BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1758

In the Matter of

PUBLIC UTILITY COMMISSION OF OREGON,

Report to the Legislature on Incentives for Development and use of Solar Photovoltaic Energy Systems.

COMMENTS OF SOLARCITY CORPORATION ON THE DRAFT SOLAR INCENTIVES REPORT

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Pursuant to the September 7, 2016 Message from Julie Peacock, SolarCity Corporation (SolarCity) hereby submits these comments on the *Second Draft Solar Incentives Report* filed by Commission Staff on September 7, 2016.

I. Description of SolarCity

SolarCity is a full service solar power provider for homeowners and businesses – a single source for engineering, design, installation, monitoring, and support. The company has more than 50 employees based out of our Portland warehouse and has installed over 4,000 net metered systems accounting for over 23 MW of capacity in Oregon. SolarCity has more than 10,000 employees nationwide and had installed solar energy systems for over 285,000 customers as of June 30, 2016.

II. Introduction and Summary

Oregon House Bill (HB) 2941 requires the Commission to submit a report to the Legislative Assembly that "recommends the most effective, efficient and equitable approach to incentivizing the development and use of solar photovoltaic energy systems" in Oregon.[1] In reviewing the second draft of this report, that high level goal appears to have been overlooked during drafting of the report. The ultimate recommendations that the report offers in this second draft would likely have significant negative consequences on the nascent solar market in Oregon, especially residential solar. These consequences only become more severe in the aggregate should all recommendations of the report be adopted.

The report recommends shifting from residential net metering (NEM) and altering the Energy Trust of Oregon (ETO) incentive payment. However, both of these actions will dramatically reduce the viability of residential rooftop solar in the State, which is directly contrary to the goals laid out in HB 2941. It cannot be stressed enough that NEM and the ETO incentive, when combined with the Residential Energy Tax Credit (RETC), are the mechanisms that make residential solar economic in the State. Any departure from NEM runs the risk of depressing deployment across the state and the departure proposed by the report is not justified or supported by any evidence.

In fact, evidence supports the view that NEM is a critical component of solar adoption nationally. For example, the National Renewable Energy Laboratory (NREL) found that "[o]ver the long run, an immediate elimination of NEM would reduce cumulative U.S. [distributed photovoltaic (DPV)] deployment by roughly 20%, compared to projected deployment under a

[1] HB 2941 § 2(1)(a).

continuation of current NEM policies."[2] Nationwide, researchers at NREL also found that, in the top ten states with highest cumulative DPV deployment, ". . . an immediate elimination of NEM would result in up to a 62% reduction in residential DPV deployment in 2050 and up to a 28% reduction in nonresidential deployment."[3] Based on these concerns, the status quo in Oregon is the best way to reach the stated goal of incentivizing the development and use of solar photovoltaic energy systems in Oregon.

III. The Report mischaracterizes the nascent solar industry in Oregon as "established"

The report claims that solar is an established part of Oregon's supply mix. Yet, the penetration level for Oregon is hovering around 1% for residential systems within the PacifiCorp and Portland General Electric service territories. The description of solar in Oregon as "established" in light of these numbers appears inappropriate and the departure from NEM seems premature. Most recently, in California, a successor tariff to NEM was only determined to be appropriate at a penetration level of 5% of aggregate customer peak demand.[4] In Hawaii, the departure from residential NEM at full retail credit was introduced only after solar penetration levels exceeded 15% of utility customers.[5] The Oregon market is nowhere near the penetration levels seen in states that have begun to transition the industry away from NEM.

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[2] Barbose, Galen, et al., On the Path to SunShot: Utility Regulatory and Business Model Reforms for Addressing the Financial Impacts of Distributed Solar on Utilities. Golden, CO: National Renewable Energy Laboratory, NREL/TP-6A20-65670 (May 2016), at p. 32, *available at* http://www.nrel.gov/docs/fy16osti/65670.pdf.

[3] *Id.* at p. 33.

[4] *See* California Pub. Util. Comm'n, Decision Adopting Successor to Net Energy Metering Tariff, D.16-01-044, R.14-07-002 (Jan. 28, 2016), at pp. 13-14, *available at* http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M158/K181/158181678.pdf.

[5] *See* Haw. Pub. Util. Comm'n, Order No. 33258, Docket No. 2014-0192 (Oct. 12, 2015), at pp. 160-61, *available at* http://dms.puc.hawaii.gov/dms/OpenDocServlet?RT=&document_id=91+3+ICM4+LSDB15+PC_DocketReport59+26+A1001001A15J13B15422F9046418+A15J13B31859H489831+14+1960.

By using installation numbers in lieu of adoption or penetration levels, the report mischaracterizes the adoption rate of solar to the detriment of all recommendations that flow from that basic paradigm. We urge the Commission to use a penetration target statewide that would enable solar to grow into a truly established and robust industry. Greater solar penetration will ensure that the value of solar to the grid will only increase.[6]

Proposing a departure from the underlying programs aiming to increase adoption of residential solar PV, such as NEM, will reduce solar adoption and handicap the growth in value of these systems to the State. Until such time that Oregon's penetration levels meet or exceed those seen in other states that have looked at reforming NEM (5-15%), any departure from residential NEM or diversion of the Energy Trust of Oregon funds from being accessed by all residential systems currently included in the program offering would be detrimental to the growth and sustainability of the sector.

IV. Residential customers are not confused by the current program offerings

The report purports to aim to streamline the offerings of solar incentives by reducing ETO availability and departing from NEM, arguing that current program offerings are confusing and complex. Again, no evidence is offered for this assertion.

From the perspective of a residential customer, NEM is the most straightforward method of valuing excess energy they produce as it gives the solar homeowner a credit for excess energy delivered to their neighbor. This exchange greatly simplifies the analysis that needs to be done during the sales process to explain the value of an investment in solar energy. Under a NEM framework, because an excess kWh of energy is valued the same as a kWh of energy consumed

[6] SolarCity, A Pathway to the Distributed Grid: Evaluating the economics of distributed energy resources and outlining a pathway to capturing their potential value, *available at* http://www.solarcity.com/sites/default/files/SolarCity_Distributed_Grid-021016.pdf.

on site, one does not need to analyze what amount of energy will be exported by a particular system in order to explain to a customer what the value of their system will be. Given most customers in Oregon do not have access to the type of granular information that is necessary to accurately assess the amount of energy that will be exported versus consumed on site, a move away from NEM at this time would stymie further development of the rooftop solar PV market in Oregon by introducing uncertainty into every sales conversation. Such an outcome is directly at odds with the basic goal of Oregon's energy polices including HB 2941. Thus, the report's recommendation to introduce differing compensation mechanisms for rooftop residential solar risks needless customer confusion by moving to a more complex paradigm based on the unsupported concern that a cost shift exists.

Moreover, such a move risks undervaluing generation and depressing adoption or exceeding value and encouraging over-built systems in excess of the homeowner's generation needs. Residential rooftop solar PV generation is built for the purpose of serving onsite load primarily, and federal tax incentives are crafted with that requirement in mind. Care therefore needs to be taken to ensure the market is robust and sustainable before more complexity is introduced.

V. There is no cost shift from NEM

Simply put, there is no basis for presuming a cost shift exists in Oregon due to NEM. The report offers no analysis to support its conclusions and the Commission has not found a cost shift to exist in any docket. Yet the report appears to have pre-judged the ongoing efforts to value onsite solar resources to support its recommendation to transition away from full-retail-rate NEM in favor of this as-yet-undetermined value of solar. This outcome puts the proverbial cart

before the horse and must be rejected. State policy should not be made based off of unsupported assumptions.

Furthermore, numerous studies across the country have shown that NEM is a net benefit to energy consumers.[7] Any impact from net metering is generally shown to have downward pressure on retail rates.[8] Thus, if any conclusion should be stated in the report regarding NEM at this point in time, it should be that evidence nationally shows no serious issues and that Oregon does not need to move away from NEM at this time.

To be clear, SolarCity does not oppose any move away from NEM. What we oppose is moving away from NEM in a nascent market based on unsupported assumptions about cost shifts. There are many different ways of crafting a successor tariff once residential NEM has reached a sufficient level of penetration. However, the report, while urging a transition to this future tariff, provides no penetration point trigger. Rather, it appears to suggest that transition should occur imminently based on unsubstantiated fears of a cost shift. This is premature. Instead of leaving the question open, a better option would be to recommend further study on integration of increased rooftop solar PV to unlock the benefits of customer investment in solar PV resources while also identifying a penetration level at which point departure from retail NEM would be appropriately considered. Such a recommendation would allow for customer investment in rooftop solar PV to unlock grid benefits while also offering stakeholders a clear trigger point at which a transition away from NEM will begin to occur. Both of these outcomes

[7] *See, e.g.*, M. Muro and D. Saha, Brookings Institution, Rooftop solar: Net metering is a net benefit (May 23, 2016), *available at* https://www.brookings.edu/research/rooftop-solar-net-metering-is-a-net-benefit/.
[8] Naïm R. Darghouth, et al., Net Metering and Market Feedback Loops: Exploring the Impact of Retail Rate Design on Distributed PV Deployment Prepared for the Office of Energy Efficiency and Renewable Energy Solar Energy Technologies Office U.S. Department of Energy, *available at* https://emp.lbl.gov/sites/all/files/lbnl-183185_2.pdf.

support the continued growth of solar energy in Oregon in a way that benefits energy consumers while also supporting the industry.

VI. Conclusion

The Legislature, in HB 2941, requested that the Commission engage in a study to recommend the most effective, efficient and equitable approach to incentivizing the development and use of solar photovoltaic energy systems. The most effective, efficient, and equitable approach at this time remains the status quo. Recommending any departure from full retail net metering for residential solar rooftop systems and any diversion of ETO funds from all eligible systems is premature and would result in a decrease in adoption rates across the state.

Respectfully submitted,

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