

BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

UM 1452

In the Matter of)	SUPPLEMENTAL COMMENTS OF
)	RENEWABLE NORTHWEST PROJECT,
PUBLIC UTILITY)	THE CITIZENS' UTILITY BOARD AND
COMMISSION OF OREGON)	THE OREGON SOLAR ENERGY
)	INDUSTRIES ASSOCIATION
Investigation into Pilot Programs to)	REGARDING SOLAR PROJECT
demonstrate the use and effectiveness)	INSTALLED COSTS AND THE
of Volumetric Incentive Rates for Solar)	IMPLICATIONS OF HB 3690
Photovoltaic Energy Systems.))

Renewable Northwest Project (RNP) and the Citizens' Utility Board of Oregon (CUB) appreciate the opportunity to provide the following supplemental comments regarding solar project installed costs and the implications of House Bill 3690.

Solar project installed costs

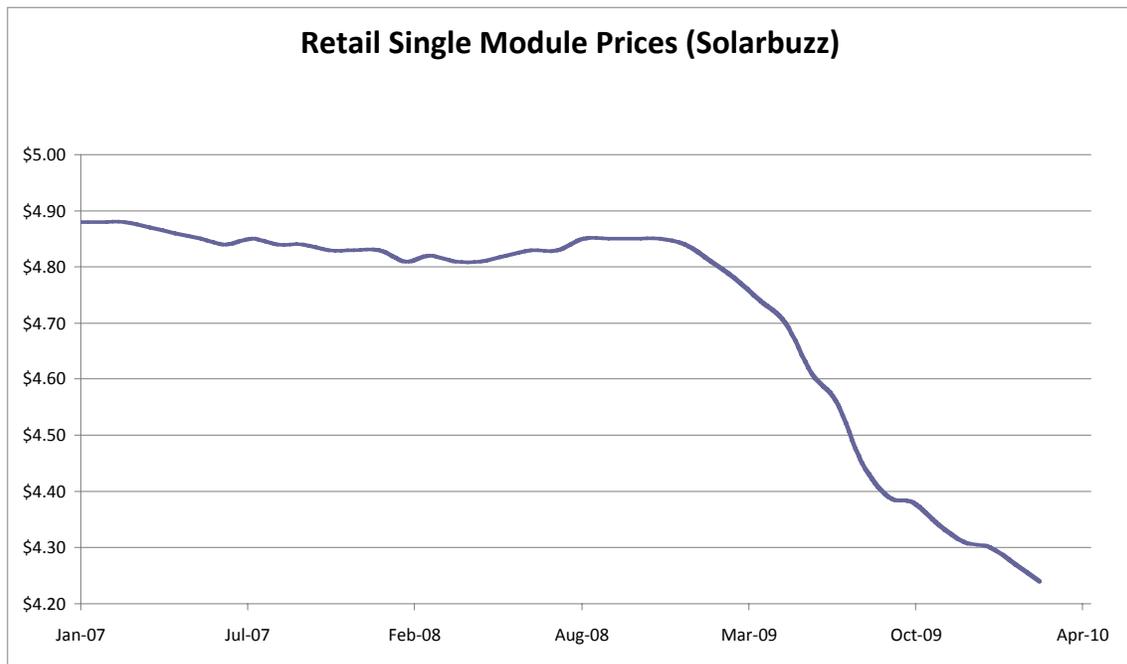
As RNP and CUB noted in our March 19th Motion to the Commission, we believe there has been a significant decline in installed costs in the fourth quarter of 2009 and the first quarter of 2010. This is primarily due to the decline in solar module prices, which can make up about half of a system's total installed cost.

A recent publication by Clean Energy Trends 2010 describes the solar photovoltaic market trend:

“Cheaper silicon – along with increased production capacity, declining demand growth, and price competition – led to a 30 to 50 percent drop in crystalline silicon module prices during 2009. Another major factor was the emergence of China as a leading PV cell manufacturer, bringing a vast amount of low-cost production online.”¹

¹ <http://www.cleandge.com/reports/pdf/Trends2010.pdf>, pages 10-11

A freely available data source referring specifically to module prices is the Solarbuzz² index. It is important to note that this index emphasizes the cost of *individually purchased, full retail price* modules, and equally weights all advertised module prices. The effect of these two methodological choices is to produce prices that are typically much higher than what a developer purchasing wholesale would pay for modules, but the relative trending of the data is relevant and accurately reflects market experience. As can be seen in the chart below, the Solarbuzz data suggests a price reduction in average modules of approximately 14 cents per Watt from the 4th quarter of 2009 to the present day. Solarbuzz does publish a Marketbuzz 2010 report every quarter that includes superior data with actual module pricing. The Commission may find it useful to purchase that report to inform their analysis.

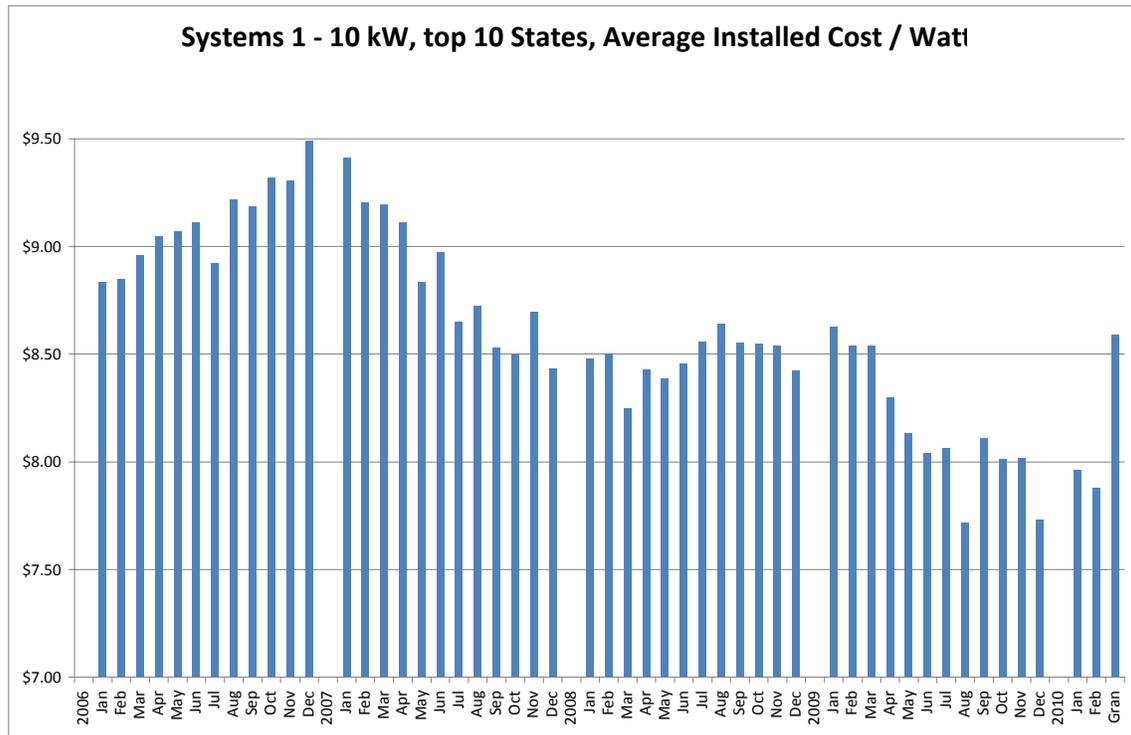


The OpenPV Project of the National Renewable Energy Laboratory is another excellent and publicly available source of data on solar system installed prices

² <http://www.solarbuzz.com/Moduleprices.htm>

nationwide³, with a database of more than 67,000 PV installations in the U.S. While the data is by no means complete, it does represent the most comprehensive available data source on the costs of installed systems in the country. From the database, we created subsets consisting of:

- The ten states with the largest number of installed projects recorded in the database (CA, NJ, FL, NV, CO, CT, MA, AZ, NY, PA) together representing more than 70% of the systems in the database (These datasets are less variable than those from states with, in some cases, fewer than ten installations, and they tend to have data which is more up to date).
- Systems installed January 1, 2007 through February 2010, and eliminating all systems without a reported installed cost or size.
- Reported here as average costs per Watt DC for each month, separately for systems 1 – 10 kW and for systems of all sizes.



³ <http://openpv.nrel.gov>

is fully subscribed. Additionally, Staff did not propose program application requirements to ensure incentive reservations are limited to viable systems and did not propose issuing weekly application reservation updates. As we discussed at length in our opening and closing comments, experience with other Feed-in Tariff programs has shown that programs without criteria to reward viable systems and without frequent public updates regarding application reservations have experienced serious oversubscription and an effective freeze on new project development.

Staff's proposed VIRs, Rate Adjustment Mechanism, minimal application requirements and lack of frequent reservation updates risk creating oversubscribed, unsustainable pilot programs. We urge the Commission to establish VIRs that are revised downward from the Staff proposal to reflect the most current market information and to structure the rate adjustment, application requirements, and reservation updates in a manner that fosters the programs' learning objectives.

RNP, CUB and OSEIA believe that the Energy Trust of Oregon (ETO), an independent third party, is the appropriate entity to provide specific solar installed cost data to the Commission. We worked in partnership with the ETO and Staff to ensure the ETO provides the Commission with up-to-date solar installed cost data from completed and planned solar projects from the fourth quarter of 2009 and the first quarter of 2010 as well as the bids from neighborhood bulk purchase programs (e.g. Solarize Northeast). We also worked with ETO and Staff to develop a survey of residential and commercial solar developers regarding current installed costs for the Staff's proposed range of system size categories. The value of the survey data is two-fold: it is reflective of the current market and is not directly associated with the existing ETO and state tax credit incentive

structure. We believe the data from ETO's completed projects and planned projects, the bids from neighborhood bulk purchase programs, and the survey results will provide the Commission with the best range of information to use to determine the VIRs.

Implications of House Bill 3690

RNP, CUB and OSEIA supported House Bill 3690 (HB 3690) during the February 2010 legislative session. HB 3690 amends HB 3039 in five ways: 1) it gives the Commission the flexibility to establish pilot programs that do not conflict with Federal Energy Regulatory Commission (FERC) jurisdiction, 2) it ensures the programs are available to customers no later than July 1, 2010, 3) it clarifies each program's goal of attaining 75% of the capacity from systems less than or equal to 100 kW, 4) it clarifies that all prudently incurred costs associated with the pilot programs are recoverable in the rates of an electric company and, 5) it clarifies that the pilot programs close to new participants when the cumulative nameplate capacity of systems installed under pilot programs equals 25 MW or on March 31, 2015, whichever is earlier.

Regarding FERC jurisdictional issues, HB 3690 ensures that the Commission has sufficient statutory authority to establish VIR net-metering and a bid option for the pilot programs. Regarding the programs' start date, HB 3690 requires the Commission to issue an order and related rules for the entirety of the pilot programs in sufficient time for the utilities (and/or the program manager) to begin accepting applications for qualifying systems and bids for the bid option no later than July 1, 2010.

Regarding the 75% capacity goal for each program, HB 3690 requires the Commission to ensure 75% of the qualifying systems in each program are systems less than or equal to 100 kW in size. It is important to note that the defined terms "residential

qualifying system” and “small commercial qualifying system” are not referred to in HB 3690 except in Section 2(6) regarding the 75% goal. Given that systems less than or equal to 10 kW in size are applicable to both homes and businesses and systems greater than 10 kW in size are applicable to both homes and businesses, we urge the Commission *not* to use the terms “residential” and “small commercial” to define system size categories in the rules pertaining to the pilot programs. Instead, we recommend the Commission use the term “small” to reference systems less than or equal to 10 kW, “medium” to reference systems greater than 10 kW or equal to 100 kW, and “large” to reference systems greater than 100 kW or equal to 500 kW.

Regarding pilot program cost recovery, HB 3690 requires the Commission to ensure that all prudently incurred costs (including the resource value and additional incentive value) of the pilot programs are recovered in electric company rates. Finally, regarding the pilot programs’ end date, HB 3690 gives the Commission sufficient flexibility to deploy the pilot programs’ 25 MW capacity in a short period of time and far in advance of March 31, 2015.

Implications of FERC Docket RM09-23-000

In our closing comments we referred to an open rulemaking (RM09-23-000) regarding FERC’s consideration of waiving QF certification requirements for generators less than 1MW in size. On March 19, 2010, FERC issued a final rule adopting an exemption for generating facilities with net power production capacities of 1 MW or less from the requirement that a generating facility, to be a QF, file either notice of self-certification or an application for Commission certification, and codify the Commission’s

authority to waive the QF certification requirement for good cause.⁴ The implication of this decision on the pilot programs is to clarify that obtaining FERC market rate authority for qualifying systems is unnecessary.

DATED this 9th day of April 2010.

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⁴ <http://www.ferc.gov/whats-new/comm-meet/2010/031810/E-31.pdf>

CERTIFICATE OF SERVICE

I hereby certify that I served the foregoing **SUPPLEMENTAL COMMENTS OF RENEWABLE NORTHWEST PROJECT, THE CITIZENS' UTILITY BOARD AND THE OREGON SOLAR ENERGY INDUSTRIES ASSOCIATION REGARDING SOLAR PROJECT INSTALLED COSTS AND THE IMPLICATIONS OF HB 3690** on the following persons on April 9, 2010, by hand-delivering, faxing, e-mailing, or mailing (as indicated below) to each a copy thereof, and if mailed, contained in a sealed envelope, with postage paid, addressed to said attorneys at the last known address of each shown below and deposited in the post office on said day at Portland, Oregon:

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