



REQUEST FOR PROPOSALS (RFP)

**Co-Location Opportunities with
ReEnergy at Biomass Power Facilities in Maine:
Ashland, Fort Fairfield, Livermore Falls and Stratton**

October 18, 2017

Administered by: Biobased Maine
www.biobasedmaine.org



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REQUEST FOR PROPOSALS

1. Background

ReEnergy Biomass Operations LLC (“ReEnergy”) owns and operates four utility-scale renewable energy generating facilities in Maine. These facilities use locally sourced, sustainably harvested, forest-derived woody biomass as fuel, in addition to woody biomass that is residue from mill operations. ReEnergy is one of the largest biomass power companies in the United States, with 245 megawatts of installed renewable energy generation capacity. 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.

Each ReEnergy facility is adjacent to undeveloped land that is available for lease or sale, and companies locating on those parcels could make use of affordable electricity and/or steam generated by ReEnergy’s facility.

ReEnergy’s 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. Energy costs for an entity locating at this site will be more competitive than market-rate energy, since electricity and steam supply from ReEnergy’s facilities should result in avoided capital and maintenance costs, avoided electrical transmission and distribution costs, and the ability to enter into a long-term agreement to hedge market price risk.

Maine’s forest industry overall is seeking to partner with emerging technologies and projects. As the most forested state in the U.S., Maine has the highest percentage of land that is forests, with 16.8 million acres of timberland, and a substantial percentage has sustainability certifications from either the Forest Stewardship Council (FSC) or Sustainable Forestry Initiative® (SFI®). Due to a long history of vibrant forest industries, including pulp and paper manufacturing, Maine has impressive infrastructure for wood harvesting and trucking. In 2016, Maine’s wood harvest was approximately 11.2 million green tons – sawlogs, pulpwood, and biomass.

Maine’s forest industry is further advantaged because a small number of private landowners control the majority of its timberland. In other forested areas of the world, forestland is government-owned or owned by hundreds of smaller landowners, which makes wood procurement difficult. With respect to species, Maine currently has an abundance of softwood pulp that lacks markets, as well as forest residuals from sawmills.

Maine is unique due to its abundance of second generation, sustainable feedstock and its close proximity to the largest consumer market in the world (the United States).¹

As Maine pursues new economic development opportunities for its forest industry, there is a robust suite of economic development incentives available at the local and/or state level, including tax incentives and loan guarantees. Additionally, many rural Maine communities, including the communities featured in this RFP, are open to the idea of new projects and welcome new development.

2. RFP Purpose

ReEnergy is committed to the long-term sustainability of biomass power in Maine. This commitment includes strategic interest in participation in new technologies, including biobased technology to produce higher-value products with wood, and/or technology to convert the co-products of biomass power (heat, steam, carbon dioxide, emissions) into higher-value products.

The intent of this RFP is to solicit information and business proposals for commercially-viable technology to co-locate at one, several, or all of ReEnergy's facilities in Maine at Ashland, Fort Fairfield, Livermore Falls, and Stratton.

Proposals will be assessed by ReEnergy for technical and commercial viability with assistance from Biobased Maine and other industry experts, as applicable.

If ReEnergy determines that a proposed business opportunity is worth pursuing, a confidential project development agreement will be negotiated pursuant to which ReEnergy and the successful respondent will collaborate on the development of the proposed project at one or more of ReEnergy's facility sites.

3. RFP Scope

The overall business objectives of this RFP include: (1) an increase in the utilization of Maine's wood resources; (2) an increase in the profitability of ReEnergy's biomass plants; and either: (3) the manufacture of high-value biobased materials from wood; or (4) converting co-products of the biomass energy process into high-value products for sale into growth markets. Examples of industries which could co-locate with ReEnergy's facilities include biofuels, biobased chemicals, advanced biobased materials, as well as industries such as agriculture, aquaculture, algae, or other technologies that use biomass energy co-products (heat, steam, emissions).

¹ U.S. Department of Commerce International Trade Administration. 2017. <https://www.selectusa.gov/largest-market>

ReEnergy is prepared to facilitate site access (and the site itself at Livermore Falls), provide operations & maintenance services, supply thermal and electric energy at below-market rates, provide liaison with state and local officials, and provide technical/commercial guidance. In limited circumstances, ReEnergy might be interested in investing in a project.

The scale of technology deployment may depend on the size and location of each ReEnergy facility, as listed below:

- ReEnergy Ashland – produces net 36 MW of electricity, utilizes approximately 475,000 tons of biomass fuel per year, 360 kpph steam flow up to 850 psig, 900 deg F
- ReEnergy Fort Fairfield - produces net 33 MW of electricity, utilizes approximately 380,000 tons of biomass fuel per year, 310 kpph steam flow up to 1450 psig, 900 deg F
- ReEnergy Livermore Falls - produces net 36 MW, utilizes approximately 440,000 tons of biomass fuel per year, 340 kpph steam flow up to 850 psig, 900 deg F
- ReEnergy Stratton – produces net 45 MW of electricity, utilizes approximately 600,000 tons of biomass fuel per year. 480 kpph steam flow up to 1450 psig, 950 deg F

Deployment of technology is desired by Q2 2020.

Technology deployment will be integrated into, and/or co-located with the current operating ReEnergy facilities. See Appendix A for the existing site infrastructure details. ReEnergy assumes no responsibility for errors or misinterpretations resulting from the respondent's use of incomplete sets of reference documents.

Before submitting a proposal, each respondent must: (a) examine these RFP documents thoroughly; and (b) investigate applicable federal, state and local laws, ordinances, rules and regulations that may affect cost, progress or performance of the proposed project.

4. Proposal Requirements

The timeline for receipt and selection of proposals is provided below. Proposals shall not exceed 10 pages, single-spaced, using type sized 11-point font or larger. Endnotes, process diagrams and staff qualifications and capabilities are not included in the proposal page count.

Each proposal should include the following information and sections. To the extent practicable, please organize your proposal in accordance with the following sections to facilitate ReEnergy's review.

I. Proposal Title

II. Company Background:

- Issuing company including title, organization, address, e-mail, and phone.
- Project point person, address, e-mail, and phone.
- List of senior staff assisting on the project; include title, affiliation, and brief biography with academic background and previous relative technological or business qualifications. Indicate the roles and responsibilities of the organizations and key personnel that comprise the Project Team.
- Identify key capabilities provided by the organizations comprising the Project Team and how those key capabilities will be used in the proposed effort.
- Identify (if applicable) previous collaborative efforts among team members relevant to the proposal scope.

III. Project Objective and Summary:

- Introduction with sufficient detail to assess the efficacy of the proposed technology.
- Expected project duration from proposal to commissioning, including a timeline of project milestones from business assessment to technology commercial commissioning.
- Description of how the project will meet the RFP's stated purpose.
- Description of the key parameters for the project. This should include the expected capacity of the project, the market value of the resultant product(s), and the expected ROI for the project.
- Identification of which ReEnergy facility site(s) is proposed for the project.

IV. Business Case:

- Overview of business model, explaining how it makes a strong commercial business case. For wood feedstocks, please assume a \$25 per-green-ton cost for biomass chips for the purposes of this RFP (this does not commit ReEnergy to procuring biomass chips or other grades of wood for this cost).
- Clear identification of potential customers and off-takers for product(s).
- Summary of market assessment sufficient to assess the commercial viability of technology deployment and ROI.
- Description of benefits realized through successful development of the proposed technology, including benefits to Maine's rural economy. Please identify previous opposition to facilities utilizing the proposed technology from communities, NGOs, or local governments, and how this opposition was addressed.
- Explanation of the project's potential to be innovative compared to existing or other emerging technologies.

- Identification of any market barriers to entry, as well as anticipated competitors
- Identification of economies of scale, if any, that can be achieved by utilizing more than one ReEnergy facility site.

V. Technical Approach and Feedstock:

- Feedstock requirements (e.g., softwood chips, hardwood chips, biomass type). For wood, please be as specific as possible with respect to species, bark content, moisture content, and dimensions.
- Summary of planned technical approach - at a minimum, please provide scale, a list of key process elements, key equipment and process chemicals, CAPEX and OPEX, references to literature, patents and other key assumptions.
- Description of the background, theory, simulation, modeling, experimental data, or other sound engineering and scientific principles that support the proposed technology deployment.
- Identification of proven quantitative technical performance at demonstration or commercial scale and cost targets (both CAPEX and OPEX) for the proposed technology. If applicable, compare the targets to current and emerging technologies.
- Specific examples of supporting data and/or appropriate patent activity supporting the scientific and technical accomplishment.
- Data from market assessments conducted to quantify commercial viability of the technology deployment.
- Identification of any techno-economic challenges to be overcome for the proposed technology to be commercially viable.

VI. Financing:

- Brief description of how existing technology installations have been financed to date.
- List of investors and funding for the proposed project (including grants and loan guarantees); please include list of all current JVs.
- List of state and federal incentive programs relevant to the proposed project – please be as specific as possible with respect to incentives required to ensure financial success (e.g., tax incentives, production tax credits, RECs, RINs, etc.).

VII. Resource Needs:

- List of expertise and resource needs from ReEnergy or other organizations to achieve project milestones.
- Description of project footprint (in acres), electricity and thermal load that will need to be served by ReEnergy’s adjacent facility.
- List of equipment relevant to the proposed project to be provided by ReEnergy and equipment to be provided by other project partners.

5. Proposal Review Timeline

All proposals in response to this RFP are due no later than **5 p.m. EST, November 30, 2017**. Submitting proposals before the deadline is strongly encouraged. ReEnergy expects to commence review of each proposal as soon as the proposal is received.

ReEnergy expects to complete its evaluation of proposals by Friday December 29, 2017. If additional information or discussions are needed during this time, the respondent's contact person will be notified. ReEnergy also will endeavor to notify respondents whose proposals were not selected at or about this time.

6. Proposal Evaluation Criteria

ReEnergy will evaluate all proposals based on the following criteria:

- **Complete Response to RFP Requirements:** Proposals must address the requirements outlined in Section 4 in an organized, concise way with complete information. Omissions should be clearly identified and reasons provided. Please note that proposals will be kept confidential by ReEnergy and Biobased Maine, and respondents must provide sufficient information to prove a strong business case for their proposal, both financially and technically.
- **Strategic Fit of Feedstock:** Wood-based feedstock or the byproducts of the biomass energy facilities must be incorporated to produce products for sale.
- **Overall Technology Viability:** Proposals must outline the technology proof-of-concept information that demonstrates Demonstration or Commercial scale (e.g., minimum production of 10TPD). This needs to be presented in a clear and organized manner.
- **Commercial Viability:** Expected scale, CAPEX and OPEX for the technology deployment and market assessment for profitable off-take. Markets should be clearly identified and quantified.
- **Timeline:** Market deployment of the technology must be completed no later than Q2 2020.
- **Technology Rights:** Proposals must confirm that the respondent owns or has all licenses necessary to use the proposed technology.
- **Company Organization, Capabilities and Qualifications:** Proposals must demonstrate that the team has the experience, skill, financial support and equipment capabilities to carry out the proposed project.
- **Financing Capability:** proposals should address the respondent's ability to finance (or partially finance) a project in Maine.

ReEnergy and Biobased Maine will evaluate proposals based on the above criteria. ReEnergy intends to select the highest-rated proposals for negotiation of a confidential project

development agreement. It is possible that no proposals will meet the criteria and therefore none will be pursued. It is also possible that more than one proposal will meet the criteria, in which case ReEnergy may pursue more than one potential project.

ReEnergy may conduct such investigations as it deems necessary to assist in the evaluation of any proposal and to establish the responsibility, qualifications and financial ability of the respondent, its proposed contractors and other persons and organizations associated with the proposed project.

7. Confidentiality/Disclaimer

Confidentiality:

Responses to this RFP will be treated as confidential by ReEnergy.

Please be advised that at ReEnergy's discretion, questions received and answered may be shared with all parties participating in the RFP process so that all are equally informed. ReEnergy will not disclose the source of the question, just the question and answer.

Disclaimer:

This RFP is not an offer to enter into an agreement, but is merely a request for project proposals. Nothing herein or in a respondent's proposal shall be deemed to create a contract by implication, estoppel or otherwise. ReEnergy is not obligated to award any contract or business to any respondent. Furthermore, any proposal, even if accepted, will be subject to review and negotiation, and no contract or business will be deemed accepted unless and until a definitive agreement is executed between ReEnergy and the pertinent party.

ReEnergy reserves the right to amend, adjust, change, enhance, alter, add or delete any aspect of this RFP or the proposed process (in whole or part) at its convenience and without notice to any respondents. ReEnergy also reserves the right to reject any or all proposals for any reasons whatsoever, to terminate consideration of any or all proposals without restrictions, and to contact and negotiate with persons and/or firms not initially receiving this RFP.

Costs and expenses incurred in connection with developing responses to this RFP are entirely the responsibility of the respondents. ReEnergy is under no obligation to pay or reimburse any respondent for any such costs or expenses.

8. Submission

Respondents must submit their proposals in .pdf format **electronically by 5 p.m. (EST) Thursday November 30, 2017 to the individual below:**

Charlotte Mace, Executive Director
BIOBASED MAINE
565 Congress Street, Suite 204
Portland, ME 04101
cmace@biobasedmaine.org
office: 207-699-5792
www.biobasedmaine.org

Appendix A: ReEnergy Site Infrastructure and Assets

ReEnergy Ashland

Location: 63 Realty Road Ashland, Maine 04732 (Aroostook County)



- 39 MW gross generating capacity
- Annual net MW of 284,000, enough to supply about 37,000 homes
- In-service date of 1993
- 21 direct jobs, an estimated 150+ indirect jobs
- Annual spending of \$23 million
- 50+ acres available land immediately adjacent to the energy facility plus another 40+ acres available in the Plantation of Garfield.
- Access to major state road networks to the north and east to the Canadian border plus to the South to all markets in the lower 48 states. Located approximately one hour from I-95.
- Adjacent to the largest privately owned, contiguous forestland base in the United States. With over 8 million total acres, this forestland is accessed by a privately built and maintained off-road network extending over 90 miles to the west, northwest, and southeast to the Quebec border.
- Adjacent to a rail line owned by the State of Maine and operated by Maine Northern Railroad, a subsidiary of JD Irving.
- Proximity to four international airports in 4 (+/-) hours: Bangor, Portland, Fredericton and Moncton. Daily domestic air service to Boston is available in Presque Isle (20 min).
- Located in a Municipal Tax Increment Financing District
- Located in a Pine Tree Zone

ReEnergy Fort Fairfield

Location: 78 Cheney Grove Road, Fort Fairfield, Maine 04742 (Aroostook County)



- 37 MW gross generating capacity
- Annual net MWh of 260,000, enough to supply about 34,000 homes
- In-service date of 1987
- 26 direct jobs, an estimated 150+ indirect jobs
- Annual spending of \$22 million
- A 60-acre vacant parcel is located adjacent to the energy facility
- Easy proximity to I-95, US1A, ME-161, and the Trans-Canada Highway (approximately 10 miles away in Perth-Andover, New Brunswick)
- Adjacent to a rail line owned by the State of Maine and operated by Maine Northern Railroad, a subsidiary of JD Irving
- Proximity to four international airports in 4 (+/-) hours: Bangor, Portland, Fredericton and Moncton. Daily domestic air service to Boston is available in Presque Isle (15 min).
- Located in a Pine Tree Zone

ReEnergy Livermore Falls

Location: 267 Diamond Road, Livermore Falls, Maine 04254 (Androscoggin County)



- 39 MW gross generating capacity
- Annual net MWh of 284,000, enough to supply about 37,000 homes
- In-service date of 1992
- 25 direct jobs, an estimated 150+ indirect jobs
- Annual spending of \$22.5 million
- 50-acre vacant parcel located adjacent to the energy facility
- Close to major highways; approximately 30 miles from I-95
- Intermodal facility within an hour
- Located within two hours of three major airports and two ports
- Located in a Municipal Tax Increment Financing District
- Located in a Pine Tree Zone

ReEnergy Stratton

Location: 27 Fox Farm Road, Stratton, Maine 04982 (Franklin County)



- 48 MW gross generating capacity
- Annual net MWh of 355,000, enough to supply about 46,000 homes
- In-service date of 1989
- 28 direct jobs, an estimated 200 indirect jobs
- Annual spending of \$25.5 million
- 100-acre vacant parcel located adjacent to the energy facility
- Close to major highway Route 27
- Within 30 minutes of the Canadian market
- Intermodal facility within two hours
- Located within 2.5 hours of three major airports and two seaports
- Located in a Pine Tree Zone

Government/Business Tax Incentives

- Projects located on or adjacent to the ReEnergy facility sites may be eligible for State or Local - Economic Development Incentives, such as: Tax Increment Financing, Equipment Tax Relief Programs or Pine Tree Development Zones. Additional information can be found at: <http://www.maine.gov/decd/index.shtml>
- Maine Technology Institute has \$45M available in challenge grants for infrastructure, equipment and technology upgrades for research development and commercialization: <https://www.mainetechnology.org/program/maine-technology-asset-fund-2-0/>
- Other incentives could also be available. Please contact Maine and Company for more information at: www.maineco.org.

The information above is provided without any representation, warranty or guarantee, expressed or implied to its accuracy. Prospective co-locators should conduct an independent investigation and verification of all matters deemed to be material.