STATE OF MAINE
PUBLIC UTILITIES COMMISSION

Docket No. 2017-00015

June 12, 2017

H.Q. ENERGY SERVICES (U.S.), INC.
Request for Approval Certification for
RENEWABLE RESOURCE RPS Eligibility

ORDER APPROVING NEW RENEWABLE RESOURCE CERTIFICATION

VANNOY, Chairman; McLEAN and WILLIAMSON, Commissioners

I. SUMMARY

Pursuant to this Order, the biomass-powered generation facility of H.Q. Energy Services (U.S.) Inc. (HQ Energy) located in Saint-Félicien, Quebec, Canada is certified 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’s 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. § 3210(3-A)). The Act added a mandate that specified percentages of electricity that supply Maine’s consumers come from “new” renewable resources. 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" 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 requirement; 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.

Chapter 311, § 3(B)(4) of the Commission’s rules establishes a certification process that requires generators to pre-certify facilities as a new renewable resource.

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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.
under the requirements of the rule and provides for a Commission determination of resource eligibility on a case-by-case basis. 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, or 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 January 18, 2017, HQ Energy filed a petition to certify the 21.4 MW biomass fueled power plant (Facility) located in Saint-Félicien, Quebec, Canada as a Class I New Renewable Resource under the refurbishment provision of the Commission’s renewable portfolio rules. Ch. 311, § 3(B)(3)(d). After a protective order was issued by the Commission Staff, HQ Energy supplemented its petition with confidential documents on January 19, 2017. As required by our rules, the Commission provided interested persons with an opportunity to comment on HQ Energy’s petition. No comments were received. Commission Staff issued Information Requests on February 22 and March 27, 2017, which sought a list of refurbishment investments made in the Facility and a clarification on how the Facility met the requirements of the refurbishment provision. HQ Energy provided its responses on March 3, 2017 and April 10, 2017.

According to the petition, the Facility is owned and operated by St-Félicien Cogeneration Limited Partnership (SFC). However, SFC has transferred to HQ Energy the exclusive rights to both the electricity and environmental attributes associated with the Facility. HQ Energy has provided the Agreement for the Transfer of Environmental Attributes which allows HQ Energy to have the environmental attributes associated with the energy generated by the Facility recognized as RPS RECs.

In its petition, HQ Energy explains that the Facility generates electricity utilizing fuel that consists of renewable biomass, a combination of sawmill and forest residuals, and a de minimis amount of #2 fuel oil, used as start-up fuel. HQ Energy also states that the Facility has a net 21.4 MW of electric capacity output and began its operations on October 1, 2001.

HQ Energy asserts that the Facility meets the vintage requirement necessary for Class I certification because it has been refurbished and uses an alternate technology that significantly increases the efficiency of the generation process. According to HQ

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3 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.

4 Although Chapter 311, § (3)(B)(4)(a) of the Commission rules permits the owner or operator of a generation facility to submit a petition for certification, the Commission has frequently allowed petitions submitted on behalf of the owner/operator, as is the case here.
Energy, over C$8.1 million of capital expenditures have been invested in the Facility since 2011. This includes C$6.5 million invested to install a bark dryer, which represents thirty five percent of the Facility’s value prior to the bark dryer installation. HQ Energy is also claiming as refurbishments investments is the remaining C$1.6 million of capital expenditure out of the $8.1 total identified above. In its petition, HQ Energy identifies specific refurbishment projects, including the amount invested for each project.

Finally, HQ Energy claims the bark dryer is atypical for biomass cogeneration facilities and improves the efficiency of the Facility. The bark dryer, which has seldom been utilized in North America, recovers energy from the flue gas that would otherwise be lost up the stack to reduce the biomass moisture and improve combustion efficiency. According to HQ Energy, this technology uses a rotary drum dryer that removes up to 12,300 lb/hr of water from the fuel stream. By removing the water before it enters the boiler and not relying on the combustion process to remove it from the fuel, the dryer has reduced the Facility’s hourly fuel heat input by approximately five percent. Further, the bark dryer enables HQ Energy to make use of wetter biomass and continue to operate economically. HQ Energy’s other option would have been to use the wetter fuel by increasing air flow through the boiler. This option would have decreased efficiency of heat transfer in the boiler while, at the same time decreasing boiler life.

III. DECISION

After considering HQ Energy’s petition, the Commission finds the HQ Energy Facility has been refurbished and is employing an alternative technology that significantly increases efficiency pursuant requirements of Chapter 311, Section 3(B)(3)(d), and therefore qualifies as a Maine Class I New Renewable Resource. The Facility is a biomass generator with a nameplate capacity less than 100 MW. The remaining requirements for certification under the refurbishment vintage prong are discussed below.

A. Vintage

HQ Energy 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

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5 HQ Energy determined the value of the Facility prior to the bark dryer by subtracting the bark dryer investments, C$6.5 million, from the appraised value of the Facility with the bark dryer, C$25.3 million.

6 The refurbishment projects identified by HQ Energy are: redesign and replacement of electrostatic precipitator elements to meet more stringent particulate emissions requirements implemented by the Province of Quebec; redesign and re-tubing of the water steam air cooled condenser; installation of an Improved Induced Draft Fan Design; replacement of the main Facility interconnection breaker and station service transformer; and redesign and installation of improved economizer supports.
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 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).

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 Maine, LLC v. Public Utilities Commission, 2012 ME 74, ¶ 16 (2012) (Covanta).

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. Covanta, 2012 ME 74, ¶¶ 17, 19.

i. Refurbishment

The Commission’s practice in assessing whether a generation facility has been refurbished is to examine a collection 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. As is clear from HQ Energy’s petition and subsequent filings, the bark dryer alone was a substantial addition to the Facility that will encourage its long term viability. This project changes the nature of the Facility and was not routine maintenance or repair. Although we make no finding as to whether each of the specific projects accounting for additional

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7 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).
C$1.6 million of expenditures were refurbishments, in aggregate they provide further support that the Facility has been refurbished. Therefore, given the nature, character, and scope of the bark dryer and other capital expenditures, we find that the Facility has been refurbished, consistent with 35-A M.R.S.A. § 3210(2)(B-4).

ii. Alternate Technology that Increases Efficiency

HQ Energy seeks qualification of its investments under the alternate technology sub-prong of the refurbishment vintage category, arguing that the bark dryer constitutes an alternate technology that significantly increases the efficiency of the Facility’s generation process. When asked to explain how the bark dryer constitutes an alternate technology, HQ Energy responded that that use of bark dryers is rare for North American biomass plants, which typically waste the energy from the flue gas up the stack. HQ Energy further asserts that by reducing fuel moisture, the bark dryer improves combustion efficiency by removing 12,290 lb/hr of water from the fuel stream and thereby reducing fuel use by approximately 14 MMBtu/hr, or 5% of the Facility’s hourly fuel heat input.

The alternate technology sub-prong establishes three distinct requirements for a technology to warrant Class I certification. First, the technology must be alternate. Second, the technology must improve the efficiency of the facility. Third, that efficiency improvement must be significant.

The Commission has never relied on the alternate technology sub-prong alone in granting Class I certification. The only instance in which the Commission found a refurbishment included an alternate technology, it also determined that the facility in question was operating beyond its previous useful life. Request for Certification for RPS Eligibility (ReEnergy Fort Fairfield LLC), Docket No. 2011-00374, Order Granting New Renewable Resource Certification (June 14, 2013) at 8. In that Order, the petitioner claimed that its biomass power plant, in addition to operating beyond its previous useful life, was employing an alternate technology that significantly increased the plant’s efficiency in the form of an ECOTUBE system. As explained in the Order, the ECOTUBE system consists of four retractable lances that are inserted in the upper portion of the boiler to inject high velocity air into the boiler to improve combustion of the biomass fuel.

Without specifically defining alternate technology, the Commission agreed with the petitioner that an ECOTUBE system constituted “an ‘alternative technology’ within the meaning of the statute.” The Commission did make specific findings as to why the ECOTUBE system significantly increased the efficiency of the plant, relying on confidential data indicating the percentage by which efficiency was improved. The Commission further stated that efficiency gains can be more inclusive than just thermodynamic effects and whether efficiency improvements are significant is a case-by-case determination that includes such considerations as “initial efficiency, fuel type, the specific technology involved, and the engineering estimates that underlie the initial investment decision.”
After review, the Commission here finds that the bark dryer is an alternate technology that significantly increases the efficiency of the Facility. Alternate technology has not been defined by statute and discussion on the issue is absent from legislative history. Without such guidance, the term alternate technology could be open to a variety of interpretations. For instance, past petitioners have argued that alternate simply means different from the technology that was previously employed.\(^8\) Conversely, an alternate technology could be a considered a novel technology not generally utilized in the industry or region.\(^9\)

While the former interpretation may seem unlikely as it would be redundant to the refurbishment requirement, thereby creating surplusage contrary to the rules of statutory interpretation,\(^10\) a distinction is not required here because the bark dryer would conform to all plausible definitions. The bark dryer both is alternate to what existed previously at the Facility and is novel for the industry and the region. The bark dryer has been employed so infrequently that such a technology has not been presented to the Commission by any of the twenty-two biomass facilities previously certified as Maine Class I REC eligible.\(^11\) Bark dryer technology is also commonly recognized for increasing efficiency and improving operations.\(^12\)

Further, the efficiency improvements realized as a result of this installation are significant. While the specific efficiency gains experienced at the ReEnergy biomass power plant as a result of the ECOTUBE are confidential, the fuel reduction caused by

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\(^8\) *Request for Certification for RPS Eligibility (KEI (MAINE) POWER MANAGEMENT (IV) LLC), Docket No. 2012-00203, Order Granting New Renewable Resource Certification (October 8, 2013) at 6.*  

\(^9\) For example, alternative technology is often defined as a process that causes less pollution and is more efficient than the traditional method. *See What is ALTERNATIVE TECHNOLOGY?*, Black's Law Dictionary Free Online Legal Dictionary 2nd Ed., available at http://thelawdictionary.org/alternative-technology/ (last visited May 16, 2017)

\(^10\) *See Allied Res., Inc. v. Dept of Pub. Safety*, 2010 ME 64, ¶ 15, 999 A.2d 940 (“All words in a statute are to be given meaning, and none are to be treated as surplusage if they can be reasonably construed.”).


the bark dryer at the Facility compares favorably. Therefore, the Facility is employing an alternate technology that significantly increases its efficiency.

Accordingly, the Commission

O R D E R S

1. The electrical generation of the HQ Energy Facility is hereby certified as a Class I New Renewable Resource eligible to satisfy Maine’s New Renewable Resource portfolio requirement pursuant to Chapter 311, § 3(B)(3)(c) of the Commission rules; and

2. H.Q. Energy Services (U.S.) Inc., or the Facility’s successive owner or operator, shall provide timely notice to the Commission of any material change in the character or operation of the Facility from that described in the petition filed in this proceeding.

Dated at Hallowell, Maine, this 12th day of June, 2017.

BY ORDER OF THE COMMISSION

/s/ Harry Laphear
Harry Laphear
Administrative Director

COMMISSIONERS VOTING FOR: VANNOY
MCLEAN
WILLIAMSON
NOTICE OF RIGHTS TO REVIEW OR APPEAL

5 M.R.S.A. § 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 1004 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.A. § 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.A. § 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.