Docket: **UE-131883**

Companies: Puget Sound Energy; Avista Corporation; Pacific Power & Light Company

Staff: E. Cooper Wright, Regulatory Analyst, Conservation and Energy Planning Section

Re: Distributed Generation Reports (August 1, 2017)

Recommendation

Staff recommends that the commission acknowledge the reports as submitted, and direct the companies by letter to include the total amount of electricity produced by distributed generation annually in future reports.

Discussion

Distributed generation (DG) is a decentralized method of electrical production and usually consists of rooftop solar panels, small wind turbines, and anaerobic digesters. Beginning in 2013, the Washington Utilities and Transportation Commission (commission) opened this docket to assess DG within the state. To gain a greater command of the issue, the commission solicited written comments from stakeholders, hosted a presentation, and held a workshop. In May 2016, the commission issued a letter to Puget Sound Energy, Avista Corporation, and Pacific Power & Light Company (companies) requesting semi-annual distributed generation reports.

August DG Characteristics
In accordance with RCW 80.60.020, each electric utility is required to make net metering available to qualified customers on a first-come, first-serve basis and to reserve capacity for distributed generation equal to a half percent of their 1996 peak demand. In their August 2017 DG Reports every utility exhibited DG growth. Avista fulfilled just 36 percent of their allocation, while both Puget Sound Energy (PSE) and Pacific Power & Light Company (Pacific Power) exceeded their reserved amount.

2016 to 2017 Report Trends
In a broad sense, DG is advancing within the utility's service territories. For each utility, the number of customers participating, and the total DG capacity, increased. As expected, solar generation dominated DG utilization, with wind, micro hydro, and biomass technologies representing a much smaller portion of net metering customers. Just 1.2 percent of net-metering customers utilized non-solar technologies.

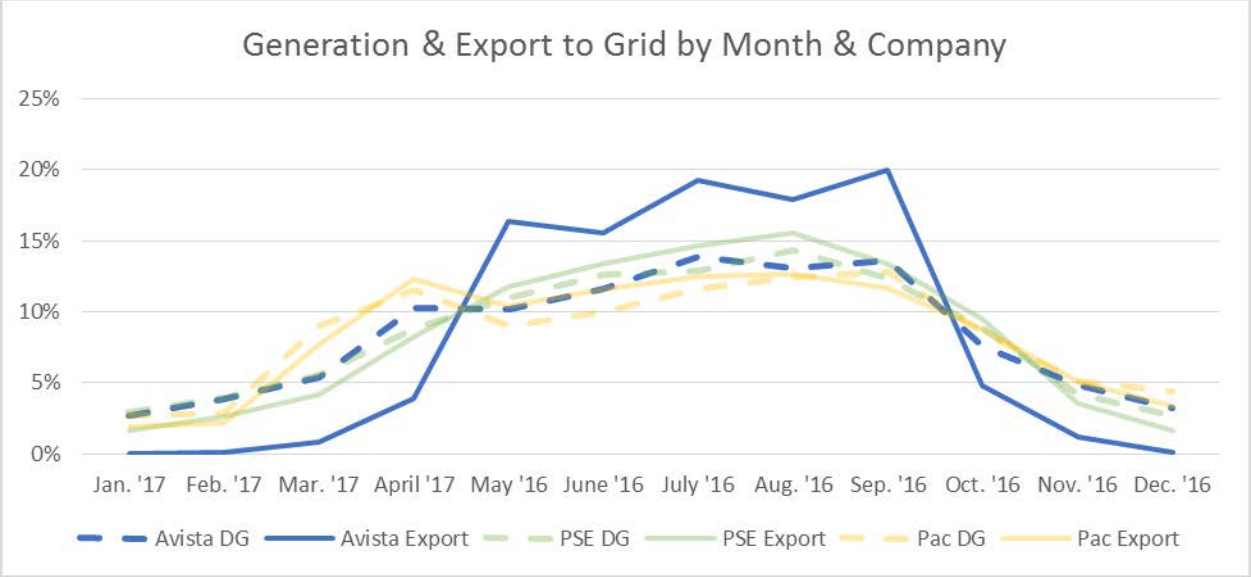
Net Metering credits are how customers take advantage of their local generation. They function much like "roll-over minutes" where excess generation is credited to a net-metering customer's bill, and are available for later in the year should that customer's generation not meet their local needs. On April 30 of each year, any excess credits expire, and are released to the utility without compensation. Interestingly, from August 2016 to August 2017, the trend in the number of

credits expiring varied from utility to utility. Avista's and PSE's reduction in expiring credits indicate that customer load is being met with DG sources. However, Pacific Power's marked increase indicates that their customers are installing net metering systems with capacities larger than needed and those customers are losing some of the economic value DG provides.

Table 1: 2016 to 2017 Report Trends

	Participation Growth	DG Capacity Growth	Solar Percentage of DG Capacity	Credits Expiring
PSE	+ 24%	+29%	99%	-7%
Pacific Power	+ 47%	+58%	98%	+155%
Avista	+ 12%	+14%	94%	- 42%

The Curious Case of Avista Net Metering Customers



When comparing customer generation and exportation behavior through the year, PSE and Pacific Power customers largely follow the expected distribution of summer "peaking" when solar generation is most advantageous. However, when examining Avista net metering customers, they generate similarly to other DG customers, but they consume DG in the winter more and export a larger percentage in the summer. After contacting Shawn Bonfield of Avista, he explained that this behavior could be due to the difference in climate between eastern and western Washington. The theory is that the colder winters of eastern Washington cause DG customers to consume their local generation for heating and allow for more exportation in the summer.

Recommendation

Staff recommends that the August 1, 2017, Distributed Generation reports be acknowledged.