



Oregon

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MEMORANDUM

To: House Energy and Environment Committee

From: Andy Ginsburg, Assistant Director
Rob Del Mar, Senior Policy Analyst

Date: February 6, 2017

Re: Small-Scale Community Renewables Database

The Oregon Department of Energy will present on our database and preliminary analysis associated with the small-scale community-based renewable target established in ORS 469A.210 and modified by SB 1547 (2016). This new data analysis tool allows users to compare results under a variety of different scenarios. The scenarios were developed in collaboration with stakeholders in May 2016, and the data was provided by Portland General Electric and Pacific Power. Following is a description of the scenarios and other considerations taken into account in order to create this tool.

Aggregate Electrical Capacity

SB 1547 (2016) modified the small-scale community-based renewable energy goal in ORS 469A.210. The original law stated the goal as a percentage of “retail electric load”; section 14 of SB 1547 states a target in terms of “aggregate generation capacity.” The new language changes the calculation from an energy basis to a capacity basis.

On an **energy** basis, the generation from a facility is the actual amount of electricity that a generator produces over a period of time and reported as a unit of energy, typically megawatt-hours or kilowatt-hours. On a **capacity** basis, the calculation of renewable energy describes the instantaneous output of the facility under a certain set of standard test conditions. Capacity is reported as a unit of power, typically megawatts or kilowatts. As an example of how energy and capacity relate, a generator with a nameplate capacity of 1 MW will produce 1 MW-hour (MWh) of energy if it operates at its nameplate capacity for one hour.

The term “aggregate electrical capacity” does not have a statutory or industry accepted definition. During the meeting in May 2016, stakeholders agreed that ODOE could use utility peak load in Oregon as an acceptable proxy for aggregate electrical capacity.

Qualifying Projects

The term “community-based renewable energy project” is not defined in statute and does not have a broadly accepted definition. The statute provides the following two criteria for facilities to qualify toward the target.

1. “Small-scale renewable energy projects with a generating capacity of 20 megawatts or less.”
2. “Facilities that generate electricity using biomass that also generate thermal energy for a secondary purpose.”

Development of the Small Scale Community Renewables Database

ODOE convened stakeholder meetings in 2016 on May 18 and August 17, and attended a Work Group meeting on July 29, 2016. The department asked for feedback on the types of facilities that should be counted toward meeting the eight percent small-scale community-based renewables energy target. Given the broad definitions provided in SB 1547, stakeholders agreed that a scenario analysis would be appropriate to determine the impact of including or not including certain facilities. Options available in the analysis tool include:

- a. **Net metered facilities:** the tool enables the user to include or not include solar installations across the state as well as other projects that are connected on the customer’s side of the utility meter.
- b. **Biomass co-gen facilities larger than 20MW:** the tool enables the user to include or not include biomass cogeneration facilities larger than 20 MW. The 20 MW size cap that applies to small-scale renewable energy projects is not included in ORS 469A.210 (2)(b) as modified by SB 1547.
- c. **Non RPS compliant facilities:** the tool enables the user to include or not include facilities constructed before 1995 that do not meet the definition of renewable energy projects established under ORS 469A.025. Some of these facilities, which may not be eligible for the RPS, may meet the qualifications described in the small-scale community-based renewable energy facilities target.
- d. **Out of state facilities:** the tool enables the user to include or not include renewable energy facilities located outside of Oregon that contribute to Oregon peak loads. If included, these facilities are considered based on the estimated share of their output serving the Oregon market.

Expanded Analysis

Feedback from stakeholders resulted in additional facility scenarios and compliance options to be considered. In addition to the original scenarios described above, the tool now includes:

- e. **Planned Facilities:** The utilities provided data on projects that are planned or under contract but were not yet completed as of the end of 2015. Historically, many planned facilities have not been built. Conversely, by 2025 many facilities may be built that are not currently on the planned projects list.
- f. **Capacity and Energy:** In addition to the capacity target stated in ORS 269A.210, the tool now includes the ability evaluate facility contributions to annual energy loads.

The tool was originally designed to simply select or deselect items to produce individualized scenarios. As the number of scenarios expanded at the request of stakeholders, summary tables proved to be a

Small-Scale Community Renewables Database Summary

better way to convey the data. The tool now has a “Scenario Toggle” tab where the user can evaluate multiple scenarios. There is also a “Summary Tables” tab that includes additional information about future loads and planned facilities. In both cases, utility load assumptions may be changed to reflect future energy trends. The summary tables demonstrate small-scale community renewables as a share of capacity as well as annual energy.

Additional Data Fields

The database includes fields that are not presented in the summary tables. Additional fields include utility ownership, REC ownership, capacity factors, capacity contribution values, and others. In many cases, the additional data is incomplete and ODOE will continue to develop the dataset.

