BEFORE THE PUBLIC UTIITY COMMISSION

OF OREGON

UM 1505

In the Matter of	)	
	)	
PUBLIC UTILITY COMMISSION	)	
OF OREGON	)	COMMENTS OF
	)	OREGONIANS FOR
Solar Photovoltaic Program Draft Report	)	RENEWABLE ENERGY POLICY
Comments and Recommendations	)	

Oregonians for Renewable Energy Policy (OREP) values the opportunity to contribute comments on the Solar Photovoltaic Program Draft Report. We appreciate Staff's work thus far, but we feel that the Legislature would benefit from more complete information in order to assess the pilot program.

COMMENTS ON THE DRAFT REPORT

The Draft overstates costs of the pilot programs to retail electricity customers
Of primary importance is that legislators receive an accurate and comprehensive picture of both the costs and the benefits of the pilot programs. We believe that the Draft Report significantly overstates the estimated retail rate impact of the pilot programs and that its estimates create a misleading perception of the cost of the programs.

Retail Electricity Rates
The estimates of annual payments in the Draft simply apply the gross levelized volumetric incentive rate to the estimated annual KWh produced. There appears to be no subtraction of the retail electricity rate from the VIR in the estimates of annual payments. If the retail rate were included in the calculations, the net annual payments would be substantially reduced. The retail rate is currently about 20% of the VIR for Small and Medium Systems. As retail electricity rates rise over the next 15 years, the retail rate will become a larger and larger fraction of the VIR and, subsequently, under the net-metering program incentive cash payments from the utilities to system owners will be decreasing. We suggest Staff take into account projected general electricity rate increases in their projections.

The Large Capacity Sized Systems, which use competitive bids systems, are not required to have onsite consumption, whereas the small systems are required to consume all of their generation in order to receive payments. Therefore, the failure to subtract the retail electricity rate gives a false comparison of the levelized costs of the two categories of system sizes and overstates the relative cost of the small systems.

Resource Value

The pilot programs serve load. The estimates of annual payments should show a subtraction from the VIR of the utilities' power supply cost. Since the peak generation of solar PV systems is in times of summer peak load, rather than simply subtracting the average net variable power cost, the specific generation pattern of the solar resource needs to be considered and the specific power cost should be subtracted from the gross VIR.

To convey a fair impression of the estimated retail impact, the Draft Report should include an estimate of the resource value of the energy produced under the pilot programs. In addition to electricity, the utilities receive renewable energy credits (RECs) from the pilot programs. The RECs have value to the utilities, as they save the cost of purchasing the RECs elsewhere. The estimated value of the RECs should be subtracted from the estimates of annual payments in order to present a more accurate view of the net costs of the pilot programs.

The figures presented in the Draft do not say what the additional revenue requirement would have accrued without the pilot programs. In addition to the cost of purchasing RECs, some portion of this added revenue requirement would have been accrued by the utilities in the avoided transmission and distribution costs that are benefits of the pilot programs.

The rules require filings by the electric companies of estimates of the levelized resource value and the rate impact of the pilot program participation by November 1 of 2010, 2012 and 2014, and the opening of dockets to begin work on reports to the Legislature on the same dates.[1] It is not clear from the public record that these filings have been made. The resource value should be at least what the utilities themselves spend per KWh on solar

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[1] ORDER NO. 10-200

Rates and Cost Recovery

860-084-0370

Resource Value

(1) On November 1 of 2010, 2012, and 2014, each electric company must file, for review in a Commission proceeding, its estimate of the 15-year levelized resource value for the company, along with supporting work papers.

860-084-0380

Cost Recovery and Rate Impacts

(2) On November 1 or 2010, 2012, and 2014, and as otherwise directed by the Commission, each electric company must file for review, in a Commission proceeding, its estimates of the rate impact of the pilot program participation, for each customer class, along with supporting work papers.

power (under HB 3039 and HB 3690) with an adder for reductions in distribution and transmission investments.

Other comparative cost factors

The estimated cost of the pilot programs should also be reduced by the equivalent cost of Energy Trust of Oregon (ETO) incentives, as these subsidies are another ratepayer expense. Without the resource value, the rate impact estimates show only the highest gross cost of the programs without their offsets and benefits.

To present helpful comparative information to the Legislature, it would also be useful to estimate the value of the RETC and BETC saved, which would have been incurred in lieu of the VIR payments for the equivalent amount of installed capacity. Ratepayers are also taxpayers and the tax credits that are claimed under these programs are costs that ratepayers bear as well.

Interest in the pilot programs should be measured by total number of applicants

In their draft report, the PUC Staff note:

> At this time, it is not necessary for the Commission to substitute a PURPA-based program for the current net metering and competitive bidding Solar Pilot Programs. In fact, one of the benefits of the Commission's net metering approach is that it allows for more participation in the pilot due to the fact that it constrains system size to the projected usage of the home. The fact that the current solar pilot program has more participants, due to its net metering structure, provides the Commission an opportunity to better learn the appropriate cost structure and potential bidding strategies to encourage the most cost-effective manner of implementing a solar feed-in tariff program.

OREP agrees wholeheartedly in the importance of learning the appropriate cost structure for the FIT and of bringing all available data to bear on this issue. A large amount of data is especially critical given the existence of a cohort of early adopters, perhaps better termed, ethical adopters, who are willing to subsidize solar installations because of their ideological commitment to energy independence and/or climate care. Given the allocation limitations of the Solar Pilot Program, this cohort may be large enough to considerably skew the learnings of the pilot and suggest a VIR that is in fact lower than the price needed to broadly incentivize installation of solar PV systems. OREP believes that the net-metering component of the program is neither a sufficient nor desirable method for increasing the amount of data coming out of the program.

In order to maximize the data coming out of the pilot, OREP strongly recommends that the utilities be required to collect data about all applications to the Solar Pilot Program, not just those that are successful in their bids for capacity allocations. Under the current system, the only metric for assessing the level of demand at a given VIR (volumetric incentive rate) is the length of time in which the capacity allocation for the period runs out. This has been a matter minutes in both the enrollment periods to date. However, we have no idea if the number of interested applicants is measured in tens or hundreds or thousands, nor will we know the actual level of interest going forward until the capacity available in an enrollment period is not immediately reserved . See Table 1 for a hypothetical illustration of how the current process of noting only the time taken to

allocate available capacity does not give valuable information about actual demand at a given VIR.

Table 1. Hypothetical Illustration of Inability of Current Data Collection to Measure Serious Interest in Installing Solar at the Published VIR for Small and Medium Systems.

VIR (Volumetric Incentive Rate)	Number of Individuals Ready to Apply for Capacity Allocation at Start of Enrollment Period	Time after opening of application process until capacity enrolment is filled	Number of Individuals denied capacity at this VIR at opening of allocation period
$0.65	10,000	minutes	9,980
$0.58	1,000	minutes	980
$0.53	100	minutes	80
$0.47	20	minutes	0
$0.43	7	days, weeks, or months	0

Indeed, when applicant interest is high, the time taken to allocate available capacity is more accurately a measurement of the sophistication of applicants in their preparation for filling out the application form.

Capacity application process should be fair to all

It has been suggest that, under the current application process, some applicants are employing sophisticated computer programs to prepare applications ahead of time and to auto-fill the application instantaneously when it becomes available online. This amounts to "gaming the system." Application procedures must be put in place to give all applicants a fair chance at "winning" at capacity allocation.

The impact of FERC rulings

The October 21, 2010 FERC decision in the California PUC case[2] removes the central obstacle to a feed-in tariff in Oregon. The Draft Report concludes that it is not necessary for the Commission to substitute a PURPA-based program for the current "net-metering and competitive bidding Solar Pilot Programs." It assert that the net-metering approach allows for more participation in the pilot due to the constraints on systems size.

System sizes will be predominantly constrained by rooftop capacity, system costs and the lower incentive for systems larger than 10 kW. The limitation place on system sizes was not part of the rulemaking process early on, but was a merely an add-on to avoid FERC preemption.

OREP recognizes that this FERC ruling provides the Commission with an opportunity to carry out the mission it was originally given by the Legislature, which is to compare the effectiveness of the pilot programs to the effectiveness of the pre-existing net-metering

[2] 133¶61,059

programs for promoting the use of solar PV systems and reducing system costs. Concerns about FERC preemption caused the Commission to veer away from volumetric incentive rates toward a hybrid net-metering scheme for the pilot programs. While intended and designed to avoid conflict with early FERC rulings, the net-metering plus VIR program, is confusing to potential applicants and undermines the goals of the Legislature by increasing costs and discouraging conservation.

From a policy perspective, the limitation on generation and the perverse incentive to consume electricity should be removed. There is no compelling evidence that the programs have more participants due to the constraints of the net-metering structure.

The hybrid net metering plus VIR does not allow a feed-in tariff to be compared to net metering, as both systems are versions of net-metering. OREP recommends that the Commission revise 860-084-0100 (2) so that volumetric incentive rates can be paid for all generation, regardless of the retail electricity consumer's consumption and that capacity of qualifying systems no longer be limited to 90 percent of the retail electricity customer's average annual usage. These rule changes would simply the administration of the pilot programs, encourage generation and conservation and thereby eliminate the perverse incentive to consume.

OREP also recommends that 860-084-0100 (3) be revised so that the bid option is eliminated. The bids already received could serve as a price-setting mechanism for the volumetric incentive rates to be applied to these larger systems. This would simplify administration, allow standard offer contracts and provide more transparency.

Net-metering limits residential installation size

The net-metering approach to the Solar Pilot Program does not encourage the most cost effective systems. Systems are the most cost efficient when roof capacity at a given installation site is maximized, allowing the inherent economies of scale to be fully exploited. Information has come to OREP's attention indicating that the common assumption that residences are not expected to have enough roof space to be limited by the 90% usage limitation is not valid.

We present here a **case study** of a household that applied for a capacity reservation on October 1, 2010, but did not apply for the maximum system size that would fit on the homes sunniest roof. This household is not extraordinary except in so far as paying reasonable attention to turning out lights and using almost exclusively CFLs. The home is shaded on the southeast by evergreen trees, leaving the less optimal due-west-facing roof available for solar. Even under these less than ideal circumstances, the system runs into the 90% load limitation.

- Single story home - 2,000 sq. ft
- 2 adults, one high school student
- Gas heat, stove top, and hot water
- Electric clothes dryer; no air conditioning; use window fans for night cooling
- Annual electricity usage ~ 5,332 kWh

- Usage x 90% = 4,374 kWh
- System that fits on west roof – 6.5 kW
- Estimated production given orientation – 4860 kWh

With the expectation of decreasing loads due to the student moving on and new generations of energy-efficient LED lighting options over the next fifteen years, the homeowners in question opted for a 4.4 kW system instead of optimizing their roof space with at 6.5 kW system.

Net metering discourages conservation
Net-metering and the 90% rule is likely to discourage conservation going forward for householders who maximize their installation size now and are faced with options as the years pass by to substantially reduce their electrical load as more efficient lighting, flat screen, computer, and appliances become available. This perverse incentive is not hypothetical, as shown in the case study above.

Transparency
Transparency in the pilot programs is vital to the process. It would be useful for stakeholders and the public to see winning bid prices for large systems, rather than the average. Stakeholders would like to know how many contractors have been engaged and have installed systems and the breakdown of the project sizes.

It would also be helpful to know whether any systems have been installed in lessor-lessee situations, where the lessees are the retail electricity consumers and the lessor has installed the solar PV system. Without this information, policymakers are unable to determine whether the pilot programs are serving this market.

The filings of the utilities with their estimates of resource value and rate impact (see footnote 1) would be instructive to interested parties as well, and OREP believes they should be made available.

Liability insurance risk should be pooled
The original insurance requirement in the utilities' contracts was impossible to fulfill. The utilities have modified contract language to make the one million dollar coverage requirement easier and less expensive to obtain. However, this still imposes a cost on system owners, which impacts rates. System owners may still be required to provide proof of insurance on an annual basis.

OREP recommends that the utilities pool the insurance risk for pilot program systems and obtain insurance coverage for all pilot program systems. This would lead to a lower aggregate cost, which could become an administrative cost of the program, and would enable the VIR to be decreased slightly and lead to a decrease in rate impact. It would also eliminate the administrative burden of maintaining separate insurance records for all pilot program participants.

RECOMMENDATIONS TO THE LEGISLATURE

Remove Zoning Obstacles

Several solar installations under the new program have faced obstacles to receiving building permits because selling electricity to the grid was not a permitted use in the zone. Net-metered systems using the same panels and inverters would have been permitted where all power was consumed onsite, but not systems which purported to sell power back to the grid. While under the Commission's current rules, smaller systems under the pilot programs cannot currently sell surplus power to the grid, under a production-based incentive or feed-in tariff, they should be allowed to do so. A statute is needed which would permit generating and selling electricity in all zoning classifications statewide.

Another zoning problem has been the inflexible application of scenic view environmental zoning overlays to permits for rooftop PV systems. Rather than being treated as roofing material, applications for building permits for rooftop solar systems, even those which are flush-mounted and do not extend beyond the footprint or the ridgeline of the house, are being treated as "structures" which require a lengthy and expensive review process by local zoning authorities. Permit fees exceed $700 (in addition to building permit fees) and the review process can take up to five months. For participants in the pilot programs, this can lead to an inability to take the federal tax credit until a subsequent year and, for those who have taken out a commercial loan to finance the system, a five-month period of paying principal and interest without receiving any VIR payments with which to make the loan payments.

A statewide statutory exception for solar systems with certain parameters and would enable more participation in the pilot programs in all zones.

Create Low-interest Financing for Renewable Energy Systems

One of the contributing factors to the installed cost of PV systems is the cost of capital. Legislative action to create a source of low-interest loans for renewable energy systems would reduce the cost of these systems and produce a correspondingly lower retail rate impact. It would make more projects financially feasible, leading to increased installations, increase economic activity and increased employment.

Broaden the definition of success of the pilot programs to include job creations, local economic impact and environmental impact

HB 36909 created a Solar Pilot Program with the goal of evaluating the effectiveness of an energy payment incentive relative to pre-existing tax and ETO incentives in "*promoting the use of solar photovoltaic energy systems and reducing systems costs.*" This narrow definition should be expanded to include consideration of local economic development as a result of the program and state-wide environmental impacts.

Solar electric energy delivers multiple benefits not measured by a gross cost per KW figure. A stable solar feed-in tariff program in Oregon will promote growth of local businesses and create local jobs, both in installation and manufacturing of components.

Installation jobs cannot be outsourced and already Oregon is home to thriving manufacturers of solar panels and inverters. Production of energy at times of peak load, near to the point of use, reduces future expenditures, transmission energy losses and environmental impacts that would come with construction of more long distance transmission lines and other grid infrastructure. It is imperative that these less-obvious benefits be counted and incorporated into reports of avoided cost for accurate comparison against other renewable energy options.

Annual Reports to the Legislature

HB 3690 (13) requires the Commission to report to the Legislative Assembly by January 1 of each odd-numbered year. Since the passage of Measure 71, the Legislature will now meet in annual sessions and should therefore consider the merits of receiving a report from the Commission each year.

DATED this 23rd day of November, 2010.

Oregonians for Renewable Energy Policy (OREP)

/s/ Mark E. Pengilly */s/ Kathleen A. Newman*
OREP Representatives