BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1452

In the Matter of	)	JOINT OPENING COMMENTS OF:
	)	
	)	Oregonians for Renewable Energy Policy,
PUBLIC UTILITY COMMISSION	)	Albina Community Bank, Environment
OF OREGON	)	Oregon, Solar Energy Solutions, Inc.,
	)	National Solar, Inc., Sustainable
Investigation into Pilot Programs to	)	Solutions Unlimited, LLC, Environment
Demonstrate the use and effectiveness of	)	Oregon, MoveOn Portland Council,
Volumetric Incentive Rates for Solar	)	Environmental Law Alliance Worldwide,
Photovoltaic Energy Systems.	)	Ecumenical Ministries of Oregon, Oregon
	)	Interfaith Power and Light, Douglas Rich,
	)	Financial Consulting and Capital Sourcing,
	)	Columbia Riverkeeper and Ray Neff

We want to thank the Public Utility Commission for the opportunity to comment on the December 4th Straw Proposal and the proposed administrative rules for the Solar Photovoltaic Programs. We value the quality of the work done by the PUC staff on the entire range of issues presented in AR 538 and UM 1452. We would like to address our opening comments to three areas: the deployment of pilot program capacity, setting volumetric incentive rates and the possible federal preemption.

DEPLOYMENT OF PILOT PROGRAM CAPACITY

We believe that the allocation of the 25 MW capacity of the solar PV pilot programs should reflect the experience profile of the Energy Trust's solar PV project installations and should also reflect the composition of the customer classes of Oregon's investor-owned utilities.

HB 3039, section 2 (13), requires the PUC to compare the effectiveness of paying volumetric incentive rates under the pilot programs to the effectiveness of the Energy Trust of Oregon (ETO) and state tax credit incentive program. For this comparison to be effective and accurate, there needs to be a close approximation of the samples in both programs. Fully 88% of the ETO's installed solar capacity has been for projects ≤10 kW in size (figures taken from Maury Galbraith's Preliminary Analysis Solar PV Data). Table 2 of the Straw Proposal proposes an allocation of only 60% of capacity to systems ≤ 10 kW; this allocation should not be reduced further, as to do so would make the project size profiles of the two incentive programs less congruent. This would make the comparison less valid and would thus fail to fulfill the mandate of HB 3039.

HB 3039 establishes a goal that 75% of the energy generated in the pilot programs be generated by smaller-scale qualifying systems. While the capacity deployment proposed in Table 2 of the December 4th Straw Proposal does not achieve the 75% smaller-scale goal of

HB 3039, we understand it to be an effort on the part of staff to accommodate the desire of larger-system solar developers for more capacity under the 25 MW pilot program cap. We consider this a reasonable compromise, but the capacity allocation should not deviate further from the 75% statutory goal of the pilot programs.

A further reason for allocating pilot program capacity predominately to projects less than 10 kW in size is that 86% of the customers (and potential solar PV producers) of Oregon's IOU's are residential customers. These small customers contribute 51% of the revenue to Oregon's IOUs. This customer class, which uses an average of 11,660 kWh per year, should receive its proportionate share of pilot program capacity; not more than 86%, not less than 51%.

Perhaps equally important is the visibility of neighborhood rooftop solar. Large PV arrays in remote areas, or flat roof arrays on warehouses, are not visible to the public. Each visible solar array is an advertisement for the potential of renewable energy. If we are to increase our awareness of conservation and take more responsibility for generating energy from renewable sources, we need to see projects where we live. This, too, is part of the reason for the success of distributed generation and the Feed-In Tariff model.

Entities Without Tax Liabilities

Schools, churches and individuals without tax liabilities are unable to use the 30% federal tax credit for renewable energy installations. Incentive rates that assume the 30% tax credit place these entities at a disadvantage and will not be sufficient for these projects. The proposed rules make no allowance for this difference in tax status.

Ecumenical Ministries of Oregon – Oregon Interfaith Power and Light has suggested a carve-out at a higher VIR for nonprofit installations in the medium size range. The suggested carve out is 10% of the pilot program capacity, or 625 kW per year for four years. The impact on ratepayers would be limited by the size of the carve-out. We support this proposal as a creative solution which would allow schools, churches and other nonprofits to participate in the pilot programs.

VOLUMETRIC INCENTIVE RATES

The setting of rates is the single most important element in determining the success or failure of the solar PV pilot programs. The PUC staff has worked diligently under a tight timeline to draft proposed administrative rules. However, return on investment, cost factors, financing, and tax considerations present issues that need to be evaluated further. The Straw Proposal's rates as set forth in Table 1, (.60/kWh for projects ≤10 kW and .50/kWh for projects ≤500 kWh) are too low to attract capital and also pose the risk of unbalanced incentives for solar PV projects.

Return on Investment

The proposed rates do not provide for a return on investment and are inadequate to attract capital. Experience in Germany, Ontario and elsewhere demonstrates that incentive rates which do not return a reasonable profit for investors fail to stimulate deployment of solar PV projects.

Straw Proposal Table 1, "Variable Incentive Rates by IOU Service County and Project Size," contains assumptions that do not reflect current market conditions. For example, proposed incentive rates are based on a 15-year payback, assuming a 6% loan. According to lenders, 6% is an unrealistic interest rate; market conditions require an interest rate of 7.5-9%. While the proposed incentive rates are calculated to produce a revenue stream to repay 70% of project cost, lenders typically require annual income equal to 125% of annual debt service. The rate structure needs more precision to ensure that it will work in the marketplace. With the proposed incentive rates, there would be no return on an average-cost project investment for 15 years. No rational investor would invest money that would be tied up for 15 years with no return.

The return on investment needs to be competitive with the return on investment of investor-owned utilities in Oregon if capital is to flow to pilot program projects and the potential of the pilot program incentives is to be realized.

Risk of Unbalanced Incentives

There is a serious risk that the proposed incentive rate structure does not adequately address the potential variation in costs of systems of different scale. The proposed rates were calculated using an estimated installed cost of ~$8/watt, based primarily on ETO projects ≤10 kW in size. While the Energy Trust cost data contain only scarce information on project sizes larger than 10 kW, there are reports that some large projects in 2010 will have installed costs that are a fraction of the $8/watt assumption.

If these reports of lower costs prove to be accurate, larger projects that reserve capacity in the first week of April 2010 will be inappropriately subsidized, relative to smaller projects, for 15 years at ratepayer expense. Proposed OAR 860-084-0200 provides that projects are eligible for the volumetric incentive rate in place at the time of their reservation. While proposed OAR 860-084-0360(4) allows the Commission to adjust rates, if the entire year's capacity is reserved during the first week of April, the Commission will be unable to adjust rates for the capacity already reserved and the rates for those projects will remain in effect for 15 years.

For example, under the proposed "Table 2. Deployment of Pilot Program Capacity by System Size", projects between 10 kW and 500 kW in size can reserve 2.5 MW of pilot capacity in April 2010, with the potential to produce more than 2.5 MWh/year for 15 years. A cost differential of $2/watt without an appropriate rate adjustment would produce an unbalanced subsidy of nearly $5 million over 15 years. This potential, and the potential variation in costs of systems of different scale, should receive further scrutiny.

Precision

More precision in rates is needed to ensure that projects of various sizes are appropriately profitable. The incentive rate structure should be designed so that energy production in each project is maximized and the producer is fully compensated for all energy generated.

With the proposed project size classifications and rate classes presented in Table 2 of the December 4 Straw Proposal, systems very similar in size would receive very different incentive payments. Table 2 presents three categories of project size (≤10 kW, 10-100 kW, 100-500kW). Using the rates suggested in Table 1, a 10 kW project paid @ .60/kWh would receive more in total energy payment than an 11 kW project paid @ .50/kWh, despite having lower installation costs and producing less energy.

With only two project size categories and rates in Table 1 (≤10 kW and ≤500 kW), an 11 kW system would receive the same rate per kWh as a 500 kW system, despite the vast differences in economies of scale.

We propose that variable incentive rates, or stepped tariffs, be set with at least four project size categories (<10 kW, 10-30 kW, 30-100kW and 100-500 kW) so that rates can be set with more precision. Alternatively, one rate could be set for the first 10,000 kWh produced by a project, with lower rates set for energy produced above that amount, so that it is always beneficial for projects to produce as much energy as possible, yet the economies of scale for larger projects are taken into account.

Additionally, we propose the use of the ODOE Oregon Solar Climate Zone map set forth below at page 5, with three solar climate zones, as being simpler and perhaps more accurate than the four IOU Service Counties in Table 1.

Transparency

The PUC's calculation of incentive rates is not yet transparent. At the January 20, 2010, workshop, a spreadsheet should be developed that provides a more detailed, explicit picture of the costs of generation for all project sizes. Other jurisdictions have used spreadsheets which include installation costs, project size, cost of capital, operation and maintenance (including a reserve for inverter replacement), property and income taxes, depreciation, panel degradation, geographic insolation, capacity factor, inflation, insurance and return on investment. Precision, transparency and consistency in calculating costs would give investors more confidence that solar investments are economically viable.

Other parties have suggested a lottery as an alternative to the first-come first served basis for capacity reservation for larger systems in OAR 860-084-0190(5). We support this suggestion as a possible method to ensure fairness in distribution. We support a reservation method which is orderly to administer, more fair to diverse medium and large system applicants, and fairer to entities without tax liabilities, who are less likely than commercial developers to be ready to file applications at midnight on March 31, 2010.

FERC PREEMPTION

The Feed-In Tariff model has proven itself to be the most rapid, least expensive method to increase production of renewable energy. That is the reason Oregon's legislators chose to implement the solar PV pilot programs. Of the three approaches suggested thus far to work around the possible FERC preemption, we feel that setting a value on the RECs is preferable to the net-metering VIR or RFP approaches.

First, FERC has expressly ruled that states have the power to determine who owns RECs and how they may be sold or traded; it is not an issue controlled by PURPA, *Docket No. EL03-133-000.* The jurisdiction of the State over RECs is clear. A technical fix by the Legislature could make the PUC's authority to assign REC values clear.

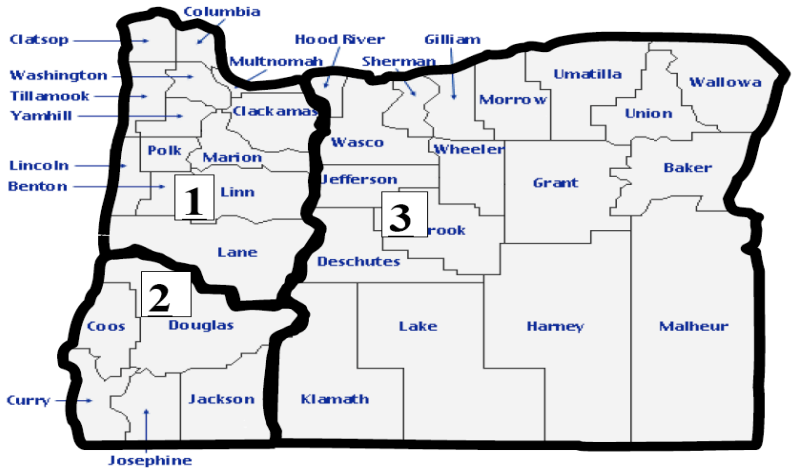
Secondly, pricing the RECs offers ease of administration and can be applied uniformly to projects of all sizes.

Thirdly, unlike the net-metering VIR approach, pricing the RECs would not discourage surplus generation and offers a real comparison of the production-based incentive model versus the existing tax credit and ETO subsidy net-metering model.

Another alternative which deserves exploration is having the utilities pay avoided cost for the electricity purchased and, in addition, provide an incentive payment for every qualified kWh of electricity generated. This alternative is simple, offers the potential to avoid federal preemption and possibly avoid income taxation on the incentive payment, which would allow a lower incentive rate.

Oregon Solar Climate Zones (by county)

Zone 1	Zone 2	Zone 3
Benton	Coos	Baker
Clackamas	Curry	Crook
Clatsop	Douglas	Deschutes
Columbia	Jackson	Gilliam
Lane	Josephine	Grant
Lincoln		Harney
Linn		Hood River
Marion		Jefferson
Multnomah		Kalamath
Polk		Lake
Tillamook		Malheur
Washington		Morrow
Yamhill		Sherman
		Umatilla
		Union
		Wallowa
		Wasco
		Wheeler



We ask that these perspectives be taken into consideration in rules and orders and look forward to continued participation in developing effective solutions.

Thank you.

The following organizations and individuals join in these comments:

Solar Energy Solutions, Inc.
National Solar, Inc., Justin Lancaster, President
Sustainable Solutions Unlimited, LLC
Ecumenical Ministries of Oregon – Oregon Interfaith Power and Light
Albina Community Bank
Douglas A. Rich, Financial Consulting and Capital Sourcing
Environment Oregon
Environmental Law Alliance Worldwide
MoveOn Portland Council, Darrel Johannes, Council Coordinator
Columbia Riverkeeper
Ray Neff
Oregonians for Renewable Energy Policy

DATED this 14th day of January 2010.

/s/ Mark E. Pengilly