

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UM 1758

In the Matter of

OREGON PUBLIC UTILITY COMMISSION

HB 2941 Solar Photovoltaic Incentives
UM 1758

Joint Comments of
Community Renewable Energy
Association (CREA), Environment
Oregon, NW Energy Coalition
(NWECA), Northwest Sustainable
Energy for Economic Development
(NW SEED)

CREA, Environment Oregon, NWECA, and Northwest SEED (the Parties) appreciate the opportunity to provide input and comments on the draft report provided as part of UM 1758. The intent of this report, as specified by the 2015 House Bill 2941, is to inform the legislature and : “recommend the most effective, efficient and equitable approach to incentivising the development and use of solar PV energy systems in this state.” The Parties offer the following comments related to the draft report, and generally find that the report does not provide adequate analysis to support the conclusions and recommendations made. Our feedback is addressed first at structural issues throughout the report, and then on critique of the recommendations.

I. Draft report structure

The draft program recommendations lack sufficient support and analysis

While the draft report has helpful basic background on specific programs, it does not provide the full context for their purpose and structure, either from the legislative history or documentation from the relevant agencies and other stakeholders. As a result, the draft report cannot offer any assessment of the efficacy and fairness of these programs.

The draft report makes specific recommendations for only two programs. First, it recommends replacing Net Energy Metering (NEM) with a “Solar Metering Program.” The draft report provides a future rate structure dependent on the as-yet-undeveloped resource value of solar (RVOS).

Second, the draft recommends substantially restricting and phasing out the Energy Trust of Oregon's (ETO) Solar Incentive Program. However, the recommendation provides no assessment of key factors, such as the likely trajectory of above-market solar costs or interaction with other market development factors..

Overall, the draft does not provide substantial reasoning for these dramatic changes, nor more than the most limited explanation for the "Solar Metering Program," the scope of a reduced ETO solar program, or the combined effect of these changes on continued progress in solar resource development. In addition, the draft provides no assessment whatsoever of changes in market structure, accessibility to various types of customers, desired near term and long term market development, alignment with other state policies and programs, or equity of incentive programs.

Indeed, there is no assessment of what might be gained and lost by eliminating these long-standing programs, and whether modification of program design, rather than elimination could achieve state policy goals more effectively.

Intervening policy developments supports deferring specific program recommendations

Specific program recommendations are premature at this time even if there were additional depth and breadth in the analysis. There should be a more comprehensive evaluation of solar-related incentives at a future time when there is greater clarity around some of the analytic tools and legislative direction related to solar deployment.

Three important developments have occurred that were not anticipated at the time that HB 2941 passed:

1. The resource value of solar docket (UM 1716) has taken longer than initially anticipated, well beyond the deadline for the present report. We believe the extended timeline is well worth the effort and duration. Since HB 2941 (2015) Sec. 2(2)(a) requires that recommendations of this report consider the resource value of solar, specific program recommendations are premature, and should not be used as a basis for policymaking at this time.
2. As noted further below, the passage of SB 1547 (2016) makes wide ranging and substantial changes to implementation of Oregon energy policy. The Commission has engaged a comprehensive approach to policy review and rulemaking, some of which overlaps with the consideration of programs in the draft report.
3. As the draft report notes, the programmatic review of the Oregon Department of Energy is underway.

Program assessment principles are not sufficiently supported

The report identifies two principles for program assessment (p. 5): ratepayers should not subsidize solar PV installations where there are no above-market costs; and subsidies and

incentives aimed at social and economic development should be funded by taxpayers and not utility ratepayers.

The report provides no justification for these principles, no indication of the process and criteria for their selection, and whether other alternatives were considered. Parties cannot understand the justification for the principles when examining the 11 factors they were drawn from. We request that the Commission includes a clear analysis for their decision to create the two final principles.

While we do not wish to give a full discussion here of the two principles, we will make just a few observations.

The focus on above-market costs is appropriate but not sufficient for consideration of solar incentives, because in addition to direct energy benefits, solar PV systems can provide ancillary services, assist with electric system resilience under disturbance conditions, and more.

Furthermore, the factors listed here could be included in the forthcoming resource value of solar, but docket UM 1716 will not be completed for at least another year. In addition, some important benefits of solar PV may be excluded because of the regulatory context for RVOS but still provide value in achieving state policy goals, for example, the development of local sustained employment.

Related to the second principle that social and economic development benefits should be funded by state taxpayers, this is a broad statement with incomplete evaluation of role and impact. Indeed, the Public Utility Commission does regulate aspects of social benefits, especially related to low-income ratepayers, and elements related to environmental compliance. Market forces in the utility industry in the Pacific Northwest are tied directly to environmental factors including annual variation in stream flow and temperatures, as well as economic trends in the region. The principle proposed creates a sharp distinction of responsibility, without exploring the nuance and interrelated nature of these topics.

In providing evaluation of incentives, the draft report notes the difficulty of assessing cross-program effects, but makes no effort to address what can be done to alleviate the gap. The report states (p. 7), "There is no quantitative way to determine which program had the greatest impact or was the reason a project occurred." We understand that time and resource constraints would make it difficult to undertake such an analysis, but an effort should be made or the entire purpose of the review – to assess program efficacy in all its aspects – will be defeated.

The legislature should establish a comprehensive solar strategy review

In our view, the most important recommendation supported by the draft report is the one it does not make: the legislature should engage in a process that provides a comprehensive review and

specific recommendations for solar incentive programs and for solar development in Oregon generally.

This could be accomplished with a temporary task force or other review process, and coordinated directly by the legislature, the governor's office, or a lead agency. The review process should incorporate a broad and open approach to legislative, agency and stakeholder input. The comprehensive assessment should be directed toward current and potential solar incentive programs as well as other policy and programmatic efforts:

- Start with a foundation based on the state's energy policy in ORS 469, as well as relevant legislation such as SB 838 (2007) and SB 1547 (2016);
- Consider and articulate relevant goals for economic stability and fairness, climate emissions and response, and environmental integrity;
- Build on the information provided in the 2014 and 2016 PUC reports;
- Look more fully at interactive effects among policies and programs, to identify overlaps, reinforcements and gaps;
- Consider a range of criteria for setting overall and programmatic goals for solar incentive programs, with full recognition for fairness and program accessibility to all consumers, utility billpayers and taxpayers;
- Define a strategy for balanced development of customer-sited, community and utility-scale solar in all parts of Oregon, with due consideration for the distribution of the solar resource and the needs of end users;
- Consider how a robust state solar industry can be further enhanced to provide accelerated uptake of solar and in-state job and economic benefits;
- Make recommendations not only on program scope, goals and objectives, but also on methods for measurement, verification and evaluation, including cross-program project tracking, so that, going forward, program assessment by the legislature and others can proceed with more transparency, comparability and accountability than has been the case.

II. Process

We believe the process for developing this report was flawed, flowing from its delayed start to the rushed timeline. HB 2941 was enrolled on July 1, 2015 with an effective date of June 25, 2015. Parties received notice for the initial stakeholder meeting over 7 months later, and the first, poorly attended workshop was held on February 4, 2016. A more robust public meeting was scheduled for May 9, 2016, 4 months before the final report was due to the legislature on September 15, 2016. Individuals who wished to participate in the special two-hour public meeting were told that they must first email OPUC Staff ("Staff") with an outline of their comments, a request which limits the public's ability to participate in public meetings of this kind. Parties were also told that, if their comments were similar, they may be asked to consolidate and designate a single speaker for the group. Not knowing the time allocation for speakers in

advance resulted in several stakeholders consolidating comments to save time. To this point, speakers did not know the time available for their comments until the Friday before a Monday morning hearing.

During the May 9th meeting, there was the general understanding that there was a tight timeline, but that there would be adequate opportunity for iterative stakeholder input. Following the May 9th public meeting, Parties did not receive a schedule from Staff with the timeline moving forward, and did not see the draft report until July 28th. This left the Commission 1.5 months to ask for and incorporate stakeholder input, and Parties were given only 9 business days to file their comments. We are highly concerned that this rushed timeline at the end of the available investigation period will result in a report that cannot appropriately address stakeholder comments.

In drafting their report, the Commission cites no specific consultation with the Oregon Department of Energy, an element required in HB 2941. The draft report sites information pulled from the Energy Trust of Oregon's May 9th testimony, but none from ODOE's May 9th testimony. We ask that the Commission share the results of their consultation with ODOE, and clarify the sources of material consulted in developing the report.

III. Incomplete analysis and lack of metrics

The report is flawed in its failure to define or establish metrics for what qualifies as an “effective, equitable, and efficient” approach. This leads to final results that are not thoroughly analyzed, and cannot be substantiated by stakeholders. There needs to be clear articulation of what these three terms mean in the context of solar incentives and the legislative directive.

Our recommendations include, first and foremost, defining the terms “effective,” “equitable,” and “efficient.” The definitions should also include metrics to determine whether or not program meet the criteria. We have thoughts on how some of these terms can be defined, and suggest that at a minimum, the term “equity” should be interpreted to include issues related to low-income customers, and the access (or lack thereof) to incentives and opportunities for different customers to participate in solar programs. There should be transparency in evaluating how programs meet these objectives. This clarity in defining terms and metrics was also requested by Parties during the May 9th hearing.

Similarly, it is important to recognize that different programs have different goals and aims. Some may be aimed at growing distributed generation, while others may be focused on large-scale solar development for utility acquisition. The report fails to acknowledge the goals of any of the programs they examine, resulting in an “apples-to-oranges” comparison. We encourage the Commission examine the original intent of the programs being analyzed, both in legislative history and previous rulemaking processes. Programs can then be assessed against their stated goals to determine their relative success.

Further, the report focuses almost exclusively on residential-scale solar deployment, and makes little to no mention of commercial and industrial sector deployment of solar. If the report seeks to fully examine the programs that incentivize the development and use of solar PV energy systems, it must be expanded across market segments to provide the broader picture.

Review of factors

In developing the recommendations, the Commission was tasked with considering certain factors. Reviewing the analysis, several of these factors appear to be missing from the recommendations.

A. First, “how to minimize confusion and transaction costs for persons who participate in programs that incentivize the development and use of solar photovoltaic energy systems.” The report fails to explore this factor. For the two programs examined, the only nod toward “minimizing transaction costs” is Figure 5 which uses fictional numbers to demonstrate the Commission’s recommendation that the RVOS be used in place of the retail rate. Similarly, the report does not examine how programs minimize confusion. We would recommend an analysis of this factor be added. The Commission could pull from existing resources, for example looking at the tool on the Energy Trust of Oregon’s website where potential customers can request a proposal for solar on their home by answering a few short questions.

B. Another factor is that is not fully examined is “the costs and benefits of each program that incentivizes the development and use of solar photovoltaic energy systems.” Costs are examined, but benefits are only minimally discussed and referenced in a single footnote. For the two programs reviewed, the report notes the number of projects installed and the number of kW of installed capacity. There is no context for these numbers. These programs may also provide many additional benefits, including energy savings for customers and carbon-pollution avoided. Other examples can be found in the Commission’s 2014 Report, “Investigation into the Effectiveness of Solar Programs in Oregon,” which includes factors such as greenhouse gas emissions reductions and jobs impact. At minimum, the report should be able to evaluate benefits that were previously considered.

The lack of analysis of program benefit is also highly visible in the report’s review of taxpayer programs. The report states that ODOE, and all of the incentive programs is currently administers, is undergoing a programmatic review by the Governor and Legislature. It goes on to say, “In light of this, the Commission limits its recommendations on the RETC, SELP, and RED programs.” It provides a very modest program overview for each of these programs, in addition to three additional programs, before making a sweeping recommendation about all six.

If the report aims to educate legislators about the programs it modestly reviewed, Staff should expand on the programs, including adding the benefits. Two examples of expansion opportunities are the program overviews of the Residential Energy Tax Credit (RETC) and the Property Tax Exemption for Alternative Energy Systems.

RETC: The report outlines the total number of RETC projects from 2001-2015 and the total installed costs per year. It fails to put this into context or provides information on how much money, or even what percentage of the RETC money, is allocated to solar projects. Secondly, one of the “additional factors” used to analyze programs in the draft report is “Solar incentives should adapt and evolve with this changing landscape.” The report should expand further on how the RETC has evolved. For example, it mentions that “the types of devices and appliances eligible for the tax credit are reviewed each year and have changed over time,” but we would encourage Staff to expand on the way the solar incentives have responded and changed with time.

Property Tax Exemption for Alternative Energy Systems, administered by the Department of Revenue: The report is clear on the amount of projects having claimed the exemption and the amount of money in exemptions being granted. It provides no such detail on the aim of the program or the benefits these projects have provided.

C. Finally in this section, the report allows the Commission to examine “any other factors deemed relevant.”

One of these factors states: “Increased RPS mandates combined with the region’s significant hydropower supply will ensure that renewable energy plays a dominant role in powering the homes and businesses of all Oregonians—regardless of what additional incentives are offered to promote solar energy. This increase in resource diversity as part of our electricity resource mix further reduces the need to provide financial incentives.”

While it is likely that renewable energy will play a dominant role in powering homes and businesses, the Commission notes that, so far, it has mostly been wind that meets the RPS. Solar still does not play a major role in the RPS, and with the recent repeal of the Solar Capacity Standard within the RPS, one cannot assume that in an significantly increased RPS means significantly increased solar. And, as noted previously, solar incentive programs may seek to achieve many goals. Many of these, for example development of solar projects in the State of Oregon, are not duplicated via Renewable Portfolio Standard. To this point, the fundamental aspect of the incentives, which encourage *customer* deployment of distributed renewable energy resources, should not be confused with goals that direct utility investment and a regional regulatory market. And finally, the implementation of the RPS will be over a multi-decade time frame, further distancing the goals of the RPS from the goals of the programs reviewed.

The draft report does not provide any comparison of Oregon’s solar market in relation to other states, though it does make assertions about the health and growth of the industry. In framing the discussion simply around solar growth rates, it does not provide legislators an accurate basis for evaluating Oregon’s solar deployment or understanding of the amount of total electricity generation as a percentage of annual load that solar energy provides. While the draft report does note that solar capacity is between 1.05% to 1.36% of peak utility load, there is no

analysis of the total generation provided by those solar energy systems (except in the appendix), or whether this is a significant amount of solar deployment. An evaluation of these factors on a per capita basis would also be beneficial. We encourage the commission to review Oregon's relative market maturity to other states across market segments as a comparison.

The draft report also adds the following factor: "Third, in determining the future landscape of solar incentives, we must recognize the relative maturity of the solar energy business. Many of the incentives discussed in this report were created at a time when there was little solar energy development and solar PV systems were among the most expensive forms of generation. That is no longer the case today, as the installation of solar arrays continue to grow and costs of solar PV systems continue to fall. Solar incentives should adapt and evolve with this changing landscape."

While the report talks about reducing costs of solar over time, and the growth of the market, it makes no attribution of this in Oregon to the state and ETO incentives, claiming that evaluation of individual factors would not be isolated. It is indeed possible to evaluate the impact of incentives in a rigorous statistical manner. At minimum, a comparison of solar adoption rates per capita in and out of Energy Trust of Oregon territory would provide a basis for evaluating effectiveness of these incentives relative to other parts of the state..

D. We encourage the Commission to introduce other factors to examine in this section. As mentioned above, in the Commission's 2014 Report, "Investigation into the Effectiveness of Solar Programs in Oregon," the Commission identified five additional factors to examine when looking at solar incentives. Their additional factors were:

- (a) cost to ratepayers and taxpayers;
- (b) impact of the program on the cost of solar installations;
- (c) greenhouse gas emission reductions; and
- (d) jobs impact
- (e) total cost of energy

The 2014 report also examines "Distribution of Benefits and Costs among Retail Electricity Customers."

We suggest that the Commission include these factors in the 2016 report, and also include an evaluation of the deployment of solar energy systems across customer classes (residential, commercial, industrial) as well as among income ranges in the residential market. Specifically when evaluating the distribution of costs and benefits, the PUC should seek recommendations that reduce disparities and make access available on a more equitable basis.

IV. Recommendations of the Draft Report

As mentioned, the report makes two specific recommendations on programs in the narrow scope of policies considered, related to net-metering and Energy Trust of Oregon. We do not agree with the recommendations made at this time, feel that they lack adequate analysis of potential impact and they should be modified before being sent to legislators.

Net Metering

The draft report makes a number of broad statements about the impact of net metering (NEM) and perceived problems, without quantifying or stating the magnitude of any impacts or demonstrated need for change. Page 10 of the report states that “as the popularity of solar NEM grows, the current model for solar NEM program may become unsustainable given the potential for cost shifting when the value of solar energy is less than or more than the utility’s retail rate.”

This loaded statement contains a number of assumptions that appear to tie the potential loss of utility revenue from solar customers directly to a perceived “cost shift”. Every customer has a different consumption profile, and there are many actions that customers regularly take to save energy that impact the amount of revenue that a utility receives from a customer. In relation to solar energy, the loss of some incremental revenue associated with solar generation is not necessarily a cost shift, and any rate impact to other customers would have to be articulated clearly by the utility in a rate case. To the best of our knowledge, the impact of solar generation has not been quantified by either Portland General Electric or Pacific Power as a cost shift in a ratemaking proceeding. The report suggests sweeping unilateral changes to the current net metering policy, without providing relevant analysis of the impact or input from stakeholders.

At numerous places, the draft report makes reference to net metering serving as a sale of electricity or an incentive. This is not accurate in most contexts. Net metering is a billing mechanism that allows a customer to use their energy produced on site, and simply account for monthly production in excess of consumption. The proposed “Solar Metering Program,” by contrast, seeks to implement a mechanism whereby a customer is forced to sell all the energy produced from a solar array to the utility at a rate determined by the Resource Value of Solar, and buy all energy consumed at retail rates. This proposal prevents the customer from utilizing the energy produced by their system, and would effectively be the same as putting a production meter on the utility side of the system. We have serious concerns about the regulatory framework proposed, and the prejudgment of the use of Resource Value of Solar (RVOS) in this manner.

In the UM 1716 docket related to the Resource Value of solar, Order 15-296 contains the Commission finding that: “there could be many potential policy and ratemaking uses for the resource value of solar, and in this order we are not prejudging potential future uses.” The proposal to use the RVOS in the manner suggested by the Solar Metering Program appears to

violate this aspect of impartiality in the order. We suggest that it is not appropriate at this time, before the UM 1716 docket is complete, to create policy that uses the RVOS as a key element.

Net metering is a well-established mechanism nationally that allows customers to use the energy they generate. Many Federal incentives are structured with the premise that the energy produced from residential and commercial solar energy is directly used by the residence or business entity. Any transition away from this predictable framework should be done with significant stakeholder input, and with rigorous legal and economic justifications. The proposal for a Solar Metering Program is a radical departure, and may have significant legal and tax implications for customers who would potentially be selling energy to utilities. The Commission's statement on page 12 that implementation of the Solar Metering Program would follow after the RVOS is developed is troubling and inconsistent with the Parties' expectation of a public process for such a major policy decision.

Energy Trust of Oregon Incentives

Regarding Energy Trust of Oregon incentives, the draft report makes a number of assertions about the use of the public purpose funding, and makes a recommendation to cease incentives for most all projects except those that provide specific benefits to utility operations.

On page 14, it states "As a technology or sector matures and commercializes the associated above-market costs generally decrease and state and federal tax credits persist." While above-market costs have fallen, their magnitude will absolutely depend on the presence of other incentives, which do indeed face expiration in the coming years. The draft report makes little note of the expected trajectory of above-market costs in the future, and makes contradictory analysis about the impact of the expiration of the RETC in 2018. The chart provided in figure 7 does not show above market costs, but rather the price differential and installed cost trends, as well as incentives expected in the residential sector. A chart of above-market costs would require a net-present value analysis of solar energy production compared to that from a non-differentiated retail energy rate.

The recommendation made to shift ETO priorities appears to rest on a conflicting evaluation, both asserting that above-market costs are continuing to decline and that Energy Trust incentives should ramp down the use of public purpose funds for the above-market cost of solar. It suggests that even if above-market costs rise, the Commission would cut funding and shift incentive priorities. Additionally, there is no analysis of what "unique benefits" future solar energy systems would provide under a new ETO incentive structure, or whether existing systems are indeed also providing some of those benefits. We note that Energy Trust incentives can also be used to meet goals related to increasing access to solar. The "Savings Within Reach" program seeks to provide additional rebates to low-income customers who implement energy saving measures. This could work to meet some of the objectives of the legislature related to equity, and broaden the opportunity for low-income customers to benefit from solar generation.

We suggest that the Commission undertake a more comprehensive, sector-based approach to evaluating Energy Trust incentives. If modifications to program priorities are needed, then reach out to stakeholders and make specific recommendations based on that analysis and feedback. The current recommendation for sweeping changes regarding Energy Trust incentives should be done with specific goals in mind, and those goals should be informed by a public process, not a unilateral dictate.

V. Summary

While the Parties appreciate the opportunity to provide input, we have serious concerns about the trajectory of the recommendations made in this draft report, the limited time for review, and the lack of rigor in analysis.

We suggest that the Commission look at this as an opportunity to provide basic information to the legislature about the programs requested, as has been done in the appendix, but without the two major recommendations provided in the draft report. The insufficient amount time for analysis to support the recommendations, along with the pending RVOS docket, builds a strong argument towards developing a more comprehensive future process for evaluating the range of solar incentive programs in the state of Oregon. We thank Commissioners and Staff for their consideration, and look forward to continued engagement on this important topic and a productive discussion during the workshop on August 15. We hope that we can have a more comprehensive evaluation of solar incentives as this process moves forward.

Respectfully Submitted by

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