission monitoring (CEMS), continuous opacity monitor (COM), equipment parameter monitoring and recording, required by this license, the licensee shall maintain records of the most current six year period and the records shall include:

1. Documentation which shows monitor operational status during all source operating time, including specifics for calibration and audits; and

2. A complete data set of all monitored parameters as specified in this license. All parameter records shall be made available to the Bureau of Air Quality upon request.

3. For all CEMS and COM, the records shall include:
   a. Documentation that all CEMS and COM are continuously accurate, reliable, and operated in accordance with Chapter 117, 40 CFR Part 51, Appendix P, and 40 CFR Part 60, Appendices B and F;

b. Records of all measurements, performance evaluations, calibration checks, and maintenance or adjustments for each CEMS and COMS, as required by 40 CFR Part 51 Appendix P;
c. Upon the written request by the Department a report or other data indicative of compliance with the applicable emission standard for those periods when the CEMS or COMS were not in operation or produced invalid data. Methods allowed by 40 CFR Part 75 may be used to demonstrate compliance with applicable emission standards. Evidence indicating normal operations shall constitute such reports or other data indicative of compliance with applicable emission standards. In the event the Bureau of Air Quality does not concur with the licensee's compliance determination, the licensee shall, upon the Bureau of Air Quality's request, provide additional data, and shall have the burden of demonstrating that the data are indicative of compliance with the applicable standard; and
d. A 24-hour block average shall be calculated as the arithmetic average of not more than 24 one-hour block periods. Only one 24-hour block average shall be calculated for one day, beginning at midnight. A valid 24-hour block average must contain at least 12 hours during which operation occurred. Hours in which no operation occurs shall not be included in the 24-hour block average calculation.

C. **Quarterly Reporting**

The licensee shall submit a Quarterly Report to the Bureau of Air Quality and EPA within 30 days after the end of each calendar quarter, detailing the following for the parameter monitor (steam flow), Continuous Emission Monitoring Systems (CEMS), or Continuous Opacity Monitoring Systems (COMS) required by this license:

1. All control equipment downtimes and malfunctions;
2. All CEMS or COMS downtimes and malfunctions;
3. All parameter monitor downtimes and malfunctions;
4. All excess events of emission and operational limitations set by this Order, Statute, state or federal regulations, as appropriate. The following information shall be reported for each excess event:
   a. Standard exceeded;
   b. Date, time, and duration of excess event;
   c. Maximum and average values of the excess event, reported in the units of the applicable standard, and copies of pertinent strip charts and printouts when requested;
   d. A description of what caused the excess event;
   e. The strategy employed to minimize the excess event; and
   f. The strategy employed to prevent recurrence.
5. A report certifying there were no excess emissions, if that is the case.

[MEDEP Chapter 117]

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**26**	

(34) **Semiannual Reporting** [MEDEP Chapter 140]
The licensee shall submit semiannual reports every six months to the Bureau of Air Quality. The semiannual reports are due with every other quarterly report, and the initial semiannual report is due April 30, 2002 with the second quarterly report submitted following the date of signature of this license.

A. Each semiannual report shall include a summary of the periodic monitoring required by this license. The periodic monitoring required by this license is as follows:
   1. The rolling 12-month total of propane fired into Boiler 1.
   2. Summary page of the results of stack testing for PM, PM_{10}, SO_2, NO_x, CO and VOC when requested.
   3. A photocopy of the daily Primary and Secondary ESP voltages.
   4. A photocopy of the daily Primary and Secondary ESP currents.
   5. Monthly total of each fuel burned in Boiler 1 for each day (wood and propane).
   6. A photocopy of the maintenance log for Boiler 1 showing preventative maintenance actions performed in the past six months.
   7. Tons of NO_x emitted in the past 12 months.
   8. Summary of the quantity of fuel burned in the Emergency Generator and Fire Pump (diesel fuel) over the past six months.
   9. Diesel fuel oil sulfur content of the diesel fuel burned over the past six months.

B. Each semiannual report shall include the annual capacity factor of Boiler 1 for each fuel.

C. All instances of deviations from license requirements and the corrective action taken must be clearly identified and provided to the Department in summary form for each six-month interval.

(35) **Compliance**
Compliance with all license limits and standards shall be subject to the provisions of 38 M.R.S.A. § 349(9).
[MEDEP Chapter 140]

(36) **Annual Compliance Certification**
IMEJ shall submit an annual compliance certification to the Department and EPA in accordance with Condition (20) of this license. The initial annual compliance certification is due October 30, 2002 with the submittal of the second semiannual report after the signature date of this license.
[MEDEP Chapter 140]

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	27	

(37) **Annual Emission Statement**

In accordance with MEDEP Chapter 137, the licensee shall annually report to the Department, by September 1, the information necessary to accurately update the State's emission inventory by means of:

1) A computer program and accompanying instructions supplied by the Department;

   or

2) A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

Phone: (207) 287-2437

(38) The licensee is subject to the State regulations listed below.

Origin and Authority	Requirement Summary
Chapter 102	Open Burning
Chapter 109	Emergency Episode Regulation
Chapter 110	Ambient Air Quality Standard
Chapter 116	Prohibited Dispersion Techniques

(39) **Certification by a Responsible Official**

All reports (including quarterly reports, semiannual reports, and annual compliance certifications) required by this license to be submitted to the Bureau of Air Quality must be signed by a responsible official.
[MEDEP Chapter 140]

Indeck Maine Energy, L.L.C.	)	**Department**
Washington County	)	**Findings of Fact and Order**
Jonesboro, Maine	)	**Part 70 Air Emission License**
A-127-70-A-I	**28**	

(40) The term of this license shall be five (5) years from the signature date below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2001.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of Title V application: February 27, 1998
Date of Title V application acceptance: March 24, 1998

Date filed with the Board of Environmental Protection _____
This Order prepared by Mark E. Roberts, Bureau of Air Quality.

Indeck Maine Energy, LLC.
Washington County
Jonesboro, Maine
A-127-70-B-A

Departmental
Findings of Fact and Order
Part 70 Air Emission License
Amendment #1

After review of the Part 70 Section 502(b)(10) Change application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A, Section 344 and Section 590, the Department finds the following facts:

I. Registration

A. Introduction

FACILITY	Indeck Maine Energy, L.L.C. –Jonesboro (IMEJ)
INITIAL LICENSE NUMBER	A-127-70-A-I
LICENSE TYPE	Part 70 Section 502(b)(10) Change
NAIC CODES	4911
NATURE OF BUSINESS	Electrical power generation
FACILITY LOCATION	Route 1A, Jonesboro, Maine
DATE OF INITIAL LICENSE ISSUANCE	September 5, 2001
DATE OF PART 70 MINOR CHANGE	March 11, 2004
LICENSE EXPIRATION DATE	September 5, 2006

B. Description of Part 70 Section 502(b)(10) Change

IMEJ has requested a Part 70 Section 502(b)(10) Change to perform routine maintenance, repair and replacement activities on the boiler and pollution control equipment. Since start-up, the boiler has experienced relatively rapid deterioration of certain internal components. The deterioration is such that a number of components have needed replacement every year or two. It has been determined that the primary cause of the rapid deterioration is the relatively high velocity of the circulating air in the boiler which creates a sand-blasting effect. The high velocity of the air also creates relatively high carry-over in the boiler hopper which reduces the availability and reliability of the particulate removal equipment, including the multi-clones. The following items will be replaced or altered as part of the plant's regular maintenance programs to replace worn parts: Primary and secondary superheaters, economizer, fuel feed system, radiant waterwalls, convection waterwalls, furnace refractory, air preheater, multicyclone, U-beams and sootblowers. A detailed description of the changes may be found in the Part 70 Section 502(b)(10) Change application.

These changes will not increase the maximum design heat input capacity of the boiler and will not increase the lb/MMBtu or lb/hr emission rates. The boiler is currently subject to 40 CFR Part 60, Subpart Db and was originally permitted pursuant to the State's EPA-approved Prevention of Significant Deterioration (PSD) permitting requirements, which included BPT/BACT and ambient air quality modeling.

C. Application Classification

The application for IMEJ changes no license conditions and all existing emission rates and methods for demonstrating compliance are still in effect. This change is considered to be a Part 70 Section 502(b)(10) Change issued under Chapter 140 of the Department's regulations for a Part 70 source and has been processed as such.

ORDER

The Department hereby grants Part 70 Section 502(b)(10) Change A-127-70-B-A, subject to the conditions found in Part 70 License A-127-70-A-I.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-127-70-A-I.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: February 17, 2004
Date of application acceptance: February 24, 2004

Date filed with the Board of Environmental Protection _____

This Order prepared by Mark E. Roberts, Bureau of Air Quality.

ATTACHMENT B

Affidavit of Independent Engineer

STATE OF RHODE ISLAND
PUBLIC UTILITIES COMMISSION

Docket No. 4497

January 23, 2015

COYANTA JONESBORO, LLC
Request for Certification for RPS Eligibility

AFFIDAVIT OF MARK THIBODEAU

I, Mark Thibodeau, being duly sworn, do hereby depose and say under oath as follows:

1. My name is Mark Thibodeau. I make the statements in this affidavit based upon my personal knowledge.

2. Since August 2012, I have been the Plant Manager of ReEnergy Stratton, a 48 MW biomass-fired power plant located in Stratton, Maine.

3. Previously, I was the Plant Manager of the Covanta Maine biomass facilities in Jonesboro and West Enfield Maine (collectively the "Covanta Facilities" or the "Facilities" or individually the "Jonesboro Facility" and the "West Enfield Facility").

4. I was employed at the Covanta Facilities from 2004 to August 2012. I started work as the Plant Engineer of the West Enfield Facility in 2004, was promoted to the Operations Manager position at the West Enfield Facility in 2006 and was later promoted to the Plant Manager position of both Covanta Facilities in 2008.

5. While at the Facilities, I was a key member of the management team that oversaw the extension of the operations of the Covanta Facilities beyond their useful lives. I have personally witnessed the refurbishment of the Covanta Facilities as we were successful at increasing the availability and capacity of the Facilities through many operational and design changes to improve the overall operations and efficiency of the plants in order to make the plants a viable business.

6. To the extent that I make comments on plant operations that occurred before 2004, I have reviewed the relevant plant records and had conversations with Ridgewood Power Management personnel that worked at the facilities before I was hired. Included in this list of persons is A. Daniel Heald, Kevin B. Crossman, Ryan Reed, Scott Bennett, all located in Maine, and William P. Short III in New Jersey.

7. The Jonesboro and West Enfield Facilities were each completed in 1986 and commissioned in late 1987. Each has a generation capacity of 27.5 MW. The useful life of each Facility was twenty (20) years. From 1996 until December 22, 2008, the Facilities were owned by Indeck Maine Energy. Covanta Maine acquired the Facilities on December 22, 2008.

8. The Facilities include a first generation circulating fluidized bed boiler designed by Babcock & Wilcox in 1986 that had inherent design flaws from day one. Appended hereto as

Exhibit C is a visual diagram of the boiler design. The West Enfield Facility has been in operation since 2001 and the Jonesboro Facility since 2004 as base loaded renewable power generators, selling energy into the ISO New England Day Ahead Market. During this time period, due to the design limitations of the Facilities, the Facilities operated at very low capacity values of and availability values of due to the inherent design flaws, which caused excessive downtime and costly repairs. The excessive downtime and costly repairs resulted in millions of dollars of book losses as well as cash flow shortfalls to Indeck.

9. As previously mentioned, the Jonesboro Facility has been in commercial operation since late 1987. Its generation history can be broken into five parts – one period for 1987 until 1990 when the facility was used as base-load facility, a second period of 1990 until 1995 when the facility was used as a peaking facility, a third period of 1995 until 1997 when the facility was shut down, a fourth period from 1997 until mid-year 2004 when the facility was again used as a peaking facility and a fifth period from May 2004 until the present when the facility was operated in a base-load matter and used to satisfy the requirements of the Massachusetts RPS. As previously explained, the facility had serious design flaws with its boiler. These flaws were first noticed during its first operating period and were one of the reasons that the plant was shifted to peaking operations in the early 1990s. With an above-market contract, the plant was a prime candidate for a contract repurchased and, once accomplished, the plant was shut down since it was not economical to operate. When the New England electricity markets were deregulated between 1997 and 2001, the plant was re-opened and was used as a peaking facility since that was the only way for the plant to be operated economically.

10. As facility gained operating experience and data the capacity increased from 44% to 78% for Jonesboro[1] and availabilities from 67% to 89% for Jonesboro.[2] As capacity increased the Facilities economic viability improved which was related to work completed (see #11) as design flaws (referenced in #9) were removed.

11. Appended hereto as Exhibits A[3] is a list of the refurbishments made to the Jonesboro Facility between September 2005 and mid-2010, which I personally helped prepare. As noted on Exhibits A, the investments total $6.1 million for the Jonesboro Facility. The $6.1 million number includes about $2.0 million in balance-of-plant capital improvements. All of these balance-of-plant refurbishments lead to increases in availability and capacity factor due to lower downtime and improved operation.

12. I have personal knowledge of the refurbishment investments made over the past 5 years as listed on Exhibit A. Of the refurbishments listed, none were routine maintenance projects and all reflect investments in equipment or facilities with a useful life of at least 3 years and in most cases in excess of 10 years. 54[4] refurbishment investments have a new useful life of 20 years, 20[5]

[1] The equivalent West Enfield capacity factor numbers were 62% for the period of 2002-2004 and 84% for the period of 2006-2010.
[2] The equivalent West Enfield availability numbers were 77% for the period of 2001-3 and 87% for the period of 2005-2010.
[3] An equivalent list for West Enfield was also prepared. Its investments totaled $3.97 million. A copy of that list is available upon request as Exhibit B
[4] Of which twenty-three pertain exclusively to Jonesboro.

projects have a new useful life of 15-20 years, 5[6] have a new useful life of 10 years, and 23[7] projects have a new useful life of 5-10 years. In preparing the refurbishment lists, I did not rely on tax or accounting treatment of particular expenses. When identifying items as refurbishments I used the following test as a rule of thumb to differentiate between routine repair and refurbishment: Did the item extend the useful life of the plant and/or equipment by utilizing a material upgrade to extend the service life of the equipment, include a design change to promote longer life, or did the existing equipment need to be replaced in kind due to the end of life of materials or equipment was obsolete and no longer repairable by routine repair. I am confident that all of the items identified satisfied one or more of these rules.

13. I personally helped prepare the refurbishment project descriptions discussed in the Amended Petition's narrative and which are appended hereto as Exhibit A. I am personally familiar with the year that each project was completed, the useful life of the previous item, the age of the item at refurbishment, the new useful life of the item, and the total cost of the refurbishment project.

14. Several of the refurbishment projects, such as the waterwall, superheater, and the U-beam projects, were investments required to upgrade and modernize the original boiler technology that was originally installed at the Facilities. As explained in Paragraph 8 above, the Babcock and Wilcox boiler system was a first generation circulating fluidized bed boiler design. It was consistently unreliable due to design flaws. These refurbishment projects were required to reconfigure the boilers to allow the Facilities to operate at higher capacities and to increase reliability; thus, raise plant availability.

15. Each Facility's U-beam system was an original Babcock and Wilcox design and contained serious design flaws. The U-beams separate the sand from the flue gas prior to the flue gas entering the boiler's convection pass, which contains critical components such as the superheaters, economizer, multi-cyclone dust collectors. The failure in the original design resulted in a marked reduction in boiler efficiency and allowed sand to enter downstream boiler components; thereby, significantly reducing the boiler's useful life. In particular, the original design failures included an under-designed furnace shaft that should have been larger to properly reduce the flue gas velocities, which historically resulted in premature failure of the U-beams' performance at great expense to all downstream components. The refurbishment of the U-beams was a significant, multi-year undertaking to redesign the U-beam arrangement and to test new material designs. The refurbishment project was repeated multiple times during each Facility's refurbishment. I personally participated in the time-consuming design studies to identify an optimal configuration, and oversaw the temporary staging, physical cutting of the boiler's exterior to locate and remove prematurely obsolete U-beams, each of which is approximately eighteen feet long; the internal rearrangement of the U-beams based on the new design configuration, the final side sealing, and the post-configuration efficiency studies. Because this process required several attempts to identify the optimal configuration, each Facility was required to repeat the U-beam overhaul several times during the refurbishment period. Appended

[5] Of which seven pertain exclusively to Jonesboro.
[6] Of which two pertain exclusively to Jonesboro.
[7] Of which twelve pertain exclusively to Jonesboro.

to this Affidavit is Exhibit D, which are design configuration studies that I helped prepare during the U-beam system reconfiguration projects.

16. Based on my experiences as Plant Manager, routine maintenance and repair projects for the U-beams consist of entering the U-beam system to fix alignment pans, a biannual inspection of metal fatigue, re-welding and realignment of individual U-beams, and vacuuming to remove dormant sand. These routine projects occur during standard Facility shutdowns for standard repair and maintenance and do not carry multi-year costs.-

17. The Facilities also refurbished the convection pass waterwall and the primary and secondary superheater, which were original to each Facility's construction. This capital-intensive project was a complete refurbishment that consisted of design and material changes over several years. The original Babcock and Wilcox system utilized five different materials throughout the secondary and primary superheaters and its poor design led to increased erosion and pendant failure. Based on my experiences as Plant Manager, routine repair and maintenance projects are alignment checks, replacement of the shields and air heater sacrificial tubes, and biannual visual inspections. The Facilities also implemented in 2006 a multi-year, aggressive overhaul of the furnace and convection waterwall. This refurbishment plan involved working with an external company to implement an ultrasonic testing program to identify, reequip and restore eroded tube thickness back to its original design. Routine maintenance and repair project for the furnace and convection waterwall involves simple welding repairs to a single tube.

18. In my experiences as Plant Manager, several refurbishment projects, such as the U-beams, the 125V DC systems, and the volt motor protection relays, were required in order to remain compliant with federal and state regulations, including National Electrical Code/N.F.P.A. Part 70-E and Maine's boiler codes and regulations. In addition, the new fly ash system was required to comply with new regulations from the Maine Department of Transportation.

19. The refurbishment projects related to the turbine generator bearings, control valves, electrical testing and steam path clearances were required to maximize turbine efficiency, prevent catastrophic failure, and to comply with standard loss prevention coverage requirements.

20. Refurbishing the operations building roof, replacing the raw water tank insulation, and refurbishing the L-valves was required to avoid unsafe working conditions for personnel and to prevent catastrophic, plant-wide equipment failures.

21. In my personal experience as Plant Manager, routine maintenance and repair projects at each Facility include those projects that frequently occur, that do not involve a significant investment in equipment or facilities, and that often occur during the biannual facility shutdowns. For example, the types of projects that are in the character of routine maintenance and repair include: welding to repair holes and leaks, visual inspections, replacement of sacrificial inserts and tubes such as those in the air heater system, replacement of the cones in the multi-cyclone; tightening hydraulic seals, bearings and greasing (Truck dump cylinders); frequent welding in the bed letdown screws, wet magnetic particle testing in the ID Fan rotor, replacing air actuators and diaphragms in the control valves, welding together expansion joints in the L-valve, changing the pug mill paddles in the fly ash system, patching the boiler wood feed

chute, or repairing or replacing the electronic circuit boards used in the 4160 Volt Motor Protection.

22. I have reviewed and appended hereto as Exhibit E audited financial reports for Indeck Maine Energy for the period 2001 through 2007.

23. Attached hereto as Exhibit F is a spreadsheet reflecting selected accounting data I extracted from the audited financial reports of Indeck Maine, together with financial data from Covanta Maine covering the period 2002-2010. The annual capital expenditures as reported in the Indeck Maine Energy and Covanta Maine financial statements differ each year from the amount I designated as a refurbishment expense in Exhibits A-B. The differences reflect the fact that accountants of the two companies, in preparing financial statements, may use somewhat different criteria in identifying capital expenses than the test I used to identify a refurbishment as described in paragraph 9 above.

24. I have been involved with every one of the refurbishments listed at a high level of detail in most cases. These refurbishments were critical to extending the operation of the Facilities beyond their useful lives. Without these refurbishments totaling $10 Million combined the Facilities would not be operating and generating base loaded renewable power providing clean energy for 40,000 Rhode Island homes today.

Dated: January 23, 2015

Mark Thibodeau

STATE OF MAINE
PENOBSCOT, ss. January 23, 2015

Personally appeared the above named Mark Thibodeau, who made oath that the foregoing statements by him are true based upon his personal knowledge.

Before me,

Name: _____
Notary Public/Attorney at Law

LORI L. RUSSELL
NOTARY PUBLIC
STATE OF MAINE
My Commission Expires Nov. 15, 2018

LIST OF EXHIBITS

Jonesboro Facility Refurbishment Projects	**Exhibit A**
West Enfield Facility Refurbishment Projects	**Exhibit B**
Babcock & Wilcox Chart	**Exhibit C**
U Beam Configuration	**Exhibit D**
Financial Statements[8]	**Exhibit E**

[8] A similar set of documents was previously submitted to the Commission in the Covanta West Enfield proceeding and was referenced in the initial filing for Covanta Jonesboro proceeding.

Exhibit A
Jonesboro Facility Refurbishment Projects

Jonesboro Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed/ Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
Convection Pass Waterwall, Primary, And Secondary Superheater	Complete replacement of 2/3 of the convection pass waterwalls, all of the primary superheaters and all of the secondary superheaters of new design.	2009	22 yrs	22 yrs	20 yrs	$1,154,399
U-beam	The U-beams are the sole design of B&W in its circulating fluidized bed boilers and is the primary sand separation piece of equipment. The U-beams purpose is to separate the sand from the flue gas prior to the flue gas entering the convection pass of the boiler which contains the superheaters, economizer, multi-cyclone dust collectors, and eventually the air heater and ESP. The U-beams were refurbished with new U-beams of improved materials and design configuration to minimize erosion of superheater tubes and convection pass waterwalls and to reduce high sand loss due to poor original design and configuration by B&W which was under designed due to the actual vs. theoretical high furnace flue gas velocities.	2006	5 yrs	5 yrs	5 yrs	$673,078
Turbine-Generator	Refurbished and overhauled turbine generator bearings, control valves, electrical testing and steam path clearances to improve turbine efficiency and prevent catastrophic failure. Typically, turbine overhauls are done every 5-7 years. The last refurbishment on file had been done in 1991, therefore this refurbishment was; above and beyond routine maintenance of repair.	2007	16 yrs	20 yrs	7 yrs	$606,710
U-beams	*See* above.	2010	4 yrs	4 yrs	5 yrs	$591,681
Furnace and Convection Waterwall	The furnace and convection pass waterwalls are part of a refurbishment plan to restore the original tube thickness of the walls over the course of several years which constitutes more than 50% replacement of all waterwall heating surfaces	2008	15 yrs	21 yrs	15 yrs	$495,191

Jonesboro Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed/ Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
	from 2006-present.					
Furnace Waterwall Tubes	*See above.*	2007	15 yrs	20 yrs	15 yrs	$332,285
Air Heater	The air heater is designed to pre-heat the combustion air to the boiler and is critical to efficient combustion. Partial tube replacement of 1200 of the original 2400 tubes replaced beyond routine repair.	2008	21 yrs	21 yrs	20 yrs	$177,691
Multiclone	The multi-cyclone is the secondary means of separating larger sand and fly ash particles from the flue gas prior to entering the tubular air heater and ESP (ElectroStatic Precipitator). The multi-cyclones were considered refurbished due to a complete replacement of all components and an upgrade in material design to prolong the life of the multi-cyclones and extend the life of the downstream equipment such as the air heater and ESP.	2008	3 yrs	4 yrs	8 yrs	$156,814
Truck Dump Cylinders and head shaft	The truck dump cylinders are large hydraulic telescoping cylinders that lift the truck dumps. Complete replacement of the truck dump cylinders was required due to repeated failures of original equipment that was beyond routine repair. Complete replacement of the original head shaft was also needed due to the end of life of the materials resulting in failure.	2008	21 yrs	21 yrs	20 yrs	$139,457
Bed Letdown Screw	The bed letdown screw and trough removes bottom ash and sand from the furnace bed. Complete replacement of original equipment due to end-of-life of materials, erosion and corrosion caused by heat cycles, sand and cooling water.	2008	21 yrs	21 yrs	20 yrs	$138,560
ID Fan Rotor	The Induced Draft Fan pulls combustion flue gas from the boiler and exhausts it to the stack. Complete rotor replacement due to leading and trailing edge cracking caused by the end of life of the materials that created unsafe working conditions to personnel and equipment.	2007	19 yrs	20 yrs	20 yrs	$129,659

Jonesboro Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed/ Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
Metering Bin Screws	12 under pile metering bin screws convey wood into the boiler feed chutes. Complete replacement including an upgrade in material design changes was required to extend the useful life of the screws.	2010	4 yrs	4 yrs	6yrs	$115,000
Bed Letdown Valves	The bed letdown valves meter and isolate the furnace pressures from atmospheric pressure while dumping the bottom ash from the fluidized bed. Complete replacement and upgrade of original equipment was needed in order to improve plant operations.	2006	19 yrs	19 yrs	15 yrs	$110,072
Metering Bin Screws	12 under pile metering bin screws convey wood into the boiler feed chutes. Complete replacement including an upgrade in material design changes was required to extend the useful life of the screws.	2006	Unknown	Unknown	4 yrs	$94,053
T-beams	Complete replacement of T-beams to minimize erosion of superheaters and convection pass waterwalls and reduce high sand loss due to poor original design and configuration.	2009	3 yrs	3 yrs	5 yrs	$86,031
Primary Superheater	Refurbished with new superheaters to restore plant availability and minimize forced shutdowns. Improved shield design to extend useful life.	2009	22 yrs	22 yrs	20 yrs	$78,615
L-valve	The L-Valves are large 12" diameter 310 stainless steel pipes that circulate the fluidized bed sand from the U-beams to the furnace to maintain the circulating sand flow. These L-Valves were refurbished with newly designed expansion joints due to failure of original expansion joints that restricted sand flow and caused holes in L-valve liners creating unsafe working conditions and jeopardized plant operations.	2008	5 yrs	5 yrs	10 yrs	$76,835
Fly Ash System	The fly ash system was refurbished to comply with new ash handling regulations of the Maine DOT as well as to prevent numerous system breakdowns that jeopardized plant operations and generation. This refurbishment consisted of removing the original system and installing all new	2006	19 yrs	19 yrs	20 yrs	$74,805

Jonesboro Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed/ Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
	equipment and containments that included engineering of a metering screw, twin screw pug mill, and concrete ash containment.					
Boiler Wood Feed Chute	The boiler wood feed chutes feed fuel to the boiler. Complete replacement and upgrade of original materials was necessary beyond routine repairs.	2006	19 yrs	19 yrs	20 yrs	$73,408
Raw Water Tank Insulation	Refurbished to avoid unsafe working conditions due to failure of original lagging and insulation.	2009	20 yrs	22 yrs	20 yrs	$70,900
Reclaim Screw ** defect in materials from new screw in 2006*	The reclaim screws convey wood from the reclaim pit to the main boiler feed belt. The reclaim screw was refurbished due to erosion and corrosion of barrel and flights by upgrading the material on the flights and barrel to more than double the useful life.	2008	2 yrs*	2 yrs	5 yrs	$68,977
Metering Bin Floor	The metering bin holds 30-45 minutes of fuel to feed to the boiler. Complete replacement and upgrade of materials to prevent collapse of bin floor and loss of boiler wood feed system.	2006	10 yrs	10 yrs	10 yrs	$57,627
4160 Volt Motor Protection	The 4160 volt motor protectors protect motors ranging from 450 HP to 1500 HP that are critical to plant operations. Complete replacement of original equipment with upgraded motor protectors to reduce number of false trips and increase plant availability.	2008	21 yrs	21 yrs	20 yrs	$48,630
Reclaim Screw	The reclaim screws convey wood from the reclaim pit to the main boiler feed belt. The reclaim screw was refurbished due to erosion and corrosion of barrel and flights by upgrading the material on the flights and barrel to more than double the useful life.	2007	3 yrs	3 yrs	5+ yrs, still in service to date	$41,470
Bed Drain Screw	Partial payment for complete replacement due to end-of-life of materials, erosion and corrosion caused by heat cycles, sand and cooling water.	2007	19 yrs	20 yrs	20 yrs	$39,674
Furnace Waterwalls	The furnace waterwalls are part of a refurbishment plan to restore the original tube thickness of the walls over the	2010	23 yrs	23 yrs	15 yrs	$39,605

Jonesboro Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed/ Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
	course of several years which constitutes more than 50% replacement of all waterwall heating surfaces from 2006-present.					
Wood Rotary Feeders	The wood rotary seals seal furnace pressure from atmospheric pressure in the wood feed system. Complete replacement due to end of life of original equipment beyond routine repair.	2008	15 yrs	21 yrs	15 yrs	$38,069
Operations Building Roof	Refurbished to maintain safe working conditions for personnel and prevent plant equipment from false trips.	2008	20 yrs	21 yrs	20 yrs	$37,000
Metering Bin Floor	Refurbished to prevent collapse of bin floor and loss of boiler wood feed system.	2009	7 yrs	10 yrs	8 yrs	$29,117
Reclaim Screw	The reclaim screws convey wood from the reclaim pit to the main boiler feed belt. The reclaim screw was refurbished due to erosion and corrosion of barrel and flights by upgrading the material on the flights and barrel to more than double the useful life.	2006	3 yrs	3 yrs	6+ yrs, still in service to date	$29,026
Sand Line Elbows	Replacement in part and refurbishment of the balance of sand line elbows.	2007	5 yrs	5 yrs	5 yrs	$28,932
Furnace Waterwalls	The furnace waterwalls are part of a refurbishment plan to restore the original tube thickness of the walls over the course of several years which constitutes more than 50% replacement of all waterwall heating surfaces from 2006-present.	2006	19 yrs	19 yrs	15 yrs	$26,043
Control Valve	The control valves maintain pressures, flows, temperatures, and levels of the boiler and turbine systems that are critical to the safe efficient operation of the facility. These pressures can range up to 1,450 psi, 1030 deg F, 240,000 lb/hr of water and steam. These control valves were refurbished due to reduced operational performance, lack of sufficient control, and concern for safety of employees and other critical plant systems (potential for cascading failures). At the time of refurbishment they were all original equipment and had been	2006	19 yrs	19 yrs	20 yrs	$23,823

Jonesboro Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed/ Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
	in place for 19 years.					
Truck Dump Cylinders	The truck dump cylinders are large hydraulic telescoping cylinders that lift the truck dumps. Complete replacement of the truck dump cylinders was required due to repeated failures of original equipment that was beyond routine repair.	Post 9-1-05	18 yrs	18 yrs	20 yrs	$23,530
125 VDC Station Service/UPS Battery	The 125 VDC system supplies an uninterruptable power supply to critical plant systems in the event of a black plant condition. Complete replacement of original station service batteries, UPS batteries, battery charger and solid state controls in the UPS in to maintain integrity of plant emergency systems.	Post 9-1-05	18 yrs	18 yrs	20 yrs	$22,913
Propane Tank Valves and Piping	The 12,000 gallon propane tank supplies propane to the boiler duct burners for heating of the sand for plant startups. Replaced and upgraded controls and safety valves in order to comply with NFPA 58 code and maintain safety of personnel and property.	2006	15 yrs	19 yrs	20 yrs	$22,826
Truck Dump Cylinder	The truck dump cylinders are large hydraulic telescoping cylinders that lift the truck dumps. Complete replacement of the truck dump cylinders was required due to repeated failures of original equipment that was beyond routine repair.	2007	20 yrs	20 yrs	20 yrs	$21,725
Truck Dump Drag Chains	Refurbished due to repeated failures of original equipment.	2009	20 yrs	22 yrs	20 yrs	$21,159
Cooling Water Circulating Pump	The cooling water circulating pump pumps 18,000 gpm of cooling water to the main condenser and auxiliary cooling systems. Refurbishment of original equipment was needed to maintain reliable plant operations since pump had deteriorated to the point of failure.	2010	22 yrs	23 yrs	20 yrs	$20,490
Deep Well Pump	Replacement of original deep well pump necessary to improve plant reliability and reduce forced outages.	2007	20 yrs	20 yrs	20 yrs	$18,708

Jonesboro Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed/ Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
Wood Rotary Feeders	The wood rotary seals seal furnace pressure from atmospheric pressure in the wood feed system. Complete replacement due to end of life of original equipment beyond routine repair.	2010	15 yrs	23 yrs	15 yrs	$17,502
Shaker Screen Grates	The shaker screen grates size the fuel from the main boiler feed belt to the metering bin. Complete refurbishment of original equipment due to age of original materials; upgraded materials during replacement.	2008	21 yrs	21 yrs	20 yrs	$16,459
Multi-clone Inlet Tubes	The multi-clone inlet tubes separate the heavier sand and fly ash particles from the flue gas. Partial replacement of original equipment.	2007	20 yrs	20 yrs	20 yrs	$14,640
Wood Handling Control System	The wood handling control system controls the truck dump operations, 5 conveyor belts, disc screen, wood hog, and the fuel stack out equipment. Complete replacement of original obsolete equipment with an upgraded wood handling Programmable Logic Controller ("PLC") in order to maintain plant availability.	2007	20 yrs	20 yrs	20 yrs	$14,333
					TOTAL	**$6,097,522.49**

Exhibit B
West Enfield Facility Refurbishment Projects

West Enfield Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed /Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
U-beams **due to configuration modifications*	The U-beams are the sole design of B&W in its circulating fluidized bed boilers and is the primary sand separation piece of equipment. The U-beams purpose is to separate the sand from the flue gas prior to the flue gas entering the convection pass of the boiler which contains the superheaters, economizer, multi-cyclone dust collectors, and eventually the air heater and ESP. The U-beams went through a series of refurbishments from 2005-2009 with new U-beams of improved materials and design configuration to minimize erosion of superheater tubes and convection pass waterwalls and to reduce high sand loss due to poor original design and configuration by B&W which was under designed due to the actual vs. theoretical high furnace flue gas velocities.	2009	2 yrs*	2 yrs	5 yrs	$599,562
U-beam **due to configuration modifications*	*See* above.	2007	1 yrs *	1-2 yrs	4 yrs	$435,018
Boiler Bed Let Down Screw	The bed letdown screw and trough removes bottom ash and sand from the furnace bed. Complete replacement of original equipment due to end-of-life of materials, erosion and corrosion caused by heat cycles, sand and cooling water.	2009	22 yrs	22 yrs	20 yrs	$205,338
U-beams **due to configuration modifications*	*See* above.	2006	2 yrs*	2 yrs	4 yrs	$196,406
Air Heater	The air heater is designed to pre-heat the combustion air to the boiler and is critical to efficient combustion. Partial tube replacement of 1200 of the original 2400 tubes replaced beyond routine repair.	2006	19 yrs	19 yrs	20 yrs	$186,127
ID Fan	The Induced Draft Fan pulls combustion flue gas from the boiler and exhausts it to the stack. Complete rotor	2007	19 yrs	20 yrs	20 yrs	$136,306

West Enfield Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed /Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
	replacement due to leading and trailing edge cracking caused by the end of life of the materials that created unsafe working conditions to personnel and equipment.					
L-valve	The L-Valves are large 12" diameter 310 stainless steel pipes that circulate the fluidized bed sand from the U-beams to the furnace to maintain the circulating sand flow. These L-Valves were refurbished with newly designed expansion joints due to failure of original expansion joints that restricted sand flow and caused holes in L-valve liners creating unsafe working conditions and jeopardized plant operations.operations.	2008	5 yrs	5 yrs	10 yrs	$135,652
Multi-cyclone	The multi-cyclone is the secondary means of separating larger sand and fly ash particles from the flue gas prior to entering the tubular air heater and ESP (ElectroStatic Precipitator). The multi-cyclones were considered refurbished due to a complete replacement of all components and an upgrade in material design to prolong the life of the multi-cyclones and extend the life of the downstream equipment such as the air heater and ESP.	2006	3 yrs	4 yrs	8+ yrs, still in service to date	$134,259
Bed Letdown Screw and Trough	The bed letdown screw and trough removes bottom ash and sand from the furnace bed. Refurbished the screw and trough to prolong life of screw and trough due to high number of heat cycles which caused wear by erosion, corrosion and end of life of materials.	2007	19 yrs	20 yrs	5 yrs	$107,605
Groundwork and Paving	Refurbished to maintain and improve roadway and truck unloading areas for wood deliveries since trucks were no longer capable of unloading at normal pace.	2008	20 yrs	21 yrs	20 yrs	$97,971
Furnace Waterwalls	The furnace waterwalls are part of a refurbishment plan to restore the original tube thickness of the walls over the course of several years which constitutes more than 50% replacement of all waterwall heating surfaces from 2006-present.	2007	15 yrs	20 yrs	15 yrs	$97,517

West Enfield Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed /Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
Fly Ash System	The fly ash system was refurbished to comply with new ash handling regulations of the Maine DOT as well as to prevent numerous system breakdowns that jeopardized plant operations and generation. This refurbishment consisted of removing the original system and installing all new equipment and containments that included engineering of a metering screw, twin screw pug mill, and concrete ash containment.	2006	19 yrs	19 yrs	20 yrs	$96,753
Metering Bin Screws	12 under pile metering bin screws convey wood into the boiler feed chutes. Complete replacement including an upgrade in material design changes was required and doubled the useful life of the screws.	2006	3 yrs	3 yrs	6 yrs	$91,482
Superheater Elements	Refurbished with new superheaters to restore plant availability and minimize forced shutdowns. Improved shield design to extend useful life.	2009	5 yrs	5 yrs	20 yrs	$90,715
Truck Dump Cylinders	The truck dump cylinders are large hydraulic telescoping cylinders that lift the truck dumps. Complete replacement of the truck dump cylinders was required due to repeated failures of original equipment that was beyond routine repair.	2006	19 yrs	19 yrs	20 yrs	$67,089
Reclaim Screw Assembly	The reclaim screws convey wood from the reclaim pit to the main boiler feed belt. The reclaim screw was refurbished due to erosion and corrosion of barrel and flights by upgrading the material on the flights and barrel to more than double the useful life.	2009	3 yrs	3 yrs	5+ yrs, still in service to date	$65,528
Furnace Waterwalls	The furnace waterwalls are part of a refurbishment plan to restore the original tube thickness of the walls over the course of several years which constitutes more than 50% replacement of all waterwall heating surfaces from 2006-present.	2009	15 yrs	22 yrs	15 yrs	$65,520
Generator Seals	The generator seals, seal bearing oil from the generator rotor and stator. Complete replacement of original equipment	2007	20 yrs	20 yrs	20 yrs	$64,710

West Enfield Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed /Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
	with new generator seals due to excessive wear in to prevent oil from entering generator windings.					
Truck Dump cylinders	The truck dump cylinders are large hydraulic telescoping cylinders that lift the truck dumps. Complete replacement of the truck dump cylinders was required due to repeated failures of original equipment that was beyond routine repair.	2008	21 yrs	21 yrs	20 yrs	$58,796
Reclaim Screw Assembly	The reclaim screws convey wood from the reclaim pit to the main boiler feed belt. The reclaim screw was refurbished due to erosion and corrosion of barrel and flights by upgrading the material on the flights and barrel to more than double the useful life.	2008	3 yrs	3 yrs	5+ yrs, still in service to date	$56,939
125V DC System	The 125 VDC system supplies an uninterruptable power supply to critical plant systems in the event of a black plant condition. Complete replacement of original station service batteries, UPS batteries, battery charger and solid state controls in the UPS in to maintain integrity of plant emergency systems.	2007	20 yrs	20 yrs	20 yrs	$55,705
Bed Let Down Screw	The bed letdown screw and trough removes bottom ash and sand from the furnace bed. Refurbished the screw and trough to prolong life of screw and trough due to high number of heat cycles which caused wear by erosion, corrosion and end of life of materials.	2008	19 yrs	21 yrs	5 yrs	$54,618
4160 Volt Motor Protection	The 4160 volt motor protectors protect motors ranging from 450 HP to 1500 HP that are critical to plant operations. Complete replacement of original equipment with upgraded motor protectors to reduce number of false trips and increase plant availability.	2008	21 yrs	20 yrs	20 yrs	$52,625
Hydraulic Truck Dump	The hydraulic truck dump is capable of lifting up to 120,000 lbs and lifts an entire truck and trailer of biomass fuel at a time repeatedly over its life. This hydraulic truck dump was refurbished due to a catastrophic failure of metal (metal	Post 9-1-05	18 yrs	18 yrs	15 yrs	$51,963

West Enfield Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed /Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
	fatigue) due to the high number of dumping cycles exceeding the design life of the piece of equipment which created unsafe working conditions for people and equipment. The refurbishment included an update in the structural engineering of the steel support members.					
Furnace Waterwalls	The furnace waterwalls are part of a refurbishment plan to restore the original tube thickness of the walls over the course of several years which constitutes more than 50% replacement of all waterwall heating surfaces from 2006-present.	2008	15 yrs	20 yrs	15 yrs	$48,953
Convection Pass Wall	The convection pass waterwalls are part of a refurbishment plan to restore the original tube thickness of the walls over the course of several years which constitutes more than 50% replacement of all waterwall heating surfaces from 2006-present.	2008	18 yrs	21 yrs	15 yrs	$45,683
Main Ash Drag	The main ash drag removes the fly ash from the ESP to the ash silo for conditioning. Complete chain and paddle replacement required due to age of original equipment in order to maintain availability of plant.	2007	20 yrs	20 yrs	20 yrs	$44,343
Turbine Building Roof	Refurbished to maintain safe working conditions for personnel and prevent plant equipment from false trips.	2008	21 yrs	21 yrs	20 yrs	$43,500
Furnace Waterwalls	The furnace waterwalls are part of a refurbishment plan to restore the original tube thickness of the walls over the course of several years which constitutes more than 50% replacement of all waterwall heating surfaces from 2006-present.	2006	15 yrs	19 yrs	15 yrs	$37,740
Turbine Main Stop Valve	The turbine main stop valve is designed to quickly isolate the flow of high pressure, high temperature steam to the turbine in the event of an upset condition. Refurbished turbine main stop valve due to stress cracks of original materials caused by length of service and end of life of materials in order to prevent unsafe operating conditions in the event of a plant	2009	22 yrs	22 yrs	20 yrs	$36,416

West Enfield Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed /Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
	trip.					
Compressed air System	The compressed air system supplies dry compressed air to plant control systems. Replaced original obsolete equipment that could no longer maintain reliable air supply for plant controls.	2008	21 yrs	21 yrs	20 yrs	$35,893
Furnace Waterwalls	The furnace waterwalls are part of a refurbishment plan to restore the original tube thickness of the walls over the course of several years which constitutes more than 50% replacement of all waterwall heating surfaces from 2006-present.	2008	15 yrs	20 yrs	15 yrs	$30,823
Reclaim Screw	The reclaim screws convey wood from the reclaim pit to the main boiler feed belt. The reclaim screw was refurbished due to erosion and corrosion of barrel and flights by upgrading the material on the flights and barrel to more than double the useful life.	2006	3 yrs	3 yrs	6+ yrs, still in service to date	$30,307
Metering Bin Floor	The metering bin holds 30-45 minutes of fuel to feed to the boiler. Complete replacement and upgrade of materials to prevent collapse of bin floor and loss of boiler wood feed system.	2009	10 yrs	10 yrs	10 yrs	$29,743
Furnace Waterwalls	The furnace waterwalls are part of a refurbishment plan to restore the original tube thickness of the walls over the course of several years which constitutes more than 50% replacement of all waterwall heating surfaces from 2006-present.	2009	15 yrs	22 yrs	15 yrs	$27,624
Ash Rotary Seal Feeders	Complete replacement of original equipment beyond routine repair required which resulted in lower particulate emissions.	2006	19 yrs	19 yrs	15 yrs	$24,667
Truck Dump Chain	The truck dump drag chain conveys biomass fuel from the truck dump hopper to the wood handling system. Refurbished due to repeated failures of original equipment beyond routine repair.	2008	21 yrs	21 yrs	20 yrs	$22,011
Truck Dump Drag Chain	The truck dump drag chain conveys biomass fuel from the	2007	20 yrs	20 yrs	20 yrs	$18,753

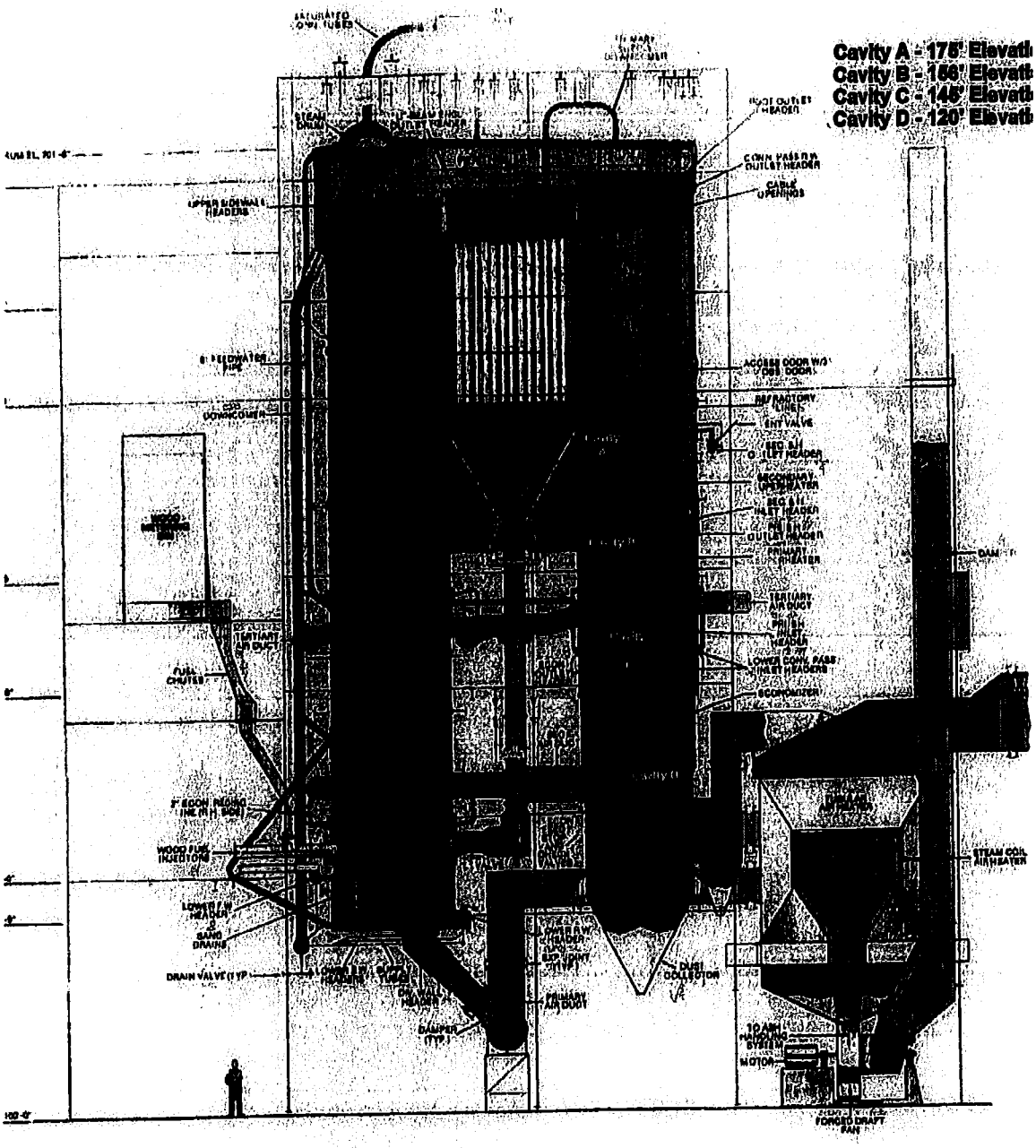
West Enfield Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed /Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
	truck dump hopper to the wood handling system. Refurbished due to repeated failures of original equipment beyond routine repair.					
Wood Handling Control System	The wood handling control system controls the truck dump operations, 5 conveyor belts, disc screen, wood hog, and the fuel stack out equipment. Complete replacement of original obsolete equipment with an upgraded wood handling Programmable Logic Controller ("PLC") in order to maintain plant availability.	2007	20 yrs	20 yrs	20 yrs	$18,446
Reclaim DC Drive	The reclaim screw DC drives power the reclaim screws to control the flow of fuel onto the main boiler feed belt. Replaced original obsolete equipment that could no longer maintain reliable power supply for plant wood feed system.	2008	21 yrs	21 yrs	20 yrs	$17,855
Wood rotary seals	The wood rotary seals seal furnace pressure from atmospheric pressure in the wood feed system. Complete replacement due to end of life of original equipment beyond routine repair.	2008	15 yrs	22 yrs	15 yrs	$17,508
Shaker Screen Grates	The shaker screen grates size the fuel from the main boiler feed belt to the metering bin. Complete refurbishment of original equipment due to age of original materials; upgraded materials during replacement.	2008	21 yrs	21 yrs	20 yrs	$16,735
Metal Detector (New Equipment)	New Capital Project – Metal detector installed following the existing magnet to extend the life of existing wood handling equipment and eliminate an average of two annual forced shutdowns of wood receiving due to pieces of metal causing catastrophic failures of downstream equipment such as the Radar Disc Screen and Jeffrey Wood Hog.	Post 9-1-05	N/A	New	20 yrs	$16,714
Attemperator Cooler	The attemperator cooler controls the outlet steam temperature to the turbine. Complete replacement required due to failure of internal tube bundle caused by corrosion, heat cycles, and end of life of original equipment	2006	19 yrs	19 yrs	20 yrs	$16,606

West Enfield Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed /Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
Furnace Waterwalls	The furnace waterwalls are part of a refurbishment plan to restore the original tube thickness of the walls over the course of several years which constitutes more than 50% replacement of all waterwall heating surfaces from 2006-present.	2010	15 yrs	23 yrs	15 yrs	$16,356
L-Valve	The L-Valves are large 12" diameter 310 stainless steel pipes that circulate the fluidized bed sand from the U-beams to the furnace to maintain the circulating sand flow. These L-Valves were refurbished with newly designed expansion joints due to failure of original expansion joints that restricted sand flow and caused holes in L-valve liners creating unsafe working conditions and jeopardized plant operations.	2007	5 yrs	5 yrs	10 yrs	$15,851
10 ton sand holding tank	The 10 ton sand holding tank supplies make-up sand to the circulating fluidized bed. This tank was refurbished with new liner due to erosion of tank wall sides from high number of sand cycles.	2006	18 yrs	19 yrs	18 yrs	$15,710
Condenser Expansion Joints	The condenser expansion joints allow for expansion and contraction of the main turbine condenser. Complete replacement of original materials due to age and number of heat cycles in order to reduce potential forced shutdowns.	2008	21 yrs	21 yrs	20 yrs	$14,521
River Pumps Controls	The river pumps supply water from the Penobscot River to the 300,000 gallon raw water tank for plant fire suppression and cooling tower make-up. Complete replacement of the control valves, telemetry communication system, and controls necessary to improve plant fire suppression and plant reliability and availability and reduce forced outages.	2006	19 yrs	19 yrs	20 yrs	$14,351
River Pump	The river pumps supply water from the Penobscot River to the 300,000 gallon raw water tank for plant fire suppression and cooling tower make-up. Complete replacement of the original equipment necessary to improve plant fire suppression and plant reliability and availability and reduce	2010	23 yrs	23 yrs	20 yrs	$14,273

West Enfield Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed /Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
	forced outages.					
Propane Tank	The 12,000 gallon propane tank supplies propane to the boiler duct burners for heating of the sand for plant startups. Replaced and upgraded controls and safety valves in order to comply with NFPA 58 code and maintain safety of personnel and property.	2006	15 yrs	19 yrs	20 yrs	$13,784
Furnace Waterwalls	The furnace waterwalls are part of a refurbishment plan to restore the original tube thickness of the walls over the course of several years which constitutes more than 50% replacement of all waterwall heating surfaces from 2006-present.	2008	15 yrs	21 yrs	15 yrs	$13,178
4160 V Motor Protector	The 4160 volt motor protectors protect motors ranging from 450 HP to 1500 HP that are critical to plant operations. Complete replacement of original equipment with upgraded motor protectors to reduce number of false trips and increase plant availability.	2007	20 yrs	20 yrs	20 yrs	$12,560
Control Valves	The control valves maintain pressures, flows, temperatures, and levels of the boiler and turbine systems that are critical to the safe efficient operation of the facility. These pressures can range up to 1,450 psi, 1030 deg F, 240,000 lb/hr of water and steam. These control valves were refurbished due to reduced operational performance, lack of sufficient control, and concern for safety of employees and other critical plant systems (potential for cascading failures). At the time of refurbishment they were all original equipment and had been in place for 19 years.	2006	19 yrs	19 yrs	20 yrs	$11,724
Air Ejector Controls	The air ejector control system controls the flow of steam to maintain vacuum on the main condenser. Replaced original transmitters and refurbished air ejector steam control valve to maintain safe operating conditions of critical plant systems.	2009	20 yrs	22 yrs	20 yrs	$11,509

West Enfield Facility Refurbishment Project	Purpose of Equipment; Reason For Refurbishment	Year Completed /Installed	Previous Useful Life	Age at Refurbish.	New Useful Life	Total Cost
Control Valve and Transmitter Upgrade	The control valves maintain pressures, flows, temperatures, and levels of the boiler and turbine systems that are critical to the safe efficient operation of the facility. These pressures can range up to 1,450 psi, 1030 deg F, 240,000 lb/hr of water and steam. These control valves were refurbished due to reduced operational performance, lack of sufficient control, and concern for safety of employees and other critical plant systems (potential for cascading failures). At the time of refurbishment they were all original equipment and had been in place for 22 years.	2009	22 yrs	22 yrs	20 yrs	$10,628
Reinjection Sand Line Elbow	The reinjection sand line elbows pneumatically convey sand to the 10 ton sand holding tank. Replacement in part and refurbishment of the sand line elbows with upgraded materials to extend the useful life.	2007	5 yrs	5 yrs	5+ yrs, still in service to date	$10,296
Control Valves	The control valves maintain pressures, flows, temperatures, and levels of the boiler and turbine systems that are critical to the safe efficient operation of the facility. These pressures can range up to 1,450 psi, 1030 deg F, 240,000 lb/hr of water and steam. These control valves were refurbished due to reduced operational performance, lack of sufficient control, and concern for safety of employees and other critical plant systems (potential for cascading failures). At the time of refurbishment they were all original equipment and had been in place for 18 years.	Post 9-1-05	18 yrs	18 yrs	20 yrs	$10,253
					TOTAL	**$3,969,515**

EXHIBIT C

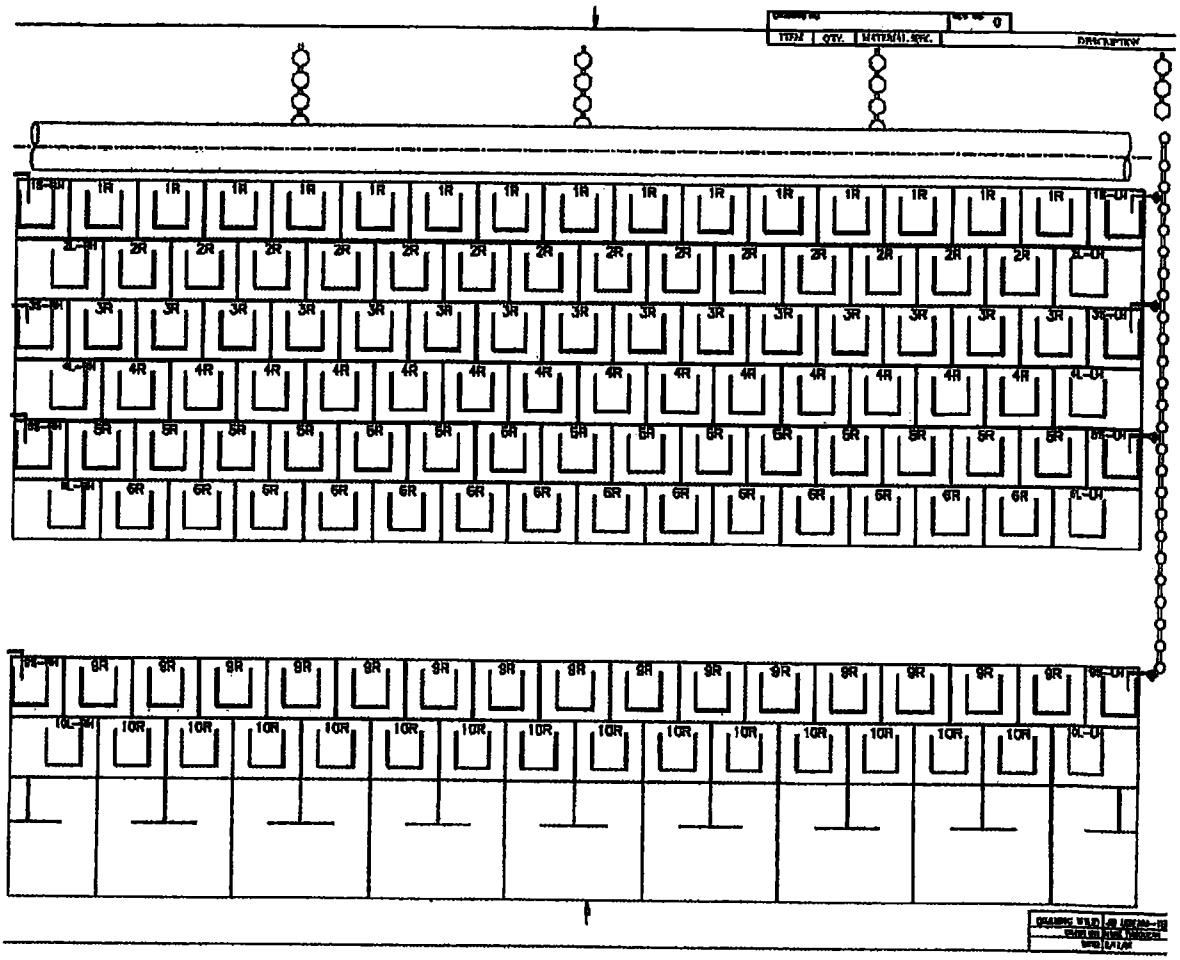


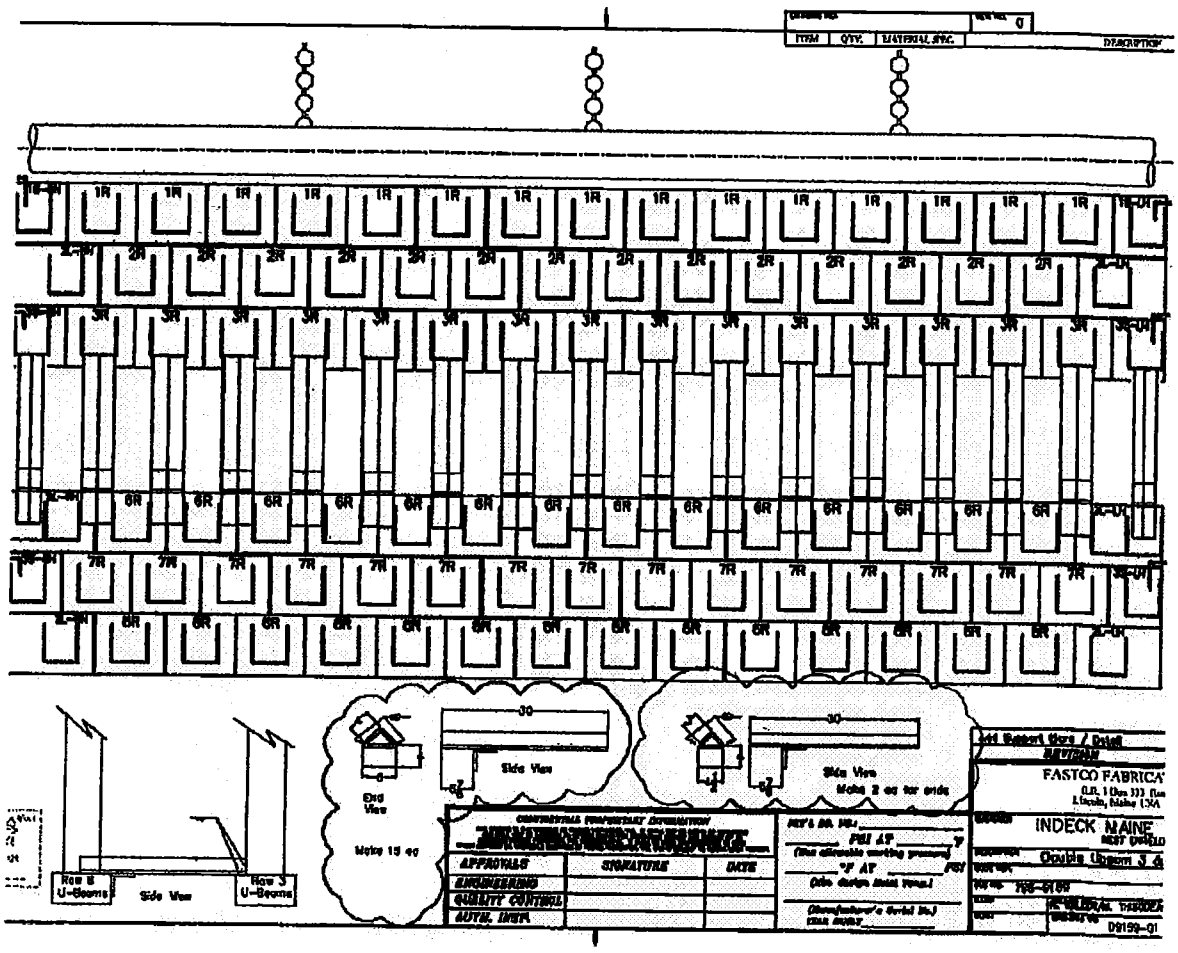
COLOR KEY
- AIR
- GAS
- WATER
- STEAM
- SAND

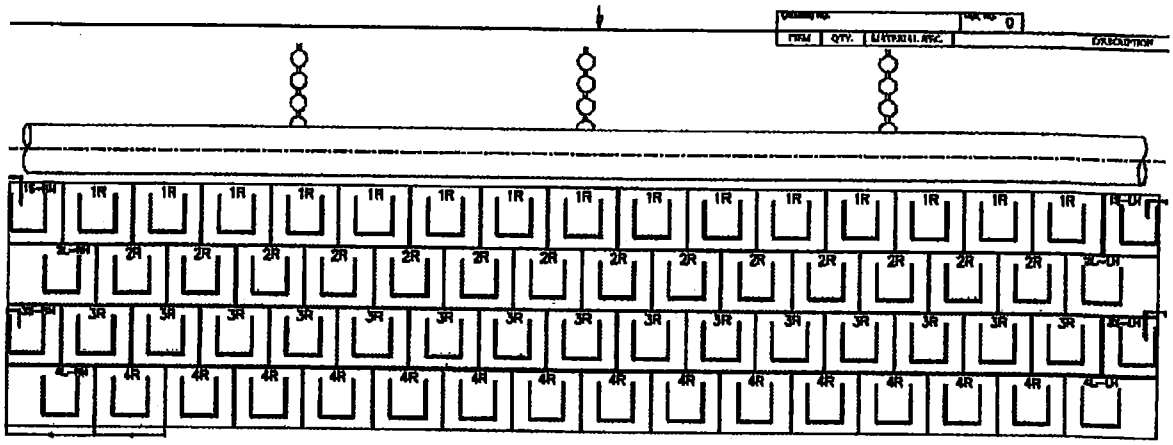
CAPACITY, LB STEAM PER HOUR	218,640	SUPERHEATER OUTLET TEMPERATURE, F	955
SUPERHEATER OUTLET PRESSURE, PSI	1 250	FEEDWATER TEMPERATURE, F	296

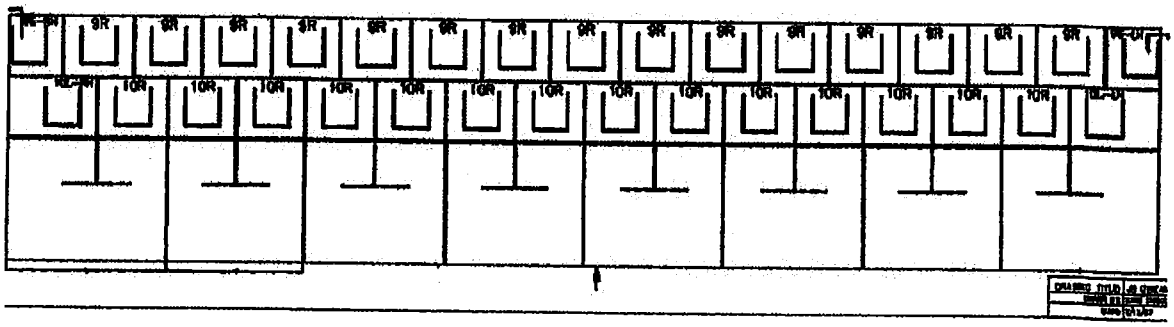
Babcock & Wilcox Circulating Fluid Bed Unit

EXHIBIT D




ITEM
QTY.
MATERIAL SPEC.
DESCRIPTION
1R
2R
3R
6R
7R
Row 6 U-Beams
Side View
Row 3 U-Beams
End View
Make 15 ea
30
Side View
Make 2 ea for ends
APPROVALS
SIGNATURE
DATE
ENGINEERING
QUALITY CONTROL
MATRL. ENGR.
FASTCO FABRICA
INDECK MAINE
D9199-01





ATTACHMENT C

Consultant Information Request

-----Original Message-----
From: Scott Albert [mailto:Scott.Albert@gdsassociates.com]
Sent: Friday, February 13, 2015 12:06 PM
To: Nydam,Ken
Cc: RES Filings (RES.Filings@puc.ri.gov); Cynthia G. Wilson-Frias (Cynthia.WilsonFrias@puc.ri.gov)
Subject: RE: Covanta Jonesboro - Affidavit of Mark Thibodeau

Dear Mr. Nydam,

Thanks for sharing a copy of your CONFIDENTIAL Affidavit with me regarding our request, on behalf of the RI Public Utilities Commission, for supplemental information dated September 11, 2014. Based on an initial review, the following observations are provided:

First, please note, the way the Affidavit was distributed (i.e., only to me) is not in line with Commission docket-related communication protocols.

- It should have been sent to the RESFiling email list.

- If CONFIDENTIAL treatment is required, the transmittal email should clearly communicate a request for such treatment and the subject line, at a minimum, should include the label "CONFIDENTIAL". <-- PUC Legal Counsel has advised that a public version (redacted) must also be provided to the RESFilings email list with a brief statement of why the information redacted is considered confidential (competitively sensitive, etc.).

Secondly, the Affidavit does not appear to be responsive to the Commission's request.

- Regarding the request for an Independent Engineer, although Mr. Thibodeau's previous job titles and responsibilities were included in paragraph's 2 through 6 of the Affidavit, there is no resume highlighting Mr. Thibodeau's engineering credentials nor is there a clear statement regarding his independence. <-- please provide additional information to help the Commission ensure that Mr. Thibodeau is "a credible source that is not self-interested." This information should specifically include a statement that Mr. Thibodeau does not have a financial interest in Covanta or any of its projects.

- Also, the Affidavit does not include any of the specific information requested to "document an estimate of what the historical baseline would have been if the plant were operated in an economically attractive environment supporting base-load operation, given its atypical technical limitations and a reasonable O&M expenditure to overcome them, consistent with standard industry practice (in which incremental O&M expenditures are made up until the point that they would be uneconomic)."

- There was no reference to, or use of the formula specified in our initial request – nor

documentation regarding inputs to specific variables

identified in said formula. ⇓ please provide values for each of the following formula variables, and supporting documentation regarding the

derivation of each value:

- Actual Production in Compliance Year (PN)

- Historic Baseline Average Annual Production (HB)

- Incremental Production in Compliance Year over HB that is due to operational changes not directly associated with efficiency improvements or additions of capacity (OCN)

Absent explicit responses to the Commission's previous request, submitted in accordance with Commission docket-related communication protocols, we are unable to conduct a review in a manner that will allow the Commission to finalize its determination regarding "new" vs. "existing" eligibility.

We look forward to receiving and reviewing your independent engineer's specific replies to the Commission's original request, and all associated supporting documentation. Please submit your response to the RESFiling email address no later than March 6, 2015. After which, we will work with Commission staff to finalize recommendations for action.

As always, if you or your independent engineer have questions or concerns during this documentation development process, please don't hesitate to contact me directly.

Thanks for your consideration.

Sincerely,

Scott

GDS Associates, Inc.

Engineers and Consultants

Scott Albert, Principal

Northeast Region Manager

1155 Elm Street

Suite 702

Manchester, NH 03101

phone 603.656.0336, direct 603.391.0040

cell 603-533-3233, fax 866.611.3791

scott.albert@gdsassociates.com

-----Original Message-----

From: Nydam,Ken [mailto:KNydam@covanta.com]

Sent: Monday, January 26, 2015 2:02 PM

To: Scott Albert

Subject: Covanta Jonesboro - Affidavit of Mark Thibodeau

Hi Scott,

Hope all is well. Attached is the document we discussed regarding the application. Please feel free to contact me at any time regarding this application. I can drop off the original if that works (after the snow storm).

Regards,

Ken Nydam

Director, New England Regional Finance

100 Recovery Way

Haverhill, MA 01835

Tel: 978-241-3030

Fax: 978-372-4280

Cell: 978-697-2577

Email: knydam@covanta.com

http://protect-us.mimecast.com/redirect/eNpdzkEKwkAMheG7ZF1bKkJhVhaPIO66CZmgI04TZtKKiHc3SFduH98P7w2KBAFOl_O4H8Z-gAYKX5PMPmoRY7LdUtucMhNWa0myE1qqSeZCEvm_JjWf7rhyeR01OWK0p0jcWk0RwqGBpTzc3cw0TN3Ukaw4G27I4_o70X--2ec1bQ

Ken

-----Original Message-----

From: xerox@Covanta.com [mailto:xerox@Covanta.com]

Sent: Monday, January 26, 2015 2:12 PM

To: Nydam,Ken

Subject: Scanned from a Xerox multifunction device

Please open the attached document. It was scanned and sent to you using a Xerox multifunction device.

Attachment File Type: pdf, Multi-Page

multifunction device Location: machine location not set

Device Name: XRX9C934E15A8E9

For more information on Xerox products and solutions, please visit https://protect-us.mimecast.com/redirect/eNpdkNtugkAURf-FB54EK9VCTEg7YL00ar02YkwInRluOsx0LoBp-u8dTZ_6ePZZOztZ3wZLoDE0wv0WOC7ouUbH4DgraKVDxqnEUFpK2KQgGCZC2pASjUAlJCWYQ4rw_zZkUkdlUmN-fWGFhnAiG0rRX5cVyBj2O4biF83lUjIxPHVPXX0jnOJKYFsP05TRorrvnbq1c38_K_-GW48gjpumsVvMaXsjTOSDZjZJ1ib0Px_KUIS8ZCw71kCwklzqEJjcb_hBuWhv1d56EWxG5cINBJGol0aRlzvehB9AnPQH73PxahJfDiZArbLlmEqVf6B5uqEwwltJNyOr3YFoPDs_VMlaFW1mCj_2diyA4_RpmrfHfpCKbXGdLoqEl9HZyb7CcHXg-2m5fCPUxL6WoOWIu-Tezy_IIIN6

ATTACHMENT D

Earlier Alternative Calculation of "New" Output

From: Bill Short [mailto:w.shortiii@verizon.net]
Sent: Wednesday, July 02, 2014 10:52 AM
To: 'Scott Albert'
Cc: Ken Nydam (knydam@covantaenergy.com)
Subject: RE: Covanta W. Enfield

Scott,

Now with the attachment.

Bill Short

From: Bill Short [mailto:w.shortiii@verizon.net]
Sent: Wednesday, July 02, 2014 10:50 AM
To: 'Scott Albert'
Cc: Ken Nydam (knydam@covantaenergy.com)
Subject: RE: Covanta W. Enfield

Scott,

Per our conversation, I took your calculation for West Enfield (see tab titled "WE RI RES Request") and modified it for Jonesboro (see tab titled "JB RI RES Request").

The Jonesboro RI RES New percentage is 92% versus 95% using the "Massachusetts" method. My biggest change is that I used 60 months of generation data starting in September 2005 and running through August 2010 as opposed to five years of annual data starting in January 2006 for West Enfield.

I am around all day today and tomorrow. If you need another conference call to discuss the fine points of my analysis, please do not hesitate to contact me.

Bill Short

William P. Short III

(917) 206-0001 Work
(201) 970-3707 Mobile
w.shortiii@verizon.net

P.O. Box 237173 (Mailing Address)
New York, New York 10023-7173
44 West 62nd Street (Street Address)
New York, New York 10023-7008

From: Scott Albert [mailto:Scott.Albert@gdsassociates.com]
Sent: Tuesday, July 01, 2014 1:15 PM

To: Bill Short
Subject: Covanta W. Enfield

Scott

Scott Albert
Principal/Northeast Region Manager

1155 Elm Street, Suite 702
Manchester, NH 03101
phone 603-656-0336
fax 866-611-3791
direct 603.391.0040
Scott.Albert@gdsassociates.com

GDS Associates, Inc.
Engineers and Consultants

Send me faxes using my custom Fax Coverpage.
Send me files using our Secure File Transfer.

Confidential

Confidential Treatment Requested By Applicant

Covanta Jonesboro
Hours of Operation
2000-2012

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
January	0	13	0	0	0	**744**	733	744	744	585	744	0	0
February	0	20	0	0	0	**672**	636	672	696	585	672	0	0
March	96	0	0	0	0	627	695	648	413	671	743	0	0
April	21	0	0	0	0	719	**660**	648	720	493	384	0	0
May	0	0	0	0	454	617	444	248	523	632	743	0	0
June	0	0	0	0	402	176	545	715	556	641	576	0	123
July	0	0	0	0	25	744	743	650	556	539	744	206	657
August	0	0	0	0	585	744	659	516	742	744	743	0	744
September	18	98	50	0	188	720	699	480	660	720	269	0	253
October	0	0	0	0	366	573	668	654	361	316	0	0	729
November	0	18	0	0	720	**672**	534	721	661	703	0	0	157
December	0	0	0	0	670	731	722	666	744	644	0	66	536
Total	135	149	50	0	3,410	7,739	7,738	7,362	7,376	7,273	5,618	272	3,199
Availability	N.A.	N.A.	N.A.	N.A.	**61.26%**	**88.34%**	**88.33%**	**84.04%**	**83.97%**	**83.03%**	**92.07%**	N.A.	N.A.

Plant Availability from 5/12/2004 through 9/12/2010 83.23%
Plant Availability from 5/12/2004 through 6/30/2005 67.40%
Plant Availability from 7/1/2005 through 9/12/2010 86.82%
Plant Availability from 9/1/2009 through 8/31/2010 88.50%

Numbers in red are calculated from daily as opposed to hourly operating data

No Improvement period
Improvement Periods --
Early Improvement Period
Late Improvement Period
Latest Improvement Period
Post Steam Drum Failure Period
Low REC and/or Power Prices Period

Confidential

Confidential Treatment Requested By Applicant

Covanta Jonesboro Generation, MWh 2000-2012

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
January	0	211	0	0	0	11,345	15,380	16,304	17,165	13,440	16,570	0	0
February	0	369	0	0	0	11,375	13,582	15,491	15,781	13,530	14,490	0	0
March	1,251	0	0	0	0	11,660	14,606	14,603	7,638	15,687	16,002	0	0
April	299	0	0	0	0	15,141	14,033	15,163	16,381	10,909	7,899	0	0
May	0	0	0	0	6,946	9,931	9,280	5,681	12,170	14,450	16,913	0	0
June	0	0	0	0	5,909	2,833	12,247	16,558	12,550	13,439	12,206	0	2,187
July	0	0	0	0	435	14,254	16,288	14,333	12,356	10,338	17,069	4,582	9,896
August	0	0	0	0	8,270	14,758	14,123	9,567	17,228	15,084	15,429	0	7,251
September	346	1,774	691	0	3,270	14,831	15,529	10,337	14,884	14,809	5,147	0	2,786
October	0	0	0	0	5,699	11,142	15,606	14,960	8,120	6,388	0	0	11,707
November	0	318	0	0	8,458	15,196	12,232	16,637	14,713	16,073	0	0	2,248
December	0	0	0	0	9,746	15,112	16,815	15,702	17,327	14,314	0	1,069	8,943
Total	1,896	2,672	691	0	48,734	147,578	169,720	165,336	166,312	158,461	121,726	5,651	45,018
Capacity Factor	N.A.	N.A.	N.A.	N.A.	**35.40%**	**68.40%**	**78.66%**	**76.63%**	**76.87%**	**73.44%**	**80.72%**	N.A.	N.A.

Capacity Factor from 5/12/2004 through 9/12/2010 **71.04%**
Capacity Factor from 5/12/2004 through 6/30/2005 **43.62%**
Capacity Factor from 7/1/2005 through 9/12/2010 **77.26%**
Capacity Factor from 9/1/2005 through 9/12/2010 **78.15%**

No Improvement Period
Improvement Periods --
Early Improvement Period
Late Improvement Period
Latest Improvement Period
Post Steam Drum Failure Period
Low REC and/or Power Prices Period

Confidential

Confidential Treatment
Requested By Applicant

Covanta Jonesboro
Generation, MWh

Year	Actual Generation (MWh)	[redacted]	Year	Actual Generation (MWh)	[redacted]
1995	5,394		2005	56,281	
1996	0		2006	169,720	
1997	18,259		2007	165,336	
			2008	166,312	
	23,653		2009	158,461	
			2010	116,579	
Average Annual Generation (MWh)	7,884			832,689	
	7,884 check				
				13,878	Average Monthly Generation
Incremental Generation (MWh)	158,653			166,538	Average Annual Generation
Incremental Generation (%)	95% <-- Percent New Calculation				

[redacted]

Confidential

Confidential Treatment Requested By Applicant

Covanta West Enfield Generation, MWh

Year	Actual Generation (MWh)	Year	Actual Generation (MWh)
1995	6,249	2006	176,733
1996	0	2007	176,282
1997	56,414	2008	178,741
		2009	175,135
	62,663	2010	167,807
Average Annual Generation (MW	20,888		174,940
	20,888 check		
Incremental Generation (MWh)	154,052		
Incremental Generation (%)	88% <-- Percent New Calculation		