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Testimony of Mark Thibodeau, Regional Manager ReEnergy Biomass Operations LLC October 6, 2017 Submitted to The U.S. Senate Committee on Energy and Natural Resources Field Hearing to examine efficient approaches to reducing industrial energy costs

I appreciate the opportunity to submit testimony regarding biomass energy. I will discuss the role of biomass energy in the rural forest economy; the significant role it could play in reducing energy costs for adjacent industrial users; and how the federal government could support the biomass energy sector and efforts to increase homegrown energy and reduce costs.

My name is Mark Thibodeau. I am a lifelong Mainer and a graduate of Maine Maritime Academy. I live in Carrabassett Valley, Maine and I serve as regional manager for ReEnergy Biomass Operations ("ReEnergy") in Maine.

I have worked in the Maine biomass industry for the past 14 years and have been fortunate to have been a plant manager at five of the six remaining viable biomass plants in the state. I also spent two years in the California biomass industry, which has some similarities and can provide some valuable lessons. I have been involved with numerous business development opportunities to co-locate industry next to a standalone biomass plant and unfortunately none of those projects have come to fruition. There have been many hurdles, including regulatory and financing challenges, and the need to secure off-take contracts. But one of the biggest hurdles has been the uncertain long-term viability of the biomass plant itself. All of the plants in Maine participate in volatile energy and REC markets. This volatility and fear of a biomass facility closure often encourages would be investors to look at other states, countries, and forms of energy.

In Maine, ReEnergy employs approximately 100 people and supports an estimated 700 indirect jobs. The company's annual economic impact in the state of Maine exceeds \$90 million. We own and operate four biomass power facilities in Maine. At these facilities – in Ashland, Fort Fairfield, Livermore Falls and Stratton – we use sustainably harvested forest residue as fuel to generate homegrown, renewable electricity. We support jobs in the logging and trucking industries and at mills, providing an end-market for wood residues. ReEnergy's facilities generate 1.2 million megawatt-hours of baseload renewable electricity each year, which is enough to supply power to 154,000 homes. Our facilities have achieved certification to the Sustainable Forestry Initiative[®] (SFI[®]) Standard, which verifies that our biomass procurement programs promote land stewardship and responsible forestry practices.

Our facilities are an integral part of Maine's forest products industry, which has suffered a great deal in recent years. We recently analyzed the list of fuel suppliers here in Maine, and determined that we conduct business with 88 logging/trucking contractors; 20 mills (sawmills, chip mills, pellet mills, and pulp & paper mills); and 8 industrial landowners.

Unfortunately, ReEnergy's facilities in Maine are struggling financially due to record-low prices of wholesale electricity. Our two facilities in Aroostook County are struggling more than our other two facilities, because they must pay transmission outcharges to wheel their power into the ISO-New England power grid.

We believe our power plants represent a significant economic development tool. Thus far, however, that promise has remained unharnessed. We hope to change that -- to preserve our plants and also to offer a benefit to existing and new industry interested in co-locating with us.

All of our facilities are located in rural areas. They are located adjacent to large tracts of vacant land that would be perfect sites for new industry and new jobs. Some of our plants are adjacent to already existing industrial consumers. Our plant in Ashland is located in an industrial park, and Town leaders there are working aggressively on a plan to recruit new industry to that park. Our biomass power plants are capable of delivering cost-effective thermal energy (steam, hot water), electricity and CO₂ to an industry or industries located on adjacent property. If we could sell our energy directly to a co-located industry, or industries, we would become more efficient and we would gain some revenue certainty instead of simply bidding into the volatile day-ahead wholesale electricity market.

The companies already located next to us – and companies interested in moving next to us – would benefit if they were able to make use of affordable electricity and/or steam. Energy costs would, by definition, be more competitive than market-rate energy, since electricity and steam supply provided directly from a ReEnergy facility would avoid capital and maintenance costs, avoid electrical transmission and distribution costs, and a long-term agreement would hedge market price risk.

I don't believe microgrids are a viable option for the State of Maine as they are in some European countries. I feel the infrastructure to build a microgrid in rural areas is cost prohibitive in its purest form. There may be some hybrid versions of a microgrid that could hold merit in Maine but I feel we are better suited to focus on Co-location opportunities surrounding our existing standalone biomass plants.

In addition, the surrounding infrastructure is already built and has been paid for over the past 20-30 years and wouldn't need to be replicated. The surrounding markets, trained workforces, transmission lines, utilities, and roadways are well established around our facilities which would significantly reduce future capital costs.

Our long-term viability depends upon finding a co-located industry and using our combined heat and power ("CHP") capabilities. We are working on a plan with Ensyn Technologies to locate a renewable fuel oil manufacturing facility next to our plant in Ashland, but we are capable of servicing more load than that. In order to further our goals, ReEnergy will soon issue a Request for Proposals to companies interested in a co-location opportunity.

The challenges are significant. Direct connections between a power plant and an industrial user tend to be challenged by the regional T&D utility, and are likely to be legally impossible if they cross a public right of way. There are significant infrastructure costs to construct power and steam lines. And add this to the fact that our plants are already struggling due to low electricity costs.

Senator Angus King, a member of this Committee, has been a leader in championing biomass energy, with efforts such as carbon neutrality legislation and the BTU Act. I urge the Committee to join him in supporting the biomass energy sector generally so our projects are more sustainable and able to pursue projects like colocation projects that make use of combined heat and power. I ask you specifically to:

• Pursue federal policy parity across renewables: Biomass provides forest management services it is not compensated for, and competes in an unfair marketplace in which other renewable forms of energy receive Section 45 Production Tax Credits that are not open to us. FERC also does not properly value "baseload" sources of energy (facilities that run consistently and are needed to supplement intermittent

sources like wind and solar). EPA has withheld final clarity regarding the carbon benefits of biomass power.

- Protect and expand the Renewable Fuel Standard ("RFS"). Ensure that advanced biofuel continues to be eligible to sell Renewable Identification Numbers, or RINs. In addition, encourage EPA to rule that biomass electricity qualify for the RFS for powering electric vehicles.
- Support the use of biomass power as a source of secure, resilient power at U.S. military installations.
- Support continued funding for grants and loans to support rural energy-related infrastructure.

Thank you very much for the opportunity to speak to you today.

Respectfully,

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Mark Thibodeau Regional Manager