



Oregon

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TO: Senate Interim Committee on Environment and Natural Resources

FROM: JP Batmale, Division Administrator, Energy Resources & Planning

SUBJECT: Status Update on RPS Implementation



Introduction

Oregon's Renewable Portfolio Standard (RPS) stimulates electric utility investment in select renewable generation technology by establishing large-scale, annual renewable energy targets. The RPS became law in 2007 and was revised in 2016, with the target doubling for Oregon's electric investor owned utilities (IOUs), specifically Portland General Electric (PGE) and PacifiCorp (PAC), from 25 percent to 50 percent. Thus far, the RPS has been a cost-effective success. This success is due to a complementary range of policies nationwide and locally driving the economics for certain generation technologies to vastly exceed even the most optimistic price forecasts from ten years ago. Looking to the future, the policy landscape for Oregon's RPS is poised to further evolve as the state and region grapples with the drive to decarbonize the economy.

Discussion

CONTEXT

In 2007, Oregon created the RPS (ORS469A.050 through 469A.300).¹ The RPS created annual renewable energy targets for most Oregon utilities.² In 2016, Oregon revised the RPS targets for IOUs to cover 50 percent of all retail sales by 2040 and made some adjustments for consumer-owned utilities (COUs) (*see Table 1*).³

¹ SB 838 (OR Laws 2007, Chapter 301).

² SB 838 included different RPS targets between IOUs and COUs. The COUs include People's Utility Districts, Cooperatives, and Municipalities.

³ SB 1547 (OR Laws 2016, Chapter 28). Investor owned utilities account for approximately 70 percent of all retail electric sales in the states.

Table 1, Oregon’s RPS Target

	Years							
	2011-2014	2015-2019	2020-2024	2025	2025-2029	2030-2034	2035-2039	2040
Original % Targets for Large Utilities (COUs & IOUs)	5%	15%	20%	25%	_____	_____	_____	→
New % Targets, COUs	5%	15%	20%	25%	_____	_____	_____	→
New % Targets, IOUs	5%	15%	20%	27%	27%	35%	45%	50%

Across the United States, twenty-nine states and the District of Columbia have enacted RPS policies, with eleven having RPS targets of at least 50 percent.⁴

To ensure the RPS stimulated new investments, only certain types of renewable generation technologies were deemed eligible for participation. Eligibility of resources is based on two factors, the source of the renewable energy and the age of the generating facility. Eligible sources include solar, wind, geothermal, certain biomass sources, and some thermal energy from renewable, non-fossil fuel sources. Most notably, large hydroelectric projects were not considered eligible if they became operational after January 1, 1995, unless they added more generating capacity from efficiency upgrades.

Each megawatt hour of electricity production from eligible renewables generates a renewable energy certificate (REC) issued by a regional clearing house. These RECs are the sole compliance instruments of the RPS. A market for RECs has emerged across the West and nationally. RECs are traded between various entities (e.g., utilities, project developers) for both compliance and voluntary programs, but the market for unbundled RECs is noted for being opaque. RECs can be sold with the underlying electricity (bundled) or separate from the underlying electricity (unbundled) and only the REC holder can claim the environmental attributes associated with that megawatt hour of electricity. In the 2016 RPS update, Oregon joined twelve other states in sanctioning the use of thermal RECs (T-RECs). These credits are for the thermal energy generated by qualified biomass-based generators and used for another productive activity.

RESULTS

The Oregon IOUs participating in the RPS have been able to meet their annual targets since the beginning of the program.⁵ They are also poised to meet their targets over the next decade (*See Charts 1 and 2*).

⁴ Lawrence Berkeley National Laboratory, “U.S. Renewables Portfolio Standards, 2019 report.” July 2019, https://eta-publications.lbl.gov/sites/default/files/rps_annual_status_update-2019_edition.pdf.

⁵ For a summation of annual compliance please see <https://www.oregon.gov/energy/energy-oregon/Pages/RPS-Compliance.aspx>.

Chart 1, PGE RPS Forecast ⁶

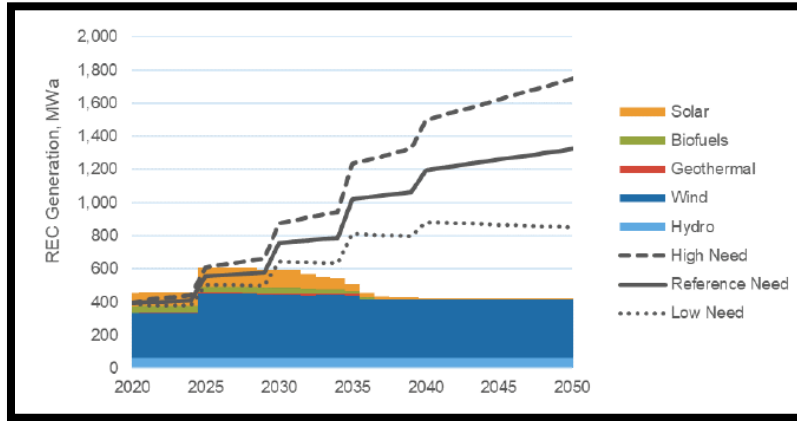
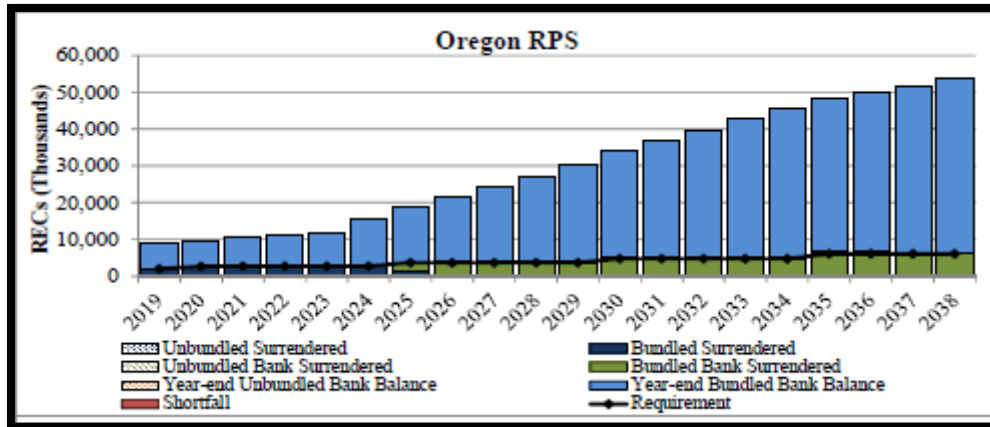


Chart 2, PAC RPS Forecast ⁷

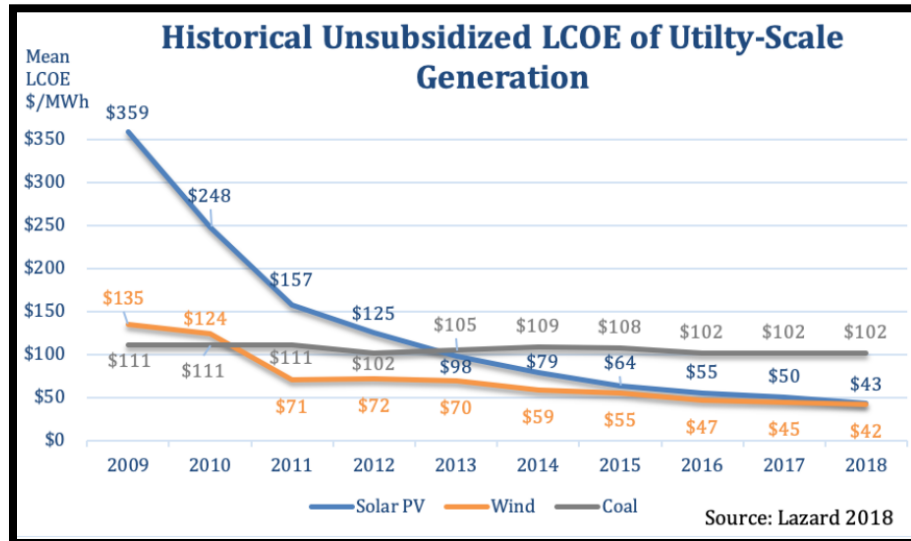


RPS costs to ratepayers have not been an issue. Over the past decade, neither PGE nor PAC have approached the annual cost ceiling of the RPS's cost containment mechanism. The lower than expected cost of the RPS is entirely due to the rapidly declining costs of two eligible, renewable generation technologies: wind and solar (see Chart 4).

⁶ See LC 73, PGE IRP Initial filing, July 19, 2019, Figure 4-19, pg. 117. This chart does not reflect the use of banked REC's. Factoring in the potential use of banked RECs, would allow PGE to meet its RPS compliance through 2035 (pg. 113).

⁷ See LC 70, PAC IRP Initial filing, October 18, 2019, Figure 1.13, pg. 38.

Chart 3, Wind & Solar Levelized Cost of Energy Decline ⁸



In short, the cost to “green” utility retail sales through the RPS has been cheaper than anticipated. Additionally, evidence has emerged that the aggregate impact of state RPS targets achieved the policy’s other intended purpose of stimulating the market for renewable generation development, which has grown to a \$64 Billion market in the United States.⁹

OPERATIONS

Oregon’s RPS involves three types of participants and is overseen by two state agencies. The three types of participating entities are: IOUs; energy service suppliers operating in IOU territory; and, COUs. The first two types of organizations report annually on their RPS activities to the Oregon Public Utility Commission. COUs do not report on their RPS activities to the PUC.

The two state agencies that oversee RPS activities are the Oregon Department of Energy (ODOE) and the Oregon Public Utility Commission (OPUC). ODOE’s main RPS role is to certify eligible renewable generation and their associated RECs.

The OPUC’s oversight role in the RPS is to ensure compliance through reporting, tracking, and planning activities. The OPUC accomplishes this through three activities: RPS compliance reports; RPS implementation plans (RPIP); and, the utilities’ integrated resource plans (IRP).

The RPS compliance reports are filed annually with the OPUC and document compliance in the previous calendar year. The RPIPs are filed every other year and provide a five year forecast of

⁸ See Advanced Energy Economy website, <https://blog.aee.net/the-numbers-are-in-and-renewables-are-winning-on-price-alone> Source of this data is the annual Lazard Report: <https://www.lazard.com/perspective/lcoe2019>.

⁹ Bloomberg New Energy Finance, <https://about.bnef.com/clean-energy-investment/>.

RPS activities and costs. Finally, the IRPs are filed about every three years and provide a minimum of a twenty year look at all new resource acquisition activities, including renewable acquisitions to meet the RPS.

The Oregon's RPS was designed to contain cost risks to ratepayers. The two most notable cost containment mechanisms in the Oregon RPS are the 4 percent cap on incremental cost increases and the ability to hold and use excess renewable energy certificates (RECs) at a later date, also known as REC banking. As mentioned previously, the RPS programs for PGE and PAC have yet to approach the annual 4 percent incremental cost cap. Further, the REC banks of both utilities have continued to grow despite increasing mandates, as the utilities acquire renewable generation beyond their RPS needs.

FUTURE LANDSCAPE

The consistently decreasing cost of renewables and complementary technology, such as storage and inverters, has unleashed possibilities not imagined just ten years ago. Oregon's RPS accomplished its goal of driving and accelerating demand for renewables. Further, the RPS in Oregon avoided driving up utility costs. While the policy included safeguards to contain costs, the decreasing costs of renewables and an eco-system of other supportive policies (e.g., Federal tax incentives; net metering; PURPA; local tax breaks) have allowed renewables to emerge as a very competitive resources in both markets and in long-term utility planning processes. While this development complements the Oregon's RPS it does pose a challenge to traditional utility resource planning, as renewables have low- to zero- marginal costs and overall has begun to hasten the demise of older, polluting, fossil fuel generation.

Potential shifts in the future policy landscape for RPS could come from several directions. The most notably challenge will be meeting the increase in demand due to the rapid electrification of the transportation sector and other areas of the Oregon economy. This drive to decarbonize will most likely lead to increased retail sales and, consequently, the need for more renewables. While decentralized renewables (e.g., rooftop solar) can help mitigate some RPS need, large-scale installations requiring land and transmission will most likely be needed to meet higher demand. Other potential changes to the RPS policy landscape include the elimination of tax incentives, the challenge of meeting resource adequacy needs under higher penetration rates of variable energy resources, and more local municipal mandates for 100 percent renewables or clean energy.

Conclusion

The electric utilities participating in Oregon's RPS have been and will continue to cost-effectively meet the state's policy targets for the foreseeable future. While resource planning and changes in the tax code pose a challenge, the forecasted trend of continuing cost declines for renewables and associated technology should continue to spur broader market adoption of renewables, bolstering the RPS and supporting the acceleration of policies like decarbonization.