

Briefing paper: Biopower Update and Interim Lessons Learned

March 15, 2006

Purpose

To update the RAC on the *2005 Biopower RFP*, lessons learned from that offering, and expectations for 2006.

Update on *2005 Biopower RFP*

Energy Trust and the City of Portland have signed a contract concerning the City's Columbia Blvd. Wastewater Treatment Plant. Energy Trust is in active conversations with additional finalists from the 2005 Biopower RFP. At least one finalist appears to be proceeding without a financial incentive from Energy Trust.

Lessons learned to date

The market is moving. Of the ten projects examined in Round Two of the RFP, four showed no above-market cost. This group included the single Round Two landfill gas-to-energy project, one of the mill waste projects, and both Round Two dairy waste projects. Some of these expect to proceed without financial support from Energy Trust.

Anecdotal evidence suggests that other Oregon biomass projects are moving forward without Energy Trust's financial involvement. This group includes some projects that we contacted in the RFP outreach process. In addition, two non-RFP biopower projects that showed no above-market cost (the Douglas County Forest Products mill project and the Dry Creek Landfill project) appear to be proceeding without financial support from Energy Trust.

We conclude that the combination of improved utility buyback rates, federal and state tax credits, and rising energy costs have changed the market environment for renewable energy projects. Preliminary findings from the Biopower Process Evaluation (currently underway) suggest that Energy Trust outreach in support of the Biopower RFP was critical in getting potential project hosts to explore project economics seriously. Other key financial drivers appear not to have been supported by targeted outreach.

We also note that some of the projects that do not require financial support from Energy Trust have used our analysis to bolster their efforts to attract equity and secure debt.

The perceived value of green tags is increasing. Energy Trust's financial incentives represent an offer to buy the green tags created over the life of a project, at a price limited by the project's above-market cost. The above-market costs of projects we have examined in detail appear to be equivalent to a tag price of under \$6/MWh.

Current market prices for biomass tags range from well below to somewhat above the six-dollar level. Because today's green tag markets rarely offer contract terms greater than two or

three years, a front-loaded payment for tags to be created up to 20 years in the future can be valuable to developers.

However, project developers appear to believe that renewable portfolio standards or similar policies enacted in the future may drive tag prices considerably higher than those available in today's "voluntary" market. To justify this optimism, developers point to RPS compliance markets (e.g., in New England) in which green tags may be worth \$50/MWh. Reasonable or not, such expectations have made some developers are reluctant to relinquish their green tags.

Energy Trust's green tag policy, which is grounded in statewide consensus among stakeholders, requires us to receive green tags in exchange for paying above-market costs. If we do not get the tags, we cannot claim to have secured renewable energy for ratepayers. However, we believe that Energy Trust can facilitate project development, and secure tags on behalf of ratepayers, by structuring offers that allow ratepayers and project developers to share any "windfall" value due to dramatic increases in the value of green tags. This may require an evolution in our business model, away from grant-making (or, alternatively, project investment) and toward commodity purchasing.

Increasing interest in forest-sourced biomass: Three of the mill-based biomass projects we have considered propose using timber waste and small-diameter thinnings from forest and rangeland as a partial fuel source. All of the other mill-based projects at least mention this type of biomass as a possible future fuel source.

Several groups around the state are exploring issues associated with using energy projects as a source of revenue to support land management aimed at lowering the risk of forest fires and improving forest and range health. These include a Forest Biomass Working Group convened by the Departments of Energy and Forestry; the Oregon Solutions process in support of the Lakeview Biomass project; research underway by the Oregon Forest Research Institute; a conference convened in the summer of 2005 by the Confederated Tribes of Warm Springs; and other efforts.

Energy projects fueled in part by forest biomass could provide an order of magnitude more energy than other sources of biomass in the state. It remains to be seen whether such projects are financially viable; whether existing physical, institutional and regulatory infrastructure is adequate to support them; and whether a critical mass of credible stakeholders will agree that such projects are part of a reasonable land management strategy. We conclude that Energy Trust should be engaged in exploration of these issues.

Next steps

In 2006, we expect to take several steps:

- **Launch an open Biopower program:** Continuing contract negotiations associated with the 2005 Biopower RFP make it difficult to determine the funds available for new biopower projects in 2006 and 2007. To ensure that we have a landing place for worthwhile projects that come in, we expect to combine the project assessment procedures developed for the 2005 RFP with the program structure developed for the Open Solicitation program. As we clarify the budget situation, we will market in support of the program. We expect the new program structure to be available in April.
- **Explore new resources:** We will continue to explore forest biomass, and add investigation of dairy-based digesters. We also expect to explore ways to import power to PacifiCorp and PGE territory via BPA, once associated QF issues are resolved.