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Maine PUC Certifies ReEnergy Fort Fairfield Biomass Facility as a Class I New Renewable Resource

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ReEnergy Fort Fairfield, courtesy of ReEnergy Holdings, LLC

In a precedent-setting decision, the Maine Public Utilities Commission recently voted to certify the ReEnergy Fort Fairfield Biomass Facility as a Class I new (refurbished) Renewable Resource. The decision helps secure the biomass power plant's long-term economic vitality by allowing the transfer of the environmental attributes associated with the renewable power generation. The decision also provides a wealth of guidance to future renewable power generation facilities on what constitutes a "refurbishment" under Maine's Renewable Portfolio Standards statute.

I. Background

The ReEnergy Fort Fairfield Biomass Facility is located in Fort Fairfield, Maine, near the Canadian border. The facility uses biomass as its primary fuel source to produce approximately 260,000 net MWh of electricity each year—enough to supply about 34,000 homes. The 36 MW base-load facility was constructed in 1987 and was acquired by ReEnergy in 2011. The biomass facility is an important part of the northern Maine electrical system and a significant corporate citizen in Aroostook County, providing many direct jobs at the facility and indirect jobs stemming from the forest residue fuel supply, and local goods and services industries.

After its purchase of the facility, ReEnergy continued and intensified a multi-year, $7.9 million refurbishment plan to renovate, reequip and restore the plant and keep it running. ReEnergy completely overhauled major plant equipment such as the turbine and boiler grate, replaced or refurbished the facility's mobile fuel equipment, purchased a new telescoping fuel conveyor and hopper, refurbished the boiler furnace refractor, replaced the service air ejector vacuum system, expanded the fuel year, upgraded computer control systems, installed a new suspended electromagnet and replaced or upgraded many other core elements of the biomass plant.

ReEnergy also installed and optimized an advanced over-fire air system called the ECOTUBE System. The ECOTUBE System consists of four retractable lances that are inserted into the upper portion of the biomass boiler to inject high velocity air into the boiler to improve combustion of the biomass fuel. The innovative technology improves the useful life of the boiler by minimizing erosion and preventing the biomass fuel from entering and damaging downstream components. The ECOTUBE System significantly improves the efficiency of the generation process by maximizing the overall burnout of the biomass fuel. Equally important, the ECOTUBE System lowers the facility's environmental footprint by reducing NOx and CO emissions and overall ash production.

ReEnergy viewed these investments as critical to keep the renewable power plant running and contributing to the northern Maine economy.

II. Can the Facility Be Used to Meet Maine's New Renewable Resource Portfolio Requirement?

A. Maine's RPS Statute

In Maine, a certain portion of electricity must come from "new" renewable resources and the amount increases by 1% each year to 10% in 2017. Once a facility is qualified as a new renewable resource, the facility also can transfer the renewable attributes—also known as Renewable Energy Certificates — associated with the electricity. Suppliers of electricity in Maine can then use

the RECs to meet the required portion of electricity derived from new renewable resources.

To qualify as a new renewable resource, a facility must create electricity from either fuel cells, tidal power, solar arrays, wind, geothermal, hydro, or biomass. With the exception of wind installations, the renewable facility cannot exceed 100 MWs.

The facility also must meet one of four "vintage" requirements. These include,

(1) An in-service date after September 1, 2005

(2) Addition to an existing facility after September 1, 2005

(3) Resumed operation after a two year shutdown

(4) Was 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

After confusion arose over the meaning of "refurbishment," the Legislature defined "refurbish" as "an investment in equipment or facilities, other than for routine maintenance and repair, to renovate, reequip or restore the renewable capacity resource."

B. ReEnergy's Petition for Certification

In June 2012, ReEnergy submitted an updated petition for certification under the "refurbishment" prong on the ground that its $7.9 million investment amounted to a refurbishment of the facility and an extension of its useful life. ReEnergy sought certification under the alternate technology prong due to the ECOTUBE's significant increase in the facility's overall efficiency.

In a lengthy and highly technical proceeding before the Maine Public Utilities Commission, ReEnergy responded to *32* detailed staff requests for information and numerous comments from interested persons. In addition to providing a wealth of information regarding every refurbishment project,

ReEnergy also worked with an independent engineering and consulting firm to quantify the significant positive effects of the ECOTUBE System on the biomass plant's useful life and generation efficiency.

Upon conclusion of the staff's technical analysis, the case finally proceeded to the full Commission for a final deliberation in May 2013.

III. The Commission's Decision

In an unusual order with multiple separate opinions, all three commissioners voted to certify the facility as a new renewable resource. Chairman Welch and Commissioner Vannoy voted to certify based on the "useful life" prong and all three commissioners voted to certify under the "alternate technology prong."

A. *Useful Life Prong*

Chairman Welch and Commissioner Vannoy voted to certify under the "useful life" prong due to the installation of the ECOTUBE system. Writing that the advanced over-fire air system "changed the nature of the facility, and was not routine maintenance or repair," the two commissioners found that the investment was large enough by itself to certify the facility.

In interpreting the RPS statute, the majority opinion clarified that "[r]outine maintenance and repair also includes work that can be reasonably assumed to be periodically necessary over the expected useful life" of a facility. The Commission did leave open a small possibility when routine overhauls lead to "additional, significant, and unanticipated work." After adopting the new standard, the Commission found that a turbine overhaul did not qualify as a refurbishment project. The Commission also concluded that the mobile fuel equipment could not qualify because the equipment had a standalone value and was not physically attached to the facility. The majority opinion did not address the other expenditures contained in ReEnergy's petition.

B. *Alternate Technology and Process Efficiency*

All three commissioners found that the ECOTUBE system met the "alternate technology" prong because it significantly improved the efficiency of the

facility's generation process by improving overall boiler efficiency. The Commission noted that the improved boiler efficiency will save at least $110,740 a year in fuel costs and the need to procure, process and burn more than three thousand tons of biomass. Very few renewable power facilities have sought certification as alternate technology and the decision clarifies that "efficiency gains can be viewed in a context more broadly than just the thermodynamic effects that result."

C. *Separate Opinions*

Although all three commissioners agreed that the facility should be certified, two commissioners also wrote separately to concur in part and dissent in part. Commissioner Littell's opinion found that the facility should be certified under the "alternate technology" prong but not under the "useful life" prong. In his view, the ECOTUBE system did not qualify as a refurbishment project because it was not installed to prolong the useful life of the facility. Commissioner Littell concurred with the majority opinion that the turbine overhaul was not a qualifying refurbishment project because it must reoccur every five to eight years.

Commissioner Vannoy wrote separately to express his view that an overhaul of a steam turbine is a contributing element to a refurbishment as contemplated by the statute. Although he based his certification decision on the ECOTUBE alone, he would find that the steam turbine overhaul effectively reequipped and restored the facility.

IV. Conclusion

The effect of the order is that ReEnergy can now not only sell the electricity it produces, but now the environmental attributes or "Renewable Energy Certificates" from such renewable power. The decision will help keep the facility running and contributing to the northern Maine economy. The order also provides much needed clarification on the meaning of "refurbishment" and the economic and technical thresholds required to achieve certification as a Class I new renewable resource.

A copy of the Commission's order is available here.

ReEnergy was represented by Bernstein Shur Attorneys Pat Scully and N. Joel Moser. For more information on compliance with Maine's Renewable Portfolio Standards before the Maine Public Utilities Commission, please contact N. Joel Moser at jmoser@bernsteinshur.com or (207) 228-7155.