



December 18, 2013

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Public Utility Commission
Attn: Filing Center
550 Capitol Street NE #215
PO Box 2148
Salem, Oregon 97308

Re: UM-1673 Filing of Energy Trust Comments in UM 1673

Enclosed for filing, please find Energy Trust's comments responding to Oregon Public Utility Commission Staff Questions for Stakeholders.

A handwritten signature in black ink, appearing to read "Debbie Menashe", with a long, sweeping underline.

Debbie Menashe
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Enclosures
c: UM 1673 Service List

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1673

In the Matter of:)	COMMENTS OF
)	ENERGY TRUST OF
PUBLIC UTILITY COMMISSION OF)	OREGON, INC.
OREGON)	
Report to the Legislature on)	
Effectiveness of incentive Programs for)	
Solar Photovoltaic Energy)	

Energy Trust of Oregon, Inc. (“Energy Trust” or “ETO”) submits these comments in response to the November 21, 2013 Public Utility Commission (“PUC”) Staff Questions for Stakeholders in connection with the PUC’s report to the Legislature. These comments are intended to provide information based on Energy Trust’s experience in operating its solar incentive program.

Introduction.

Energy Trust has reviewed the PUC staff questions regarding HB 2893 Solar Incentive Report to the Legislature. Below are comments related to a subset of those questions reflecting those issues with which Energy Trust has direct experience in its work supporting distributed renewable generation in Oregon.

There are three categories of issues that our comments will focus on:

- o Cost and benefits of programs that provide incentives for retail electricity customers;
- o Forecast of costs for solar photovoltaic systems located in Oregon;
- o Identifying barriers within programs to providing incentives for solar systems in Oregon.

Cost and benefits of programs that provide incentives for solar systems to retail electricity customers.

Energy Trust recommends that costs for the two incentive options available for customers of PGE and Pacific Power be as detailed as possible. This includes both the cost to install solar photovoltaic systems as well as the cost of programs to deliver incentives to support those installations.

Installation Costs –

Requirements for the primary program designs (ETO, State Tax Credit, VIR) have an impact on the total installation costs. To the extent possible an inventory

of costs should be identified for each program to document the differences in the cost of installation under each program. A number of those differences were included in the *Solar Photovoltaic Volumetric Incentive Program – Report to the Legislative Assembly, January 1, 2013*. This should be expanded to include the unique costs related to compliance with each of the primary program design requirements.

Based on our work with solar contractors and our review of project materials, we see that system size also has a significant impact on cost and should be considered when comparing installation costs between programs or over time. Various program expenses, requirements or incentive designs may be more or less appropriate for different system sizes. Also, incentive caps or size categories may result in systems that are sized to maximize incentives rather than to best meet a customer's needs or result in the most cost-effective installation.

Incentive Program Costs -

The primary program designs (ETO, State Tax Credit, VIR) have different cost structures depending on the program goals and requirements. For example, Energy Trust utilizes trade allies to qualify customers, design qualifying systems, install systems, and to provide customer service after the installation. The cost to maintain this trade ally approach including assuring quality control, managing trade ally qualification, and training is in addition to direct incentive payments and administration of the program. Any evaluation of the costs of various program options should explicitly identify the categories of costs for each of the delivery models under consideration.

For the analysis in this report, program costs could be divided into three general categories: 1) direct incentive costs, 2) incentive delivery costs and 3) non-incentive program costs. The direct incentive costs would include funds paid to (or taken as a tax credit by) a solar customer or contractor for the installation of a photovoltaic system. Incentive delivery costs would include costs associated with delivering these incentives, such as upfront and ongoing administrative and verification costs. Non-incentive program costs will be harder to define and directly compare between incentive programs due to the different goals and organizational structures of the entities delivering these incentive programs. For example, Energy Trust's goals go beyond expanding incremental solar photovoltaic capacity to include addressing market barriers, educating consumers and building a pipeline of renewable energy projects. These market transformation goals have associated costs and benefits and would fall under the non-incentive program cost category.

With respect to how these costs should be characterized we suggest presenting costs in the same format as the Solar Resource Value. As with the Solar Resource Value, all pertinent assumptions should be included with the resulting values. Costs can be translated between nameplate capacity (\$/kW-DC) and

energy (\$/kWh) units if assumptions such as average DC to AC derate factor, capacity factor and depreciation rate are explicitly defined.

Forecast of costs for solar systems located in Oregon.

Energy Trust uses research from Lawrence Berkley National Labs (LBNL) and the National Renewable Energy Lab (NREL) as a basis for solar cost scenarios. While there are a number of private firms that have more detailed projections, the LBNL and NREL sources are credible and publically available. Oregon's solar prices have tended to be near the national median; so, the conclusions and projections of these reports are good proxies for our market. In particular, LBNL's *Tracking the Sun VI* report provides a national context and history for Oregon's price trends, and NREL's "soft" cost roadmap provides both a current trajectory and a Sunshot program target for price components through 2020.

This report could consider three cost scenarios that would cover a range of potential price forecasts: 1) a current trajectory based on recent pricing trends, 2) a high-cost trajectory based on the assumption of stagnating costs and lower installation activity, 3) a low-cost trajectory based on the assumption of success in the Sunshot program and growing volume.

While hardware costs are largely dependent on the global market for solar components, non-hardware "soft" costs will depend on continued improvement efforts in our local market. This study presents an opportunity to evaluate how reducing soft costs may affect the forecast of costs for solar systems in Oregon. Reduced soft costs provide a pathway to increase the impact of incentive dollars over time.

Identifying barriers within programs to providing incentives for solar systems in Oregon.

Based on our experience with installation contractors, we think it would be useful for this report include a survey of such contractors to identify barriers within programs to implementing incentive funds. Installation contractors play a unique role in delivery of these programs and can provide valuable insights into the challenges of effectively utilizing incentive programs to expand solar system installations in Oregon. Potential areas to survey could include: predictability of the availability of incentives for a given project, ease of incentive reservation, the cost and value of quality assurance efforts, and the whether incentive programs are meeting the needs of various types of customers.

Conclusion.

Energy Trust appreciates the opportunity to provide these comments.

DATED this 18th day of December, 2013.

By: _____


A handwritten signature in black ink, appearing to read "Debbie Goldberg Menashe", written over a horizontal line.

Debbie Goldberg Menashe
Attorney for Energy Trust
of Oregon, Inc.

CERTIFICATE OF SERVICE

I, Debbie Goldberg Menashe, hereby certify that on this day I served a copy of Energy Trust of Oregon's Comments upon all persons indicated on the attached service list via electronic mail.

Dated this 18th day of December, 2013, at Portland, Oregon.

By: 

Debbie Goldberg Menashe, General Counsel
Energy Trust of Oregon, Inc.

Summary Report

UM 1673 PUC LEGISLATIVE REPORT TO COMPLY WITH HB 2893 SOLAR INCENTIVES

Category: Miscellaneous

In the Matter of
PUBLIC UTILITY COMMISSION OF OREGON,
Report to the Legislature on Effectiveness of Incentive Programs for Solar Photovoltaic Energy.

Docket opened by HB 2893. Copy and paste link below into...

Filing Date: 9/23/2013

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Summary Report

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