The Community Renewable Energy Association's Testimony in Support of HB 2857 and HB 3274

Oregon Small-Scale Renewable Facilities and Strengthening the Public Utility Regulatory Policies Act

March 26, 2019, House Energy and Environment Committee

CREA appreciates this opportunity to testify in support of HB 2857 on behalf of the Community Renewable Energy Association (CREA). CREA is an ORS 190 intergovernmental association. Members include counties, irrigation districts, councils of government, project developers, for-profit businesses and non-profit organizations. CREA supports business and economic opportunities through renewable energy development in a competitive environment. We support use of free enterprise principles to create economically and environmentally responsible electric generation within the State of Oregon. The development of these projects enhances our members' tax base and provides needed local employment.

There are two aspects of HB 2857 I would like to address, the first being provisions regarding the requirement eight percent of Oregon's power come from smaller, distributed community renewable energy projects, and the second being provisions that strengthen Oregon's implementation of PURPA (Public Utility Regulatory Practices Act) the Federal law which guides critical aspects of the development of small generating projects.

The Ongoing Saga of the Eight Percent Provision

CREA's involvement with the eight percent provision goes back to the passage or SB 838 which originally established Oregon's first renewable portfolio standard in 2007. At CREA's urging the legislature included the following language in SB 838:

- The Legislative Assembly finds that community-based renewable energy projects …….. are an essential element of Oregon's energy future, and declares that it is the goal of the State of Oregon that by 2025 at least eight percent of Oregon's retail electrical load comes from small-scale renewable energy projects with a generating capacity of 20 megawatts or less***. All agencies of the executive department as defined in ORS 174.112 shall establish policies and procedures promoting the goal declared in this section.***

Well that didn't really happen, especially the part about all executive department agencies establishing policies and procedures promoting the goal, irrespective of what may be otherwise claimed. This is evident by the lack of applicable state agencies monitoring progress toward the goal. As the saying goes, "that which is important gets measured". Over the ensuring years CREA attempted to engage with state personnel to determine the compliance status of this goal. Although ODOE appeared to perform

some assessment in the 2014 / 2015 time frame, no definitive answer was given, no official reporting made. Basic questions which needed resolution to determine compliance, such as how is community renewable defined, must the renewable energy certificates remain bundled with the power, and just how much power is being produced by these projects were never resolved.

When the legislature passed SB 1547 in 2016 CREA again came to the table to try to insure the legislature's intentions in 2008 were accomplished. SB 1547 gradually removed the cost of coal generation from rates, and increased the renewable portfolio standard mandate to 50% by 2040. While we were successful in turning the 8% goal into a mandate, last minute legislative action changed what had been simple and straightforward, measurement that eight percent of Oregon's energy sales be from community based renewables was turned into a capacity rather than energy sales metrics. This created considerable confusion regarding how to define both the numerator (i.e., which projects count where count for how much) and denominator (what is the definition of aggregate electrical capacity for the purpose of this calculation). So although we are now going on three years since the passage of SB 1547 and 12 years since the passage of SB 838 the saga continues, and there has been no formal action by an state agency to implement the state's community renewables law.

Current Status of the OPUC's Small Community Renewable Rulemaking

The Oregon Public Utility Commission is currently engaged in a rulemaking on this topic. Largely as a result of the change from an energy based measurement to a capacity based measurement, and all the uncertainty that has brought, the rulemaking has been time consuming and contentious. As noted above there has been uncertainty on definition, measurement and data sources for fundamental elements of the calculation. Depending upon how these issues are ultimately decided, future litigation is possible.

There has been reluctance to call for the utilities' current compliance status. That said, it appears that PGE is currently far from compliance at this time, possibly at less than 1%. They do, however a considerable number of solar projects have in the queue that, depending upon how many actually get built (historically many small projects get started in the process but never reach construction). PacifiCorp's situation is something of the reverse, with them being at or near compliance currently, but having older contracts rolling off in coming years making future compliance less certain. In short, under no reasonable measurement, we are not meeting the eight percent community renewable mandate.

How Do HB 2587 and HB 3274[1] Address the Eight Percent Community Renewables Issue?

I would note that the delay in final rules, well past the deadline previously committed to this committee and the level of disagreement within the rulemaking demonstrate the need to simplify this issue, which is precisely what HB 2587 does. It

- Synchronizes the community renewables provision with the broader renewable portfolio standard by providing that the measurement be based on energy sales
- Requires the renewable energy certificates remain bundled with the power used for compliance (we believe the law already requires this, but PacifiCorp and PGE have argued otherwise)

[1] Both HB 2857 and HB 3274 have the same changes to the community renewable mandate.

- Requires compliance of the eight percent by 2025 with interim and on-going compliance reporting
- Increases the amount of non-utility owned low impact hydro resources that can qualify for the renewable portfolio standard from 40 average megawatts to 100.

CREA believes that 12 years is more than sufficient time to see the legislature's intentions be fully implemented.

The Importance of PURPA

While the eight percent provisions establish a market for smaller resources the State's implementation of PURPA is what provides the pricing and contracting details for these smaller projects which can make or break their development. The implementation of PURPA in Oregon, as is it is elsewhere is under constant attack from the investor owned utilities. The utilities repeatedly claim, with scant evidence, that PURPA increases costs to its ratepayers. Unfortunately the OPUC, requiring considerably less evidence for this claim than is required for approval of the utilities retail rates charged customers seem too willing to accept these arguments. CREA believes that the primary motivation for the IOUs opposition is that PURPA projects, unlike projects owned by the utilities do not provide the almost guaranteed 9% +/- rate of return for their shareholders. Simply stated the utilities' opposition is almost entirely about protecting shareholders instead of ratepayers.

Price Competitiveness of Smaller Generation Projects

For the utilities arguments to be successful, it assumes that legislators and regulators can be convinced that two fundamental principles of the utility industry from its early days must forever be true; that vertically integrated monopolies are necessary because the produce lower costs power than does free market completion, and that electric generation is an economics of scale business, i.e. larger generation projects are significantly less expensive than smaller ones. And they would have your believe that these two principles are so over-riding, even today, that they should eclipse any other policy considerations regarding power generation development.

The first of these propositions in clearly not true. Since Congress passed PURPA in 1978 a robust independent power production industry has developed. Virtually all of NIPPC's members, a significant portion of REC's members and a number of CREA's members are private independent power producers, testament to the viability of this industry. In today's utility industry there are a multitude of alternatives to utility developed and owned generation facilities of all types. PURPA essentially created the non-utility owned generators who compete against each other and use market forces to drive down costs for all customers. One of the primary reasons renewable energy prices are so low now is because competition among firms, rather than utility monopolies, are able to innovate.

The presumption of economies of scale, while historically accurate for previously dominant generation such as nuclear, coal and big hydro, is no longer evident today, particularly for solar, which is likely to be the majority of community based renewables going forward. The USDOE, in conjunction with the Lawrence Berkeley Labs produces an annual report with a considerable amount of data regarding solar installations, including the installed cost of projects on a per watt basis. The results for three recent years are as follows:

Figure 11. Installed Price of 2015 Utility-Scale PV Projects by Size and Project Design

Units: 2015 Real $/W-AC

Project Size (MW-AC)	Fixed-Tilt c-Si			Tracking c-Si			Fixed-Tilt Thin-Film			Tracking Thin-Film			All PV Sample		
	Median	20th Percentile	80th Percentile	Median	20th Percentile	80th Percentile	Median	20th Percentile	80th Percentile	Median	20th Percentile	80th Percentile	Median	Project Count	Project MW-AC
5-10	2.72	#N/A	#N/A	2.38	1.98	2.78	2.01	#N/A	#N/A	#N/A	#N/A	#N/A	2.46	12	108
10-20	2.72	2.15	3.14	2.88	2.56	3.18	2.39	#N/A	#N/A	3.08	2.83	4.42	2.84	30	475
20-100	2.18	1.94	2.48	2.53	2.32	2.69	2.16	#N/A	#N/A	2.95	#N/A	#N/A	2.58	19	853
100-1000	#N/A	#N/A	#N/A	4.12	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	4.25	3	699

Figure 11. Installed Price of 2016 PV Projects by Size and Mounting Type

Units: 2016 Real $/W-AC

Project Size (MW-AC)	Fixed-Tilt			Tracking			All PV Sample		
	Median	20th Percentile	80th Percentile	Median	20th Percentile	80th Percentile	Median	Project Count	Project MW-AC
5-20	2.07	1.82	2.42	2.35	2.19	2.78	2.29	35	505
20-50	2.13	2.05	2.23	2.07	2.00	2.23	2.10	13	455
50-100	1.82	1.79	1.93	2.09	1.95	2.20	2.07	25	1,952
>100	3.02	2.41	3.63	2.39	2.18	2.63	2.39	15	2,585

Figure 11. Installed Price of 2017 PV Projects by Size, Module Technology, and Mounting Type

Units: 2017 Real $/W-AC

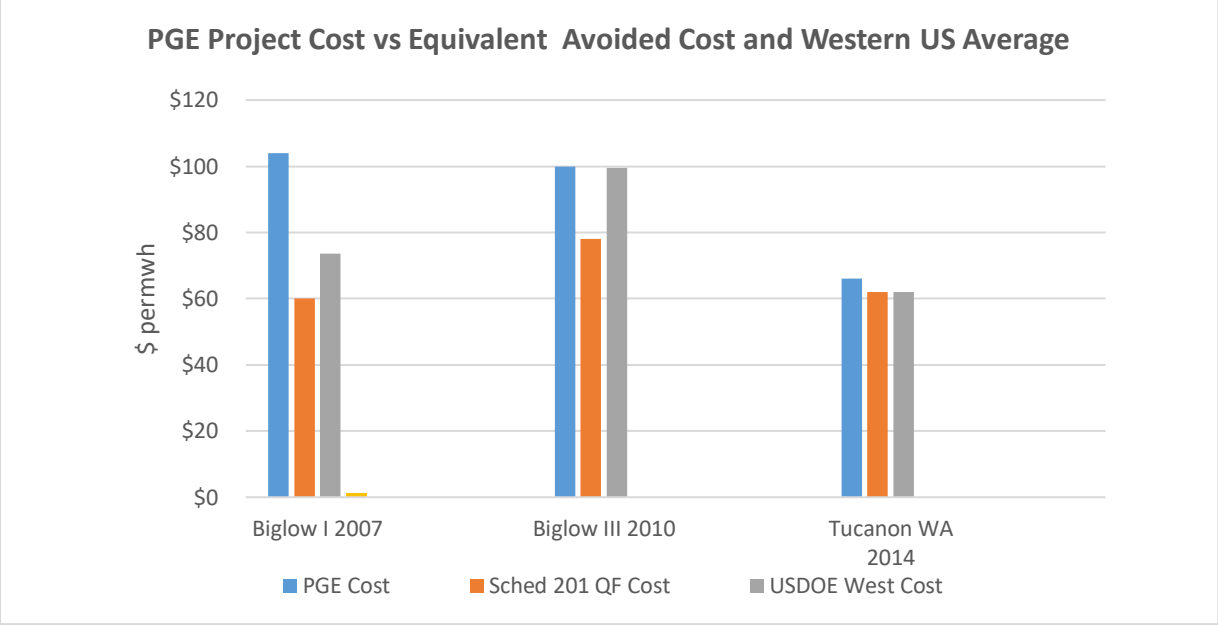
Project Size (MW-AC)	Fixed-Tilt c-Si			Tracking c-Si			Fixed-Tilt Thin-Film			Tracking Thin-Film			All PV Sample		
	Median	20th Percentile	80th Percentile	Median	20th Percentile	80th Percentile	Median	20th Percentile	80th Percentile	Median	20th Percentile	80th Percentile	Median	Project Count	Project MW-AC
5-20 MW	2.10	2.00	2.26	1.80	1.32	2.09	2.06	1.63	2.33	2.20	2.06	2.43	2.04	47	603
20-50 MW	2.14	2.03	2.14	2.13	1.80	2.25	1.96	1.96	1.96	2.71	2.71	2.71	2.05	13	457
50-100 MW	1.90	1.86	1.95	2.03	1.61	2.22	1.89	1.89	1.89	1.82	1.82	1.82	1.92	13	874
100-200 MW	#N/A	#N/A	#N/A	1.91	1.88	2.90	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	1.91	3	370

The (unweighted) average for 2015, 2016, and 2017 for all projects sized 5-20 MW is $2.26 per watt (using the 5-10 MW size for 2015 data). This compares to the $2.85 per watt of the large projects of over 100 MW. **Thus the per watt projects of the largest category projects is 25.9 percent more than those of the smallest category. The least expensive category, projects 50-100 MW are only 3.25 percent less expensive than the smallest category.** An examination of the date shows some year to year and technological variability, but reasonably concludes there is no significant economies of scale cost advantage in solar based on this exhaustive data set of 228 projects totaling almost 10,000 MW. Small and medium sized projects are less expensive, but whatever differences exist, it's in the noise of the data.

Utility Developed vs Independent Power Costs

Some ask, can't utilities build generation at less cost? What this question really poses is "can regulated monopoly whose profit is based on increasing the value of their rate base on which they earn a return does not construct projects at less cost than independent power producers whose profit margin depends upon building a project on time, on budget and keep operating costs within projections?" And when you think of it that way the question becomes more interesting. Unfortunately the data available from the utilities and the OPUC is lacking due to claims of confidentiality. However there is some evidence that suggests utility built projects are not less expensive, and they are almost always riskier.

Take for example three wind projects that PGE was involved with, Biglow I developed in 2007, Biglow III developed in 2010, and Tucanon, built in Washington in 2015. Below is a comparison of what PGE anticipated the cost of these projects were going to be at the time of construction, the cost had those same megawatt hours been constructed by QF developers under PGE's schedule 201 (the rate paid under standard contracts for QF developments) at that time, and the average cost of wind development in the West according to USDOE / LBL's Wind Technologies Market Report data for those years.



Based upon the information available to CREA it appears that had these same megawatt hours been constructed under the QF rates by independent power producers the cost would have been less than what the PGE is anticipated paying for these. Unfortunately the utilities and the OPUC are not particularly transparent with project cost information or competitive bidding results making analysis difficult. However these results are comparable to work done in Idaho by CREA's legal counsel that found independent power producer's cost to be greater than Idaho Power's. In many cases significantly so.

Current PURPA Status

PacifiCorp has essentially stopped the development of QFs (Qualifying Resources) since mid- 2016. "The power is too expensive" they say. "We don't want it or need it". Yet at the same time PacifiCorp is

asking for regulatory approval for over 1,000 MW of new wind. To be developed by them, in Wyoming. Plus expensive new transmission to be constructed across the western states. At an estimated cost of $3 billion. Most put into rate base and benefiting their shareholders and requiring ratepayers to pay higher costs than if PacifiCorp purchased the power from its competitors, including those located in Oregon.

PGE's situation was somewhat more favorable, with a period where their avoided cost rate (the price for which they pay QF's) was high enough, and solar prices were declining for the developers such that PURPA actually began to work in Oregon. These are projects PGE points to as potentially meeting the eight percent requirement are significantly PURPA projects.

So what has been the utilities' response? Declare a crisis. Inaccurately claim they are paying too much. Ask the PUC to immediately reduce payments to the developers. Open another PURPA investigation. And sadly the OPUC seems too willing to go along.

Our Alternative: Pass a Fair PURPA Bill Giving the OPUC Appropriate Legislative Guidance

Notwithstanding that previous legislatures have been down this path before in 1983, CREA and our partners have a fairly straightforward alternative to what are the seemingly never ending PURPA wars. HB 2857 provides legislative direction to the OPUC in the following ways:

- Supports the development of renewables in Oregon by requiring that the OPUC actively promote their development and ensure just and reasonable prices.
- Gives greater notice and hearing rights to customers and qualifying facilities when a utility proposes to change its price schedule paid to qualifying facilities.
- Requires that the prices a utility will pay QFs must include the cost the utility avoids by avoiding transmission costs.
- An existing renewable facility that is currently providing capacity to a utility will be paid for that capacity contribution when it renews its contract.
- Clarifies that renewable facilities are eligible for standard prices and contracts if they are 10 MW in size or smaller.

Conclusion

CREA's members, both its developer and local government members would like to see the legislature put an end to the seemingly never ending debate regarding the role of small community based renewable energy project, and how PURPA's implementation in Oregon should govern the development of these projects. CREA's local government members support the development of renewable energy of all types and sizes. It is simply good for our local economies. While some of our members have done well with large wind projects in the Columbia Gorge, other areas have begun to seem more development interest in these smaller projects, primarily but not limited to solar. They have seen the benefits of renewable energy in other counties and in some cases have begun to see the benefits in their own. They wish to see a fair share of those opportunities continue to exist here in Oregon, not in Wyoming or Utah.

Last year CREA commissioned two studies on these very topics. In a study performed by Evergreen Economics, it was found that if PacifiCorp built a proportionate share of the wind and solar projects they plan for Wyoming and Utah, the following benefits would accrue to Oregon, even factoring in the additional MW of capacity that would need to be constructed given Wyoming's admittedly better wind and Utah's slightly better solar resource:

The economic benefits to Oregon for building and operating the proposed wind and solar resources within Oregon include the following:

- *The creation of almost 4,000 jobs in Oregon and adding over $600 million in economic output to Oregon's economy during the Construction Phase.*
- *The creation and sustaining of over 120 jobs and almost $16 million in economic output to Oregon annually from the operations and maintenance of the wind and solar resources throughout the lifetime of these projects.*

Another study performed by Lewis & Clark's Green Energy Institute concluded:

- *Total direct payments to counties and taxing districts in tax year 2017-18 totaled over $31.7. In the past four years renewable energy projects have paid over $120 million to counties and taxing districts in Oregon. However these projects and their benefits have not been evenly distributed across renewable resources or counties.*

Stated simply our public sector members desire to see the economic benefits renewable energy can bring their communities. We want to see those benefits fairly stay in Oregon. Our developer members wish to develop here. Finally, CREA also supports HB 3274. This bill, similar to HB 2857, is sponsored by the Oregon Water Resource Congress, the state association of irrigation districts, some of whom are also CREA members. These small hydro projects provide unique and valuable benefits to Oregon's environment, fish and residents. The Energy and Environment Committee's efforts to bringing these bills together and advance it / them out of committee is an important and appreciated step to a better economic and environmental future in Oregon.