EnergyTrust of Oregon, Inc.

Program update: Biopower

September 17, 2008

Program Goal

Acquisition of significant amounts of renewable energy from wood-fired and other biomass generation; and development of markets for less mature energy resources such as dairy manure and forest biomass.

Program Strategy

1. Perform targeted market analyses where necessary to fill in knowledge gaps.
2. Increase generation at waste water treatment plants by supporting initiatives to utilize excess digester capacity.
3. Expand the Dairy Initiative to include anaerobic digestion of all agricultural residues with particular focus on projects that address existing environmental challenges.
4. Focus on short term opportunities in wood products industries to replace natural gas usage with local wood waste resources to expand renewable generation.
5. Target feasibility funding to projects that expand fuel supply, support innovative waste management solutions and address current environmental issues.
6. Remain engaged in forest biomass development, participating in state and regional initiatives that support expanding this resource.

Where appropriate, provide support to projects with technical and financial support for the utility interconnection process.

2008 Accomplishments

Projects Online

1. Rough and Ready – The 1.2 MW cogeneration project began commercial operation in February 2008. The $1.65 million incentive will be paid based on production over the next four years. To date $255, 950 in incentives have been distributed. Total production through July is 3.2 million kwh.
2. City of Portland Columbia Blvd. Waste Water Treatment Plant – The 1.6 MW cogeneration project began commercial operation in May 2008. A one time incentive of $362,000 will be paid by the end of October 2008.

Projects Approved for Funding/Applications Received

1. Stahlbush Island Farms – The Board authorized funding of up to $827,000 for a 1.6 MW cogeneration project fueled by anaerobic digestion of agricultural residues. This project is expected to be in operation by December 31, 2008.
2. Douglas County Landfill Gas to Energy project – This 1 MW generation project is presently being reviewed to establish technical feasibility and above market costs. Review will be completed by Oct. 2008.

Feasibility Studies

1. To date seven feasibility studies have been completed and ten more studies have been authorized or are in final negotiations and slated for completion in 2009. One group of studies to be completed in 2009 includes a multi-dairy study. The agreement is with a northwest dairy marketing cooperative who will recruit and provide bridge financing for the participating dairies.

Key Activities

1. Waste Water Initiative – In coordination with the Association of Clean Water Agencies, ETO funded the Energy Independence Project to create a roadmap for Waste Water Treatment plants to become energy independent by optimizing plant energy efficiency and utilizing renewable resource opportunities. The results of the report will be presented to both operations personnel and policy makers through 2009. The study has generated requests for funding feasibility studies to expand methane production.
2. Dairy Initiative – In partnership with Oregon Dairy Farmers Association and OSU Dairy Extension Office, ETO is continuing to assist the dairy community in exploring project opportunities. This partnership has resulted in the introduction of third party developers to the dairy operators and preliminary offers are presently being reviewed by dairy owners.
3. Forest/Mill Biomass Initiative - ETO initiated a 12 month project to identify businesses that are prime candidates for forest/mill biomass generation projects, to identify barriers to development of these projects and build a matrix ranking the most promising sites for a biomass facility. The goal is to develop 20 MW of new forest/mill biomass generation as a result of this initiative.

Budget themes 2009-2010

1. Begin commercial operation of Warm Springs Biomass project.
2. Commit funding for up to six projects and 12 feasibility studies by identifying and actively supporting the most promising projects.
    a. Identify and participate with waste water treatment plants that are evaluating incremental generation opportunities by utilizing excess digester capacity. (Presently we are participating with two treatment plants that have studies in progress).
    b. Target project opportunities identified in the TSS woody biomass study and actively support projects that meet ETO development goals.
    c. Expand the focus of the dairy initiative to include all agricultural residues. Support the developing market trend toward co-digestion of agricultural wastes and third party ownership models to develop projects. Prioritize projects that provide significant environmental and economic benefits to the state (grass seed, animal mortality).
3. Expand the role of ETO in the utility interconnection process. The interconnection process is highly technical, expensive and time consuming part of the project development process. Direct resources to aid project developers in navigating this process.