

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UM 1758

In the Matter of

OREGON PUBLIC UTILITY COMMISSION

RE: HB 2941 Solar Photovoltaic Incentives

Cascade Policy Institute appreciates the opportunity to comment on the PUC's latest recommendations in its Report to the Legislature on Incentives for Development and Use of Solar Photovoltaic Energy Systems as required by House Bill 2941 (2015).

I The first recommendation to adopt taxpayer-funded incentive programs is commendable but incomplete. The PUC acknowledges "these programs have a direct impact on the electricity rates paid for by the customers of certain utilities," and proposes the legislature adopt taxpayer-funded incentive programs to capture full economic benefits, as interpreted by the PUC's ninth application of legislative factors. However, taxpayers should not be forced to bear the costs of solar any more than ratepayers should. Costs should be borne by those who benefit; and since solar owners benefit through multiple levels of subsidies and tax incentives, it is solar owners who should bear the costs. Benefits gained by non-participating Oregonians are minimal and subjective.

The PUC ignores that these benefits are, in some cases, not benefits, but costs. This proves to be an issue of equity. Solar costs disproportionately hurt poor and minority consumers. Studies by the California Public Utilities Commission and Nevada Public Utilities Commission have shown that 73-78% of solar customers have higher than median household incomes of non-solar customers.^{1 2} Families who rent homes or apartments, and cannot afford to own a home, are forced to subsidize solar PV systems for families who are able to purchase their own homes and solar PV systems. Since these families spend higher proportions of their income on utilities, small increases in rates have dramatic cost effects. Additionally, third-party financing allows more low-income families to participate in solar programs by minimizing upfront costs. Solar is becoming a more realistic purchase for low-income homes. Every dollar spent on subsidizing existing solar users' costs is a dollar taken away from the opportunity to directly participate in solar programs.

¹ California Public Utilities Commission. "California Net Energy Metering Ratepayer Impacts Evaluation." N.p., 10 Oct. 2013. Web.

² State of Nevada Public Utilities Commission. "Nevada Net Energy Metering Impacts Evaluation." Energy and Environmental Economics, Inc. Jul. 2014. Web.

Solar owners enjoy multiple levels of state and federal subsidies, tax credits, and exemptions at the expense of lower-income Oregonians. Most costs associated with solar are covered by taxpayers and ratepayers through various combinations of at least 12 programs. Since many solar owners take advantage of multiple incentive programs, it's impossible to determine which programs are less successful than others. The PUC cannot make recommendations for all 12 individual programs, as the eighth application of legislative factor demands. The PUC's inability to make recommendations on all 12 programs due to lack of data inhibits solar PV's effectiveness in Oregon, especially when considering the PUC's seventh application of legislative factors. More effective programs may go unfunded while lousily performing programs continue to be overfunded.

Not only does this mismanagement result in inefficiency and a severe misallocation of scarce resources, but solar incentives inhibit innovation. Even Lyndon Rive, CEO of SolarCity, said, "The number one driving factor for innovation for any product is competition."³ Since government incentives help to eliminate competition and act as high barriers to enter the market, potential competitors with more effective and efficient products are inhibited from introducing their products. Subsidy beneficiaries should encourage the discontinuation of subsidies since their solar providers would have a greater underlying incentive to continue to introduce more efficient products to the marketplace. This creates real value for solar owners which creates real value for society, a positive sum outcome for all parties involved. Thirty years later this heavily subsidized market is sitting at a mere 1% market share; and if scarce resources continue to be misallocated, solar PV will continue to struggle to penetrate the market.

II The PUC's second recommendation, to modify the solar net metering program, shows positive potential for the solar industry. Modifying net metering should discontinue the cost shift from solar owners to ratepayers. In accordance with the PUC's second, third, and fifth applications of legislative factors, grandfathering of current solar owners should be prohibited. Modifying net metering programs to include grandfathering would clearly instate a confusing, complex, and inconsistent solar program. Moreover, solar owners who entered the solar market when costs were higher did so because they could afford to pay higher prices. Grandfathering affluent solar owners would impede future growth of the solar industry. Barring grandfathering would enable lower income homes to purchase their own solar. This continual redistribution of funds from lower-income homes to higher-income homes is clearly inequitable and inefficient.

As the resource value of solar is being determined in another ongoing docket, UM 1758, it's critical to point out factors related to the PUC's first and sixth applications of legislative factors. As noted, "A resource value of solar rate compensates the participant for the value to the utility system and the non-participating customer only pays for the value the resources provides to the utility system." This value should include both benefits and costs associated with solar. Resource value findings should include, but not be limited to, the potential benefits and costs of the following: market rates, time of use metering, location, spinning reserves, volatility,

³ Conscious Company Magazine, SolarCity: A Conversation with Co-Founder Lyndon Rive, <http://www.consciouscompanymagazine.com/blogs/press/84129473-solarcity-a-conversation-with-co-founder-lyndon-rive> Issue 5. Jan & Feb. 2016. Web.

increased grid maintenance, transportation losses, unplanned and planned outage costs, business costs such as O&M and payroll, profits, opportunity costs and avoided costs, transaction costs, integration costs, and financial costs, such as discount rates and inflation. All costs should be borne by those who consume the goods in proportion to each individual's level of consumption. If solar owners do not wish to pay for their portion of these costs, they should be advised to disconnect from the grid and end their relationship with utility services.

Finally, solar energy is the least beneficial renewable resource, as concluded by studies conducted by think tanks of all stripes of political ideology. Since solar is an intermittent resource with high volatility, utility companies must keep balancing "spinning reserves" constantly running in case solar fails to produce sufficient energy. This is both financially and environmentally costly. The Brookings Institution concludes solar has the lowest avoided costs and the lowest net benefits of all low and no-carbon technologies.⁴ Instead of devoting resources to increase the number of homes with solar PV systems, these resources would be better allocated in the free market, both to the research and development of solar PV and to more economical renewable resources such as hydropower. This would result in more efficient, effective, and equitable renewable solutions.

III The PUC's third recommendation contradicts the PUC's first recommendation. Since the Energy Trust of Oregon's Solar Electricity program is funded by ratepayers and benefit (or cost) ratepayers, it violates the fourth application of legislative factors. If the PUC acknowledges that "these programs have a direct impact on the electricity rates paid by the customers of certain utilities," and wishes to pursue its first recommendation to the legislature, it should recommend ending the ETO Solar Electricity program. The PUC recognizes that the mission of Senate Bill 1149 is to benefit low-income Oregon households; however, the ETO's Solar Electricity program benefits (or costs) ratepayers as a narrow class substantially more than it does society as whole. Furthermore, low-income Oregon households would be better off without government intervening and imposing cost-shifting subsidies upon them.

Respectfully Submitted by

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⁴ Frank, Charles R., Jr. "The Net Benefits of Low and No-Carbon Electricity Technologies." Brookings Institution 73 (2014): n. pag. Web.