Board Decision
Authorizing Funds for the enXco Solar PV Project

June 13, 2009

Summary

Authorize funding of up to $3,450,000 toward the above-market cost of a 3.0 megawatt (MW) ground-mounted solar photovoltaic facility owned by enXco.

Energy Trust Goals

- The project supports Goals 2 and 5 of the 2007-2012 Strategic Plan: to provide 10% of Oregon's electric energy from renewables by 2012, and to encourage and support Oregonians to integrate renewable resources into their daily lives.

- The project also supports Oregon's goal to have community energy projects (defined as less than or equal to 20MW) help meet a portion of the state's renewable portfolio standard.

- The proposed PV project will be the single largest in Oregon and the first utility-scale installation, significantly expanding the type of solar project available to support PGE's resource needs.

Background

- In April of 2008, PGE issued a competitive RFP for renewable energy resources to help comply with the Oregon Renewable Portfolio Standard and diversify its mix of renewable resources.
- PGE reviewed the bids and in August of 2008, forwarded to Energy Trust an initial short list, including four utility-scale solar proposals. Energy Trust and PGE narrowed the list to two least-cost options. The bids were updated after the 2008 financial sector collapse.
- PGE and Energy Trust reviewed the revised bids, and both independently identified the enXco proposal as the top pick. Energy Trust's analysis indicated that the project would produce the most energy at the least incentive cost per watt.

Discussion

- The project would install 3 MW of fixed-tilt, ground-mounted solar panels. The panel tilt will be optimized for late afternoon peak-power production. The panels are of a thin-film type capable of producing 1.24kWh per installed watt, significantly higher than typical Willamette Valley installations.
- Energy Trust determines incentives based on a project's above-market cost: the difference between the cost of power from the project over its life and the market value of equivalent power. The analysis includes tax credits and other benefits available to the project. Above-market costs are calculated as a net present value.
- A financial summary of the project follows:

Project Financial Summary - NPV Basis

Project Capacity (Megawatts)	3
Annual Output (MWh)	3,717
Evaluated Resource Life (years)	25
NPV of Costs (capital costs and all expenses)	$ 17,407,843
NPV of Revenues	$ 3,828,092
NPV of Tax Benefits	$ 9,634,285
Net Above Market Cost	$ (3,945,467)

- Staff reviewed the project design and costs and found them to be reasonable for a project of this size, type and design.
    - The project's per-kilowatt up-front costs are less than typical, net-metered solar installations funded by Energy Trust.
    - However, this project will pay property taxes and other expenses typically avoided by net-metered solar projects.
    - The net result is an above market cost that is somewhat higher than the largest, standard, net-metered project Energy Trust funds.
- The above-market cost, on a net-present value basis, is $3,945,467 over 25 years, including installation and operating costs and assuming state and federal tax benefits.
- Staff proposes an incentive capped at $3,450,000, equating to the minimum standard offer in the PV program of $1.15 per watt for a stand-alone net-metered project.
- Although there are occasionally projects at $0.80/watt, these are not the norm due to current market conditions and higher financing costs for most projects.
- Staff proposes to pay the entire $3,450,000 upon project commissioning. If for some reason a smaller project ends up being installed, the incentive would be proportionately decreased.
- enXco would be required to repay a portion of the incentive if installed capacity and production ability is not maintained. Installed capacity is the prime determinant of output for PV projects.
- Paying upon commissioning, rather than over time, is necessary to maintain the minimum financial return for the project and to keep the total Energy Trust payment within the program's budget. If paid over time, the actual, nominal payments would have to increase to retain a NPV of the initial, one-time payment.
- The project's power would be sold to PGE under a long-term power-purchase agreement. Market rates for the project's power reflect the value of peak-period delivery of the power and are in line with PGE's updated IRP forecasts.

- Energy Trust's incentive is 87.4% of the full above market costs. With one exception, Energy Trust's green tag policy requires a share of the project's green tags equivalent to or higher than the proportion of the above-market costs funded. Green tags are environmental attributes of renewable energy that can be used to meet renewable portfolio standards and/or sold apart from the underlying energy.
- The exception is when the levelized value of the green tags controlled by the Energy Trust is less than the forecasted market value for green tags. In this case Energy Trust's share is adjusted downward to equate the value of the tags coming to the Energy Trust to the market value.
- enXco agreed to provide 100% of the green tags to PGE's customers as part of their response to the RFP. All the green tags will go to PGE for the benefit of PGE's ratepayers to comply with Oregon's renewable portfolio standard or as otherwise directed by the OPUC.
- Based on the proposed funding for this project, the levelized cost of all the tags from this is $66.13/MWh. The current, levelized market forecast for green tags is $11.25/MWh. Based on these calculations, the exception in the green tag policy is not in effect for this project and no reduction in Energy Trust's share is warranted.
- Funds to support the project are within the 2009 budget for Open Solicitation Program. This program had originally anticipated a project from the PGE RFP in 2008 and that expectation was carried forward to the 2009 budget.

Recommendation

Authorize $3,450,000 for the 3MW enXco Solar PV project.

RESOLUTION 517
AUTHORIZING FUNDS FOR THE enXco SOLAR PV PROJECT

WHEREAS:

1. **In 2008, PGE requested proposals for renewable energy resources. PGE reviewed the resulting bids and forwarded an initial short list to Energy Trust. After updating costs to reflect recent economic conditions, PGE and Energy Trust reviewed the revised bids and both chose the enXco proposal as the best proposal.**
2. **The project would install three megawatts of ground-mounted, fixed-tilt solar panels. The energy would be sold to PGE.**
3. **The total cost of the project is $17,407,843. Staff reviewed the project design and costs and found them to be reasonable for a project of this size, type and design.**
4. **The above-market cost on a net-present value basis over 25 years is $3,945,467.**
5. **Energy Trust proposes an incentive of $3,450,000, representing 87.4% of these full, above-market costs.**

6. **All green tags from the project will accrue to the benefit of PGE ratepayers .**

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

1. **Authorizes an incentive of up to $3,450,000 for a three megawatt, ground-mounted solar photovoltaic facility to be owned by enXco.**
2. **All of the project's green tags will be assigned to PGE for the benefit of its ratepayers, to be used to comply with Oregon's renewable portfolio requirements or as directed by the Oregon Public Utility Commission.**
3. **The executive director is authorized to negotiate and sign an agreement consistent with this resolution.**

Moved by: Seconded by:

Vote: In favor: Abstained:

Opposed: [list name(s) and, if requested, reason for "no" vote]