Northwest **Power** and **Conservation** Council

February 4, 2014

MEMORANDUM

TO: Council Members

FROM: Gillian Charles, Council staff, and Leann Bleakney, Oregon Council staff

SUBJECT: Renewable Portfolio Standards in Oregon

During the past few months, the Council has heard presentations by representatives of the states of Montana, Idaho and Washington regarding state goals for development of renewable energy resources. This series of presentations began last October, when Council staff Gillian Charles presented a high-level overview of the Renewable Portfolio Standards (RPS) passed by the states of Washington, Oregon, and Montana and the development of renewable resources in the region. Following the overview presentation, the Council has heard the following panel presentations: Montana's RPS policy and status (October); Idaho's renewable goals and development (November); and Washington's RPS status and incremental cost methodologies (December).

This month, the series will be concluding with a presentation on Oregon's RPS policy and status. The Oregon State Legislature enacted the RPS in 2007. The law requires Oregon utilities to deliver a percentage of their electricity from eligible renewable resources by 2025, with interim standards for large utilities.

An overview of Oregon's RPS law will be presented by Julie Peacock, an energy data and policy analyst for the Oregon Department of Energy.

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Oregon's Renewable Portfolio Standard

February 12, 2014

Julie Peacock, Energy Policy Analyst
Oregon Department of Energy

Oregon's Renewable Portfolio Standard

- The Oregon Legislature enacted the RPS in 2007 (SB 838). Under the law, Oregon utilities must deliver a percentage of their electricity from eligible renewable resources by 2025, with interim standards for large utilities.
- The goal is to stimulate development of new renewable resources. Energy facilities developed before January 1995 are not eligible.*
- One Megawatt Hour = 1 Renewable Energy Certificate
- RECs are tracked in a regional database covering the Western Electricity Coordinating Council

*Certain older biomass & municipal solid waste facilities qualify after 2025.

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Oregon's Renewable Portfolio Standard

- An Oregon utility may comply with the RPS using any or a combination of the following options:
  - Build an eligible facility, or continue to operate an existing one, and use the power and associated renewable energy certificates (also called credits).
  - Buy power and associated certificates from an eligible facility owned by another party.
  - Buy "unbundled" renewable energy certificates without underlying electricity. Statute limits how much of the utility's obligation may be met with unbundled certificates.
  - Make alternative compliance payments, with an option to use these funds for energy efficiency or to build an eligible facility in the future.

Utility Requirements

RPS Class	Share of State Sales	Affected Utilities and Electricity Service Suppliers	Standard by Year			
			2011	2015	2020	2025
Large Utilities	> 3%	Eugene Water & Electric Pacific Power Portland General Electric	5%	15%	20%	25%
Smaller Utilities	< 3% but ≥ 1.5%	Central Lincoln PUD McMinnville Water & Light Umatilla Electric Coop Springfield Utility Board Clatskanie PUD	No Interim Obligations			10%
Smallest Utilities	< 1.5%	Other consumer-owned utilities and Idaho Power	No Interim Obligations			5%
Electricity Service Suppliers	Any	All	Aggregate obligation, as if each of the customers served by ESS were served by the customer's distribution utility			

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Flexibility Mechanisms

Cost Limitation	A utility is not required to comply with the RPS in a given year if the incremental cost to do so exceeds 4% of its annual revenue requirement.	**469A.100 (1)**
Alternative Compliance Payments	Utilities may use alternative compliance payments to meet RPS requirements in any year.	**469A.180 (3)**
Unlimited Banking of Renewable Energy Certificates	Utilities can bank renewable energy credits for compliance in future years.	**469A.140 (2)**
Unbundled Certificates	Large utilities can use "unbundled" credits, without acquiring associated electricity, to meet up to 20% of RPS requirements in any year. Before 2020, a large consumer-owned utility can use 50% unbundled credits. There is no limit on the amount small utilities and ESSs can use.	**469A.145 (1) and Sec. 17a**
Delayed Requirements for Utilities That Grow	Small utilities whose loads grow to >3% of statewide load after 2007 have an extended timeline to meet the standard.	**469A.052(2)**

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Eligible Resources

Wind	**Yes**
Solar photovoltaic and solar thermal	**Yes**
Wave, tidal and ocean thermal	**Yes**
Geothermal	**Yes**
Biomass Not treated with chemical preservatives	Organic human or animal waste
	Spent pulping liquor
	Forest or rangeland woody debris from harvesting or thinning conducted to improve forest or rangeland ecological health and to reduce wildfire risk
	Wood material from hardwood timber grown on land described in ORS 321.267(3)
	Agricultural residues
	Dedicated energy crops
	Landfill gas or biogas produced from organic matter, waste water, anaerobic digesters or municipal solid waste
Hydroelectric	Facilities constructed after Jan. 1, 1995, located outside of protected areas
	Electricity attributable to an efficiency upgrade
	Certified by Low Impact Hydropower Institute
Municipal Solid Waste	**Yes**
Hydrogen Gas	Anhydrous ammonia used as a fuel source at the hydrogen power station

Hydroelectricity

- ***Hydroelectric efficiency upgrades*** *made after Jan. 1, 1995.* For BPA facilities, the portion that is attributable to Oregon's share of the electricity generation may be used for RPS compliance.
- ***Low-impact hydroelectric projects*** *certified by the Low-Impact Hydropower Institute.* Each year a utility can use up to 50 aMW of generation from certified facilities owned by Oregon utilities, plus 40 aMW from certified facilities located in Oregon and owned by others (total of 90 aMW or 788,400 MWh).
- ***New hydroelectric projects*** *operational after Jan. 1, 1995, and located outside protected areas* designated by the Northwest Power and Conservation Council as of July 23, 1999, or any area protected under the federal Wild and Scenic Rivers Act or the Oregon Scenic Waterways Act.

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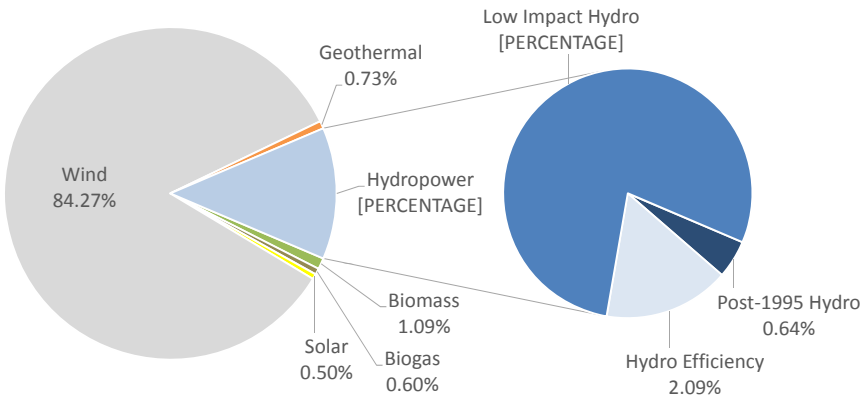
Resources Certified as Oregon RPS-Eligible by Megawatt Share



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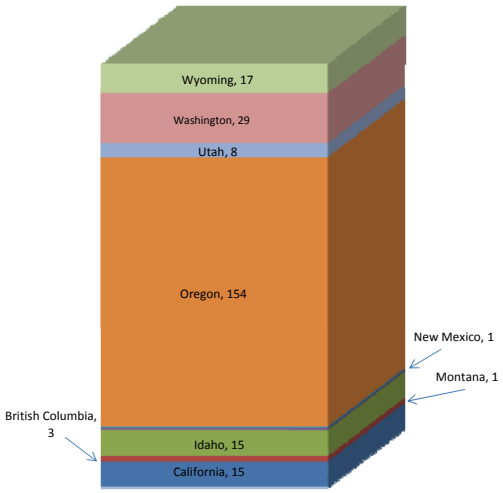
Number of Facilities Certified as Oregon RPS-Eligible by Location



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Oregon RPS-Certified Facilities

Full list at http://www.oregon.gov/energy/RENEW/Pages/RPS_home.aspx

Oregon Renewable Portfolio Standard (RPS) - Approved Facilities (Current as of May 21, 2013)

WREGIS ID	Oregon RPS ID	Eligible Thru	First Eligible Vintage Date	Month Oregon Certified	Generator Plant Name	Account Holder	State/ Province	Commercial Operation Date	Name Plate Capacity (MW)	Hydroelectric Efficiency Increment	Fuel Type	Statutory Authority
W1890	11h2n024or	01/2016	01/2011	08/2011	Central Oregon Siphon Power Project - SPP	Central Oregon Irrigation District	OR	8/1/1989	3.4		Hydroelectric Water	ORS 469A.020(4)(b)
W2240	11sun023or	01/2014	05/2011	08/2011	PAC OSIP SO 2	PacifiCorp	OR	5/20/2011	0.285		Solar	ORS 469A.025(1)(b)
W1878	11wnd012wa	01/2014	11/2010	11/2011	Kittitas Valley Wind Farm	Sagebrush Power Partners, LLC	WA	12/13/2010	100.7		Wind	ORS 469A.025(1)(a)
W1886	11lfg004or	01/2014	10/2010	11/2011	Dry Creek Landfill Gas to Energy Project	Oregon Environmental Industries, LLC	OR	7/17/2007	3.2		Biogas	ORS 469A.025(2)(g)
W2102	12sun001or	01/2015	09/2011	02/2012	PAC OSIP SO3	PacifiCorp	OR	9/8/2011	0.243		Solar	ORS 469A.025(1)(b)
W2101	12sun002or	01/2015	08/2011	02/2012	PAC OSIP CO2	PacifiCorp	OR	9/13/2011	0.043		Solar	ORS 469A.025(1)(b)
W2128	12sun003or	01/2015	07/2011	02/2012	PAC OSIP WV2	PacifiCorp	OR	7/9/2011	0.242		Solar	ORS 469A.025(1)(b)
W2448	12sun004or	01/2015	10/2011	02/2012	Joseph Community Solar	PacifiCorp	OR	10/28/2011	0.425		Solar	ORS 469A.025(1)(b)
W2611	12sun005or	01/2015	12/2011	03/2012	PAC OSIP EO2	PacifiCorp	OR	12/20/2011	0.025		Solar	ORS 469A.025(1)(b)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Cooper Dam Plant	Farmers Irrigation District	OR	1/1/1988	3		Hydroelectric Water	ORS 469A.020(4)(b)
W1910	12h2n002or	01/2014	01/2011	04/2012	Peters Drive Dam	Farmers Irrigation District	OR	11/1/1987	1.8		Hydroelectric Water	ORS 469A.020(4)(b)
W2104	12ath001wa	01/2015	04/2011	04/2012	Box Canyon - Box Canyon Unit 4	Pend Oreille PUD	WA	8/1/1955	22.5	Min 3.5%, subject to 20 MW cap	Hydro Efficiency	ORS 469A.025(4)(b)
W2690	12sun006or	01/2015	01/2012	04/2012	PAC OSIP SO4	PacifiCorp	OR	1/9/2012	0.248		Solar	ORS 469A.025(1)(b)
W2775	12h0x003id	01/2015	02/2012	06/2012	Double A Dairy Digester	AgPower Jerome, LLC	ID	1/1/2012	4.5		Biogas	ORS 469A.025(2)(a)
W2639	12lfg001id	01/2015	03/2012	07/2012	Fighting Creek LFGTE Plant	Kootenai Electric Cooperative	ID	3/5/2012	3.2		Biogas	ORS 469A.025(2)(g)
W1202	12wnd007or	01/2015	01/2015	08/2012	Four Corners Windfarm - Four Corners Windfarm LLC	Exelon Corporation	OR	8/10/2009	10		Wind	ORS 469A.025(1)(a)
W1203	12wnd001or	01/2015	01/2015	08/2012	Four Mile Canyon Windfarm - Four Mile Canyon Windfarm LLC	Exelon Corporation	OR	8/10/2009	10		Wind	ORS 469A.025(1)(a)
W1204	12wnd004or	01/2015	01/2015	08/2012	Big Top - Big Top LLC	Exelon Corporation	OR	7/23/2009	1.65		Wind	ORS 469A.025(1)(a)
W1205	12wnd009or	01/2015	01/2015	08/2012	Buttes Creek Power LLC - Buttes Creek Power LLC	Exelon Corporation	OR	7/23/2009	4.95		Wind	ORS 469A.025(1)(a)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Oregon Trail Windfarm LLC -	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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Legislative Changes to the RPS

- **HB 3039 (2009)** – Required Oregon's investor-owned utilities to meet a portion of the RPS with solar PV systems in Oregon and receive two times the credit.
- **HB 3633 (2010)** – Amended the goal that 8% of Oregon load be met with community renewable energy facilities to emphasize the importance of marine renewable energy sources.
- **HB 3649 (2010)** – Allowed up to 40 aMW of non-utility owned hydroelectric generation facilities built before 1995 to qualify, if the facilities are certified as low-impact hydropower and located in Oregon.

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Legislative Changes to the RPS

- **HB 3674 (2010)** – Allowed energy from Oregon biomass and municipal solid waste facilities built before 1995 to qualify, if facilities registered with WREGIS by 1/2011. Credits generated from these biomass facilities can be used for compliance beginning 2026. Up to 11 aMW/year from pre-1995 municipal waste facilities can be used for compliance beginning 2026.
- **HB 3691 (2010)** – Included above-market costs as one of several RPS costs that utilities can recover through rates.
- **HB 3571 (2011)** – Assigned ownership of renewable energy credits to PURPA Qualified Facilities for contracts in effect before Nov. 30, 2005, unless otherwise expressly transferred.
- **HB 2622 (2011)** – Allowed any facility which used coal as a fuel source, ends use of coal, and switches to a renewable source after 2011 as a "new" facility eligible for the RPS.

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Consumer-Owned Utilities

- Consumer-owned utilities provide RPS compliance reports to their members or customers.
- Bonneville Power Administration is in the process of registering efficiency upgrades at Grand Coulee Dam. BPA will distribute Oregon-eligible renewable energy credits created from Grand Coulee to their customer utilities.
- BPA has analyzed how many Oregon-eligible renewable energy credits the efficiency upgrades from Grand Coulee, Bonneville dam, and Cougar could generate for Tier 1 customer utilities.

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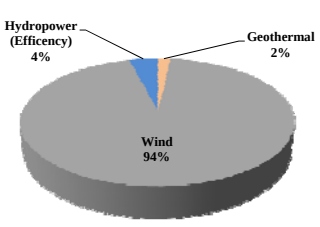
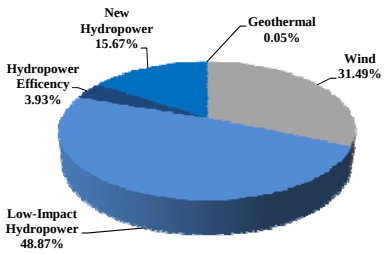
Investor Owned Utilities

Must submit their compliance reports to the Public Utility Commission June 1 of every year beginning in 2012

PacifiCorp's 2012 Proposed RPS Compliance Resource Mix



PGE's 2012 Proposed RPS Compliance Resource Mix



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Legislative Proposal HB 4126

- Would extend glide path and amount of unbundled RECs a consumer owned utility can use when it transitions from a small utility to a large utility under the RPS
  - 5% qualifying electricity - 100% unbundled RECs
  - 15% and 20% qualifying electricity - 75% unbundled RECs
  - 25% qualifying electricity - 20% unbundled RECs (business as usual)
- Requires OPUC to study impacts of electric utilities offering voluntary, bundled renewable energy tariffs to nonresidential customers and allows OPUC to approve tariffs. All costs and benefits associated with the tariffs are borne by the customer receiving service

Questions?

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