

RENEWABLE ENERGY ADVISORY COUNCIL

Notes from meeting on June 22, 2011

Attending from the council:

Juliet Johnson, Oregon Public Utility
Commission
Glenn Montgomery, OSEIA
Vijay Satyal, Oregon Department of Energy
Dick Wanderscheid, Bonneville
Environmental Foundation
Tashiana Wangler, Pacific Power

Betsy Kauffman
Elaine Prause
Thad Roth

Others attending:

John Reynolds, Energy Trust Board of
Directors
Matt Krumenauer, Oregon Department of
Energy
Bill Eddie, project representative

Attending from Energy Trust:

Kacia Brockman
Jed Jorgensen

1. Welcome and introductions

Betsy Kauffman called the meeting to order at 9:30 a.m.

2. Three Mile Canyon Farms biomass project

Thad Roth introduced the project and reviewed the documentation around key issues, risks and the proposed incentive offer. The proposal is for a 4.8 megawatt dairy biogas plant made up of three 1.6 MW generators.

Energy Trust has known about the potential opportunity at this site for many years. A project was first proposed by Enron in 1998 and we agreed to a proposed project back in 2002. Those projects were never built, nor were other proposals in 2006 or a proposal from a third-party in 2010. The farm began talking to us again in late 2010 and applied to us in April 2011.

The two most important considerations are the off-take agreement and rates, and the feedstock assessment. The project will sell to Pacific Power as a qualifying facility and take standard avoided cost rates under Schedule 37. There is a downward adjustment to the rates due to how load is served to the farm.

The farm is in a "load pocket" outside of Pacific Power's control area. In the summer, the energy produced will be absorbed by the facility. In the winter, the loads are not adequate and Pacific Power has to secure firm transmission from the Bonneville Power Administration to move the load into its control area. The power rate is decremented to reflect the cost of the transmission services.

Thad noted a third party was used to evaluate the technical aspects of the project. In this case the review showed the resources look reasonable and the project should be able to generate at the level claimed in their application to us.

There are some concerns. This is a flush facility; water is used to clean the barns. That means it is possible to lose some volatile solids from the manure in the process of moving the manure to the digester. The project is well aware and has been working to make changes to the manure management system to address this issue.

Digester design: The facility chose a well-utilized digester by GHD. It is a modified plug-flow system that operates at mesophilic temperatures. GHD operates 70 digesters in the U.S. and

there are seven GHD digesters in Washington and Idaho. There are two additional GHD projects in design in Oregon. The design has a proven track record for this application.

The engine is a Caterpillar 3920C. There are a number of projects in Oregon that use this engine, mainly landfills and the Stahlbush project. That means there are a lot of local resources, support and experience with operating this engine.

Project costs: We analyzed the capital and operating expenses and compared them to similar projects. The costs are reasonable and lower than most other projects we have helped. Matt Krumenauer asked if our evaluation includes ongoing incentives available, such as the biomass producer collector tax credit. Thad said we have not because there was no certainty around whether or not that tax credit would be available. The bill in which the credit is housed has not yet passed but it could be lucrative to the project. Thad noted we will evaluate the project based on the legislation once it is passed.

Project management: Construction will be completed by Angar out of Ferndale, WA. They have constructed the seven GHD digesters operating in the Northwest. This is a strong and experienced firm, giving us confidence that it will get completed in a timely manner and at the estimated costs. The day-to-day operations will be done by Jerry Friesen and Associates, who operate the Finley Butte Landfill nearby to this project. The project will be owned and operated by TMF Biofuels, an affiliate of RD Offutt, a very large, diversified agribusiness company.

Interconnection: Pacific Power has complete interconnection studies and has estimated costs at just under \$1.2 million.

Co-products: This project will sell electricity and produce animal bedding. There isn't a direct financial benefit to the dairy as they are already composting the solids from their current manure management system and using that for bedding. However, they do expect this to be a superior product to what they are currently using.

There are additional environmental benefits by capturing and destroying the methane that occurs under their current manure management system. This creates carbon offsets with a value of as much as \$6-7 per ton. The value of this revenue stream was included for 10 years. We also included costs for verifying the offsets.

Above-market cost evaluation: With the exception of the tax credits indicated by Matt, we found an above-market cost of just under \$4.4 million. We proposed a \$2.5 million incentive paid over four years, beginning at commercial operation and then paid annually based on meeting production targets. The net present value of our incentive is 43 percent of the above-market cost.

In return for our incentive we take a percentage of the RECs produced by the project. Our first analysis looks at the levelized costs of RECs to us based on a percentage allocation of our incentive to the full above-market cost. For this project we believe we are paying more than the market price for the RECs so we stick with the pro-rated percentage of RECs. The project may be interested delivering its RECs upfront to take advantage of what may be a different market for RECs in the future.

Juliet asked if projected REC revenues are included in above-market cost. Thad responded that initially they are not. We look first at the value of the energy. After we have determined the REC allocation we go back and look at how the REC values may impact the project's financials.

Vijay asked what our production targets look like. Thad responded we will look for 60 percent of the estimated generation in the first year, 80 percent in the second year and the full forecast target in the third year.

John asked if the engine will recapture heat. Thad said that heat recovery off the engine jacket and exhaust is standard equipment on this engine generator. John asked how the bedding is used and if it is safe. Thad said yes, the composting or digesting processes remove pathogens from the bedding.

Dick asked if there is a timing issue related to having a special meeting. Bill said that under the current Business Energy Tax Credit program the project has an obligation to be online by April 30, 2012. Betsy said Energy Trust wants to take this project to the July board meeting and that the RAC meeting in July is after the board meeting.

Dick asked about the earlier proposed incentive of \$1.5 million in 2002. What was different then? Thad responded that all he was able to look at was the board documentation from that project and hasn't seen what the design and costs looked like in 2002. It might be that the facility was new then and the project could have been easier to integrate.

Juliet asked about project risks. Thad said the biggest challenges are to integrate the facility around their existing manure management system. They have to make sure the flush system doesn't get operated for uses other than manure management. We've seen these kinds of process changes impact businesses with other projects that Energy Trust has provided incentives for.

Juliet asked if there are financial risks. Thad mentioned all the rules the project has to meet to meet ITC, Business Energy Tax Credit and Energy Trust requirements.

Vijay asked how the offsets will be monetized or used and how much private debt is supporting this project. Thad said it is very difficult to understand what the debt structures on these projects will end up being as our incentive may impact the structure. In terms of the carbon credits, we've looked at them as being monetized.

Juliet asked if we have provided incentives to qualifying facilities before. Thad noted the majority of custom projects are qualifying facilities.

Juliet noted that the OPUC likes to see how particular projects promote Energy Trust's goals for renewable energy. Thad said the board document typically notes the goal applications and noted that we take credit for the generation when it becomes operational. Elaine noted that the OPUC will see the funds for this project allocated in our activity budget this year.

Dick asked what happens if the project doesn't meet its performance goals? Thad said the project will get extra time to meet its performance goals but that payments won't be made until hard targets are hit.

Tashiana asked how RECs will be administrated. Bill said the project will be registered in WREGIS and the RECs will be transferred per Energy Trust's instructions.

Betsy asked Thad to discuss how this project relates to the Biopower program budget and Elaine how it relates to the budget as a whole. Thad said the total Pacific Power budget for 2011 was \$1.5 million. This project was not anticipated. There was also \$1.2 million dedicated to

another project in 2010. That project was sold and when it was re-reviewed we found it did not have above-market costs, so that money came back to us.

Elaine said this represents about one-half of what was available for the custom projects for this year. There are also some possible wind, hydro and geothermal projects in this year but so far we have not seen direct competition for the remaining funds.

Dick asked about the difference between the commitment of \$2.5 million versus \$625,000 going out the door in the project's first year. Elaine explained we commit only the funds we have on hand and that we don't commit funds from future years.

Betsy asked for a sense from the council about the project. Everyone supported moving the project on to the board.

3. Public comment

There was no public comment.

4. Meeting adjournment

Betsy thanked all council members for their participation and adjourned the meeting at 10:50 a.m. The next full council meeting is July 20, 2011.