EnergyTrust of Oregon, Inc.

Board Decision Authorizing Waiver of Funding Cap for OSU Combined Heat and Power Project

September 3, 2008

Summary

Authorize a $2.23 million incentive from the New Buildings program budget to acquire 28 million kilowatt-hours (kWh) in savings from a combined heat and power (CHP) system on the Oregon State University (OSU) campus. The incentive exceeds the program cap and therefore requires board approval.

Background

- CHP systems simultaneously produce electrical and useful thermal energy from a single fuel. They may either use heat from a primary steam process to generate electricity or use waste heat from an electric power generator for space, water, or process heating. CHP projects can be a considerable source of efficiency, reduce greenhouse gases and defer investment in transmission and distribution lines.
- OSU has been planning a CHP plant to serve campus needs for about 7-8 years. OSU first briefed the board and requested funding in June 2005.
- Since 2005, ODOE has worked with OSU to ensure that the project meets State Energy Efficiency Design (SEED) program requirements to exceed the Oregon building code by 20 percent or more. To meet SEED requirements, OSU needs to leverage external funding sources.
- ODOE and Energy Trust are in the process of having a thirty party analyst review and verify the accuracy of project energy analysis. However, based on ODOE's extensive energy analysis that is under the above verification review, Energy Trust staff is confident that the project will save 28 million kWh of electricity per year.
- The project is expected to cost $12.9 million. To finance this expense, OSU:
    - Requests $3.5 million in Energy Trust incentives;
    - Expects a $2.5 million Business Energy Tax Credit and $1.5 million in funding from the Climate Trust;
    - Will match all funding contributions with state bonds.
- Energy Trust's CHP policy provides that Energy Trust will:
    - Offer incentives for CHP generation that is more cost-effective than the alternative resource and would be used on-site and not be sold;
    - Use budgets and structures of existing building and production efficiency programs, and adjust incentives to reflect any higher level of risk compared to other industrial projects;
    - Evaluate projects using a cost-effectiveness methodology that is comparable to that used for other industrial projects, and which also accounts for unique CHP features;

  - Limit eligibility to facilities that use Pacific Power or PGE electricity; and
  - Provide no higher incentives for CHP projects funded through efficiency programs than comparable CHP projects funded through the renewable program.

- The standard incentive for efficiency projects of comparable scale is $0.10/kWh. To reflect the higher risk inherent in CHP projects (e.g., they may decide not to generate power because the market price of power could be lower then their cost to generate it onsite), Energy Trust offers $0.08/kWh for qualified CHP.

Discussion

- Energy Trust staff analysis shows that:
  - Power from the proposed project will be used on site;
  - At an incentive of $0.08 per kWh, the project is cost-effective and satisfies both utility and societal tests;
  - Assuming savings of 28 million kWh per year, a total incentive payment of $2.23 million is warranted.

- The project would save energy at a very attractive cost: $700,000 per average megawatt, a levelized cost of $0.007/kWh (the OPUC's 2007 minimum performance measure was $0.02/kWh).
- Project savings are expected to persist beyond 20 years, given that OSU is a long-term institution.

Recommendation

Authorize staff to enter into an agreement with OSU to provide an incentive of up to $2.23 million for this project by approving resolution #485.

RESOLUTION # 485
WAIVE THE NEW BUILDING INCENTIVE CAP FOR AN OSU CHP PROJECT

WHEREAS:

1. **Combined heat and power (CHP) systems simultaneously produce electrical and useful thermal energy from a single fuel. CHP projects can be a considerable source of efficiency, reduce greenhouse gases and defer investment in transmission and distribution lines.**
2. **OSU has been planning a CHP plant to serve campus needs for about 7-8 years. The project is expected to meet State Energy Efficiency Design (SEED) program requirements, exceed the Oregon building code by 20 percent or more, and save 28 million kWh of electricity per year.**
3. **Energy Trust analysis shows that:**
   - **Power from the proposed project will be used on site;**

- **At an incentive of $0.08 per kWh, the project is cost-effective;**
- **assuming savings of 28 million kWh per year, a total incentive payment of $2.23 million is warranted;**
- **The project would save energy at a very attractive cost: $700,000 per average megawatt, and a levelized cost of $0.007/kWh; and**
- **Project savings are expected to persist beyond 20 years.**

It is therefore RESOLVED that the board of directors of Energy Trust of Oregon, Inc. authorizes:

1. **An incentive payment to OSU of $2.23 million from the 2009 New Buildings program budget for the proposed CHP plant; and**
2. **The executive director to negotiate and sign an agreement consistent with the terms and assumptions of this resolution.**

Moved by: Seconded by:

Vote: In favor: Abstained

Opposed: