

RENEWABLE RESOURCE ADVISORY COUNCIL

Notes from meeting on November 17, 2004

Attending:

Angus Duncan, BEF
Doug Boleyn, Cascade Solar Consulting
Frank Vignola, UO SRML
Janet Fairchild, OPUC
Jeff King, NPCC
Justin Klure, ODOE
John Reynolds, UO and Board
Debra Malin, BPA
Troy Gagliano, RNP
Virinder Singh, PacifiCorp

From the Energy Trust:

Adam Serchuk
Anna Parry
Debbie Goldberg Menashe
Kacia Brockman
Margie Harris
Maureen Quaid
Peter West
Sue Meyer Sample

Others attending:

Jon Miller, OSEIA
Andrew Koyanisqatsi, Solar Energy Solution
Alan Dakessian, Siemens Building
Technologies
Martin Shain, BacGen Bioenergy
Susanne Sample, Energy Trust Controller

Peter West convened the meeting at 9:30 a.m.

1. Introductions

2. Open Solicitation Projects Review

Adam reviewed 2 proposals, a small wind turbine and large cogeneration plant.

Hull Wind Turbine

Most small wind applications are over the current 25 kW net metering limit. A new project being proposed will fit into current net metering limits. Helen Hull of Newberg proposes to install a 7.5 kW wind turbine. Energy Trust support may be contingent on actual delivery of power to the grid, and will minimize our risk relative to the technology. Staff proposes support of about \$10,000, about 20% of the net present value of the energy costs, or 9.5 cents/kWh. This project may help develop the small wind market by providing an alternative to Bergey turbines.

Doug asked about the site relative to wind quality. Adam said that anemometer data provide confidence in a low-speed wind regime. Frank asked where the wind turbine is manufactured, and Adam responded that the turbine is made overseas.

Jon asked if the customer asked for an upfront buy down, which she did, but Adam said they didn't complain about the terms proposed. Debra asked if the contract will require a maintenance plan, since small turbines have maintenance problems. Staff asked for a maintenance plan, but is not requiring it in the contract. Peter added that the production incentive will take care of it.

Angus suggested that the machine will have a 33% capacity factor, which seems high considering the low wind speeds in that area. Adam said the production payment will take that into consideration. Angus wondered if this technology will be cost-effective, and feels that the technology maturation curve is shallow and small turbines may only be cost-effective in remote areas, but not in PGE service territory. Adam reported that PGE supports the project, and that Energy Trust funding is appropriate in order to demonstrate the technology.

Martin said that the more examples there are in the marketplace of renewables, the better. Regardless of whether this project is the optimal territory, it is a low risk and high value opportunity for the Energy Trust. The RAC members offered support for the project

Douglas County Forest Products Proposal

Douglas County Forest Products of Winchester is currently installing a new boiler that will burn wood waste. They are considering add-on equipment to generate electricity. The company proposed that Energy Trust cover the above market costs associated with energy production. Adam estimates that \$727,000 will cover the Energy Trust above market costs, or 0.2 cents per kWh, a very low cost resource, and an opportunity to test a technology that demonstrates an attractive opportunity for Energy Trust funding, although there is no power purchase agreement yet. The company has also been working with the Production Efficiency program to retrofit other equipment at the facility.

Frank asked where the wood waste will come from, and whether transportation impacts would offset environmental gains from the cogeneration. Adam said that the fuel will come from the site, and the project has been sized to absorb available wood waste from the facility. Angus wondered what happened if the company closed, and Adam said that we would pay on an energy production basis. We are not providing up front capital, but rather an operating revenue stream.

Angus asked whether the project might be politically controversial depending on the source of the fuel, and suggested that Energy Trust pay attention to that. Adam said that the waste does not come from forest trimmings.

Deb wondered what the company is waiting for to decide – is it how much interconnection will cost (PacifiCorp has released a broad range of costs), what the purchase price will be to buy input, or whether the Energy Trust will provide funding? Virinder said that the interconnection study was just requested, and the range is preliminary. Deb said that if the purchase price is good enough, the project won't need Energy Trust funding. Adam said the interconnection costs and perhaps the power purchase price make Energy Trust funding needed to make the project go. Troy asked if 2.3 cents is the assumed power purchase price, and Adam said that number represents the worst case scenario.

Adam pointed out that we may be seeing interconnection and power purchase price uncertainty with projects this size (up to 3 MW). He suggested that the utilities develop a standard offer for this type of project. Doug asked about the interconnection costs. Virinder said the utility does an analysis, but the customer pays, and the uncertainty is around the cost and that there is a queue at the utility to develop interconnection capacity. There was some discussion about FERC requirements and Virinder said the federal agency has a clear prescriptive path.

Angus said the project will displace energy coming from Wyoming and there should be some additional value for the power from a closer location. Doug said we should focus resources

where there are bottlenecks. Deb asked about emissions, and Adam said that the due diligence analysis assures that there is no problem, but staff will follow up on how the analysis was done.

Frank said if interconnection is holding up the project, it might make sense for Energy Trust to pay those costs. Peter said the issue is the queue, the projects ahead of this. Angus wondered about the time sensitivity of other projects in the queue compared to this project. Deb asked about the range of interconnection costs, and Virinder said the utility is reluctant to provide one because of past experience. Adam agreed that Energy Trust should look at creative solutions relative to interconnection and help the utility manage uncertainty. The institutional barriers may be problematic in the development of projects this size.

Break

3. PGE RFP Terms

Peter reported that negotiations are ongoing in the PGE RFP for renewable energy, and the outcome is not yet clear. The negotiators are talking about 75 MW and trying to finish by the end of the month. Energy Trust has scheduled a special board meeting later this month to consider the contract terms, but it is not certain that the meeting will go forward.

4. New RAC Format

Peter presented his new format for reporting on key comments from RAC meetings and asked for feedback. He said staff will move the Green Tags proposal to the board that is a variant of Option 1, where Energy Trust does not own the tags. He reported that he spoke with the utilities as requested and they did not have a problem with letting residential customers retain the green tags. A previous legal opinion did recommend Option 2, although it was provided by outside counsel, not our general counsel. The proposal will likely be considered by the board in February 2005. Peter said an additional legal opinion was not necessary on Option 2 since there appear to be no roadblocks to moving forward on Option 1, but he would revisit this after the new year.

5. Draft Action Plan

Peter presented the 2005-06 Renewable Energy Draft Action Plan. The OPUC has set a goal of a rolling average of 15 aMW for the renewable energy programs, and the draft budget projects 27-38 aMW for 2005. Frank asked why the renewable programs have such high goals compared to the efficiency programs, when they are receiving only one-third the funding of the efficiency programs. Peter reminded all that the RAC suggested the goal and the board supported it.

2004 has not been a good year for the renewable energy programs because of the lapse in the federal production tax credit. Current policies will enable greater success next year, particularly if the OPUC docket on Qualifying Facilities moves forward. If such policies are not extended beyond 2005, renewable projects will start to dry up.

Frank said there is currently a comment process on the forms for the USDA grant program for energy projects and encouraged people to provide comments. Deb asked if Energy Trust will help people fill out proposals. Peter said we will work with Carel DeWinkel at ODOE to put on workshops to train people on grant making to USDA. Deb suggested Energy Trust pay someone

to provide technical assistance with the forms. Justin said that ODOE is looking for funds to help with that. Peter noted that there is budget funding to support such an initiative.

The overall strategic direction is to have a complete set of program offerings for the range of renewable energy technologies. Peter summarized the comments to date, noting there is agreement on the strategy, but some disagreement on the relative budgets for each technology type. Comments are being received until December 7. Margie added that the deadline is absolute and we would like to get them sooner. We must prepare the comments for the December 15 board meeting.

Frank asked where the comments have come from and Peter said the board, the RAC members and others have all provided comments. Frank said that biopower has never lived up to its potential, and there are lots of problems with it, not necessarily related to the availability of fuel. He suggested we look at the barriers to implementation of the technology. Jeff said that biopower has never received the sustained level of interest that other renewables have received. Deb said this is because the technology has been dirty with higher emissions, although the technology is better now. The attempts that have been made have been successful, but the industry has suffered from a lack of attention and incentives. If similar resources were applied, the same success could be achieved, second only to wind.

Angus said that in the last 5-6 years, BEF has searched for a biomass project with a reasonable chance of becoming cost-effective and sees three problems. First, the sheer multiplicity of applications makes it hard to standardize an approach. Second, fuel supply is often contingent on a different set of economics than energy and creates contingent risk - if markets that supply the fuel suffer setbacks, the supply decreases. Third, there are many moving parts complicating any deal, including fuel, technology, and output products.

Deb asked if money were diverted from solar to biopower, could we capture the production tax credit effectively. Peter said we are not sure what would happen, although others have commented we are being too conservative in pursuing biopower. Adam said the Energy Trust will roll out a biopower program in Q3 of 2005. Biopower projects have long lead times, and the production tax credit is half compared to wind (.9 cents/kWh) and lasts for 5 years, not 10, so it's unlikely we could take advantage of the production tax credit. If wind has no above market component in the future, we may be forced to look at other technologies, including biopower and geothermal in order to locate the utility-scale projects needed to achieve our goals.

Jeff asked if Energy Trust's intent is to focus on certain aspects of biopower and look for potential for standardization. Adam said we will do more market analysis in 2005 on wood products, landfills, waste water digesters and forest trimmings. Mid-year, we may release an RFP to study the technologies in more detail to determine where the program's initial focus should be. Jeff said that opportunities will pop up that are not in a target area, and Energy Trust should be open to those. Adam said that the Open Solicitation program will provide an outlet, and the issue is funding for the program.

Doug asked if the plan for next year will require more resources than allocated in the draft budget, and where funding will be taken from if large projects are proposed. Peter noted the budget does not exceed revenues and carry-over funds. Doug also asked where will the next increment of biopower resources be focused? Adam noted the answer will come from the additional market analyses. Angus said he is not sure what the right amount of money for this

area is, and suggested that Energy Trust develop a program strategy to focus on ways to buy down fuel /product/ income stream issues. It's not just a matter of incentives, but attention paid to manage other risks. Frank said that with the federal renewables program from the USDA, we may have more funding to work with.

On solar, Jon said that the industry has been burned in the past on making inflated claims, and the industry is not surprised at the resource allocation questions. The solar industry will not be fixed after 2 years of activity. If the funds were pulled away, the industry would be destroyed. It would be irresponsible to not develop that resource. The industry is still being developed for the future, when solar will be more attractive. Jon does not understand why the thermal industry is not viable in Oregon, and guessed that the market has decreased because federal subsidies have decreased. One bad year does not mean solar thermal is a finished industry. Margie asked where Energy Trust money can make the biggest difference.

Jon objected to separating solar thermal from the rest of the industry – solar technology includes PV, passive and thermal, and all of these contribute to a good solar investment. He wishes the conservation side would fit better with all three solar components. Deb said that that BPA is moving away from solar thermal, except in the non-wires areas. Kacia said the program plans to address some of the market barriers by targeting specific markets, like new construction and commercial. Andrew said that solar thermal is viable as an industry. One company that left the state may have accounted for up to 50% of thermal installations. Based on his business calls, there is as much or more interest in thermal now than ever, especially for pool applications.

Angus encouraged revisiting PV criteria – BEF is considering projects more carefully and is focusing on installations that have educational, remote site, distributed generation and building-integrated elements and those are the highest value current applications in the Northwest. Jeff asked if that focus will support the industry in the state. Peter said the number of professionals would decrease.

Virinder said that biopower and small wind programs make sense and each has an industry supporting them, and cautions about advice to continue doing more. The more funding is spread out, the more competition there will be, and we should remember that wind is the cheapest resource and helps Energy Trust achieves its aMW goals.

Frank said we should spread the money out among a variety of renewables, but in the future, solar will be an important source of energy. It's important to look at whether we are spending the solar dollars in the most efficient way to develop the industry. The industry is improving slowly, but cannot yet support market development without Energy Trust support. We need to keep the basic buy-down, and the RAC can look at the level of support and where we can invest to move the industry forward. He suggested boosting incentives for unique projects with demonstration potential.

Troy asked about Energy Trust support for geo thermal projects, and Peter said that any proposals could be handled through the Open Solicitation program, and that staff is open to projects, but none have been received to date.

6. Adjournment

Peter adjourned the meeting at 12:07 p.m.