

OREGON WAVE ENERGY TRUST UTILITY MARKET INITIATIVE

TASK 3.1: UTILITY INDUSTRY IN OREGON



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The Utility Market Initiative was prepared by *Pacific Energy Ventures* on behalf of the Oregon Wave Energy Trust.

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This Utility Market Initiative was prepared by Pacific Energy Ventures on behalf of the Oregon Wave Energy Trust.

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About Oregon Wave Energy Trust

The Oregon Wave Energy Trust – (OWET) - with members from fishing and environmental groups, industry and government - is a nonprofit public-private partnership funded by the Oregon Innovation Council in 2007. Its mission is to serve as a connector for all stakeholders involved in wave energy project development - from research and development to early stage community engagement and final deployment and energy generation - positioning Oregon as the North America leader in this nascent industry and delivering its full economic and environmental potential for the state. OWET's goal is to have ocean wave energy producing 2 megawatts of power - enough to power about 800 homes - by 2010 and 500 megawatts of power by 2025.

Utility Industry in Oregon

Introduction

This report was prepared as part of the Oregon Wave Energy Trust's Utility Market Initiative (UMI) to provide an overview of the utility industry in Oregon, including regional policies and programs that affect renewable energy development in the state. This report is not exhaustive; rather, it is intended as a primer on the Northwest utility marketplace. It includes summary information on the Bonneville Power Administration (BPA), the state's utilities and other power-generating entities, individual state renewable portfolio standards, and other state policies and programs designed to support the growth of the renewable energy industry in the Northwest. Links to detailed information on federal incentives as well as loans, grants, and rebate programs in Washington, California, and Oregon appear in Appendices A through D.

Bonneville Power Administration

The Bonneville Power Administration (BPA) is a federal wholesale-power-marketing agency headquartered in Portland, Oregon that operates under the U.S. Department of Energy. BPA sells power to utilities within its service territory at cost-based rates.¹ BPA's electricity is generated at 31 federal hydroelectric dam projects, one nonfederal nuclear plant, and several other small, nonfederal power plants. BPA's service territory includes Washington, Oregon, Idaho, western Montana, and small portions of California, Utah, Nevada, and Wyoming. BPA also controls approximately 75% of the high-voltage transmission infrastructure in its service territory, servicing more than 15,000 circuit miles.² In all, BPA serviced 147 wholesale electricity customers in 2008, including six investor-owned utilities, 29 public utility districts, 57 electric cooperatives, and 42 municipalities. Because BPA is a federal agency that operates as a wholesale power marketer, it is not subject to any state's renewable portfolio standard.

BPA's long-term power-sales contracts expire in December 2010. New 20-year contracts post-2011 will have a tiered rate structure: Tier One will be the utility's share of the cost-based Federal Base System power and Tier Two will be a market-based rate product for a utility's load growth beyond its allocation of the Federal Base System. Utilities may opt-in or opt-out of Tier Two. If a utility opts out of Tier Two, the utility will be responsible for meeting additional load growth by building capacity or through non-BPA purchase contracts.

BPA Environmentally-Preferred Power³: Environmentally Preferred Power is a renewable power product offered by BPA. When BPA public-power customers purchase Environmentally-Preferred Power, an equal amount of BPA system power is replaced with wind power. Therefore, the total amount of energy purchased from BPA — and the total amount of energy delivered — is the same, but the composition of the energy purchase changes.

¹ www.bpa.gov/corporate

² Bonneville Power Administration, *2008 BPA Facts*, available at http://www.bpa.gov/corporate/about_BPA/Facts/FactDocs/BPA_Facts_2008.pdf.

³ For general information on BPA's renewable energy policies, see its brochure titled *Renewable Energy: Together We're Making a Difference*, available at http://bpa.gov/corporate/pubs/2008-MAY_RenewablesBrochure.pdf.

Utilities in Oregon

Investor-Owned Utilities

Investor-owned utilities (IOUs) are privately-owned electric utilities whose stock is publicly traded. IOUs either own generating facilities or purchase electricity from BPA or other wholesale suppliers for distribution to retail customers. In Oregon, IOUs are regulated by the Oregon Public Utility Commission (OPUC or the Commission) and operate under a rate structure that allows reasonable costs and a specified rate of return to be recovered. Three investor-owned utilities sell power to customers in Oregon: Pacific Power (PacifiCorp), Portland General Electric (PGE), and Idaho Power Company. Each of these utilities is subject to the most stringent requirements in Oregon's Renewable Portfolio Standard (RPS).⁴ From 2011-2014, IOUs must meet 5% of retail consumers' load requirement with qualifying renewable resources; from 2015-2019, that amount increases to 15%; from 2020-2024, 20%; and in 2025 and beyond, 25% of retail loads must be met with renewables.

The OPUC requires each IOU operating in Oregon to file an integrated resource plan (IRP) every two years.⁵ An IRP details the utility's future long-term resource needs, its analysis of the expected costs and associated risks of the alternatives to meet those needs, and its action plan to select the best portfolio of resources to meet those needs.

After filing, the Commission staff and the public have six months to file comments on the proposed IRP. The OPUC must consider comments and recommendations on the IRP at a public meeting before it issues an order on acknowledgment. The Commission may provide the IOU an opportunity to revise the IRP before issuing an acknowledgment order. Once an IOU's IRP has been acknowledged by the OPUC, the utility must file annual updates that (1) describe the actions taken to implement the action plan to select the best portfolio of resources, (2) provide an assessment of what changes have occurred that affect the action plan, and (3) justify any deviations from the action plan.

Summaries of PacifiCorp's and PGE's integrated resource plans (IRPs) are included in Appendix A; other information about these two utilities is included in the Utility Data Summary table below.⁶

Green-Power Purchase Programs⁷: The restructuring of the electricity industry in Oregon in 1999 and subsequent changes in Oregon's 2007 Renewable Energy Act require that PGE and PacifiCorp offer their customers at least one renewable power option and allow their customers to elect a green-power rate. The

⁴ Oregon's RPS is codified at ORS §§ 469A.005 – 469A.210. The standards applicable to IOUs, are set out in ORS § 469A.052. The renewable portfolio standards for Oregon, California, and Washington are all described in detail later in this report.

⁵ OAR 860-027-0400. The Eugene Water & Electric Board (EWEB, a municipal utility) and PNGC Power (a cooperatively owned power service business providing power supply and other management services to 16 cooperative member-owned utilities) also prepare IRPs as part of their planning process; however, municipal utilities and electric cooperatives are not mandated by state law to do so.

⁶ Details about Idaho Power Company were left out of this report because its sales constitute only a small percentage of Oregon's total load, and because its service territory extends only into the eastern portion of the state, far from potential hydrokinetic generation facilities.

⁷ For an excellent analysis of retail green power purchase programs in the Northwest, see the Renewable Northwest Project's most recent *Powerful Choices* publication. This report referenced *Powerful Choices VIII: A Survey of Retail*

OPUC implemented regulations identifying three green power options for small customers. As of 2008, Green Mountain Energy Company served as the energy retailer for two of the three green power products offered to these classes of customers by PGE, and 3Degrees was the retailer for two of the three products offered to these classes of customers by PacifiCorp. Both PGE and PacifiCorp also offer large commercial and industrial customers one green power option, though it is not required by the legislation.

People's Utility Districts

People's Utility Districts (PUDs), sometimes referred to as Public Utility Districts, are publicly-owned utilities formed pursuant to a state's constitution that provide electric service to customers located inside and outside District boundaries. PUDs are governed by a Board of Directors that is elected within the District it represents. Citizens of Oregon are serviced by six PUDs: Central Lincoln PUD, Clatskanie PUD, Columbia River PUD, Emerald PUD, Northern Wasco County PUD, and Tillamook PUD. General information about each of these entities is included in the Utility Data Summary below.

In 2007, Oregon's PUDs serviced more than 110,000 customers and either purchased or generated a total of 4.521 GW of electricity.⁸ Because each of Oregon's PUDs is responsible for less than 1.5% of the state's total retail electricity sales, PUDs are not subject to a renewable generation requirement under the state's RPS until 2025.⁹ By 2025, however, each PUD must integrate enough renewable resource capacity to meet at least 5% of its load requirement.

Electric Cooperatives

Rural electric cooperatives (Co-ops) are private, non-profit distribution utilities organized under the laws of the state and owned by the customers they serve. Co-ops are governed by a locally-elected board of directors and are not rate-regulated by the OPUC. Unlike PUDs and Municipal Utilities, rural electric cooperatives are not government entities; they are private companies. As such, they do not have governmental powers such as taxing authority or the ability to issue bonds.

Oregon's 18 electric cooperatives are distribution utilities serving approximately 10% of the state's electricity consumers. The co-ops are located in 32 Oregon counties. Collectively, their service territories cover 65% of the state's geography and traverse some of its most rugged terrain with over 26,000 miles of distribution lines. Co-ops average 7 customers per line-mile¹⁰ compared to approximately 45 customers per line-mile serviced by PGE¹¹.

Because each of Oregon's co-ops is responsible for less than 1.5% of the state's total retail electricity sales, the co-ops are not subject to a renewable generation requirement under the state's RPS until 2025.¹² By

Green Power Purchase Programs in the Northwest (2008), available at http://www.rnp.org/Resources/PC8_report_final.pdf.

⁸ Oregon People's Utility District Association (OPUDA), *Operating Data and Statistics for the Year 2007*, available at <http://www.opuda.org/2007%20OPUDA%20Data%20Stats%20Report.pdf>.

⁹ ORS § 469A.055.

¹⁰ <http://www.otec.coop/whatsACooperative.aspx>.

¹¹ OPUC, *Oregon Investor-owned Utilities: Seven-Year Electric Service Reliability Statistics Summary, 2002-2008* (July 2009), available at <http://www.oregon.gov/PUC/safety/09reliab.pdf>.

¹² ORS § 469A.055.

2025, however, each rural electric co-op must integrate enough renewable resource capacity to meet at least 5% of its load requirement.

Municipal Electric Utilities

Municipal utilities are city-owned utilities that are governed by either the local city council or a utility board. In Oregon, municipal utilities are governed by (and granted authority through) ORS § 225. Because they are entities of local government, municipal utilities are NOT eligible for state or federal tax credits for renewable energy development. In Oregon, virtually all municipal utilities have their entire power requirement provided by BPA. All municipal electric power contracts with BPA expire in December 2010. New 20-year contracts post-2011 will have a tiered rate structure: Tier One will be the utility's share of Federal Base System power and Tier Two will be an incremental rate for a utility's additional load growth beyond the Federal Base System. Utilities may opt-in or opt-out of Tier Two. If a utility opts out of Tier Two, the utility will be responsible for meeting the additional load growth by building capacity or through non-BPA purchase contracts. According to the Oregon Municipal Electric Utility Association (OMEUA), in 2011, all OMEUA members will likely continue as load-following customers for Tier One. OMEUA members will also likely choose to buy Tier Two from BPA, particularly in early years.¹³

Eugene Water & Electric Board (EWEB) is the largest municipal utility in Oregon and the only public utility subject to renewable generation requirements consistent with the state's investor-owned utilities. EWEB must meet 5% of retail consumers' load requirements with qualifying renewable resources by 2011; from 2015-2019, that amount increases to 15%; from 2020-2024, 20%; and in 2025 and beyond, 25% of retail loads must be met with renewables.

McMinnville Water & Light and Springfield Utility Board will be required to integrate enough renewable generation capacity to meet 10% of their customers' load by 2025. The rest of Oregon's municipal utilities will be required to meet 5% of their load with renewable resources by 2025.¹⁴

Although municipal utilities are not required to file IRPs with the OPUC, EWEB participates in a similar planning process called an Integrated Electric Resource Strategy and Action Plan (IERP). EWEB published its most recent IERP Strategy in 2004 and its most recent Implementation Plan in 2006.¹⁵

Other Power-Generating Entities

Electricity Service Suppliers

Direct access regulations in Oregon provide retail electricity customers the option to purchase electricity from an entity other than its distribution utility. Electricity service suppliers (ESSs) are entities that offer to sell electricity services available pursuant to direct access to more than one retail electricity customer. These companies sell electricity directly to non-residential customers of either PacifiCorp or PGE within the IOUs'

¹³ <http://www.oregon.gov/ENERGY/RENEW/REWG/docs/OMEUPresentation.pdf> (OMEU Presentation).

¹⁴ OMEU Presentation, *supra* note 13.

¹⁵ EWEB's 2004 *Energy Resource Strategy* and its *Integrated Electric Resource Strategy, 2006 Implementation Plan* can be found at <http://www.eweb.org/resources>. EWEB publishes more recent information regarding its activities and facilities in its annual *Facts & Figures* publication, available at <http://www.eweb.org/public/documents/ewebFacts.pdf>.

service territories. Electricity Service Suppliers must be certified by the OPUC¹⁶ and must meet the requirements applicable to the electric utilities that serve the territories in which the ESS sells electricity to retail consumers.

Marketplace Considerations

Renewable Energy Credit (REC) Acquisition

RECs, also called “green tags” or “environmental attributes,” are tradable commodities that accompany the generation of electricity from renewable energy facilities. Because electricity generated by one source is indistinguishable from electricity generated by another source once it enters the grid, RECs serve to quantify the environmental benefit of using renewable resources for generation. Each REC represents the emissions avoided by producing one MW of electricity from a renewable energy facility. The REC can be “bundled” and sold together with the one MW of electricity, or it can be “unbundled” and sold separately. Renewable energy credit purchases give the owner the right to claim that he or she uses “renewable power” in circumstances in which they cannot purchase electricity directly from a renewable energy project.

Commercial and industrial consumers may purchase RECs in multiple ways. They may purchase unbundled RECs directly from the operator of a renewable energy facility, from a nonprofit organization like the Bonneville Environmental Foundation, or from corporations like 3Degrees. They may also purchase bundled electricity and RECs from an ESS or from a solar or wind facility not located on its premises.¹⁷

¹⁶ The OPUC is required to certify ESSs under ORS § 757.649. OPUC guidelines and forms for ESS certification can be found in OAR 860-038-0400 and on the Oregon state website at http://licenseinfo.oregon.gov/index.cfm?fuseaction=license_seng&link_item_id=14034.

¹⁷ Under ORS § 757.005(1)(b)(C)(iii), only solar and wind facilities may sell electricity directly to commercial and industrial customers through retail sales without being subject to regulation by the OPUC as a public utility.

Oregon Renewable Portfolio Standards and Policies and Programs

Renewable Portfolio Standard¹⁸: Oregon’s Renewable Portfolio Standard (RPS) was passed by the state legislature in 2007. Eligible electricity includes electricity generated from renewable resources including solar, wind, hydropower, ocean thermal, wave, and tidal power, geothermal, hydrogen derived from renewable sources, and biomass, including biogas. Electricity generated from the combustion of municipal solid waste or chemically-treated wood is not eligible. Eligible resources must be located within Western Electricity Coordinating Council (WECC) territory or must be designated environmentally preferable by BPA.

RPS compliance must be demonstrated through the purchase of renewable energy credits (RECs) through the Western Renewable Energy Generation Information System (WREGIS). RECs may be either bundled with, or purchased separately from, electricity contracts. Unbundled RECs can only meet 20% of a large utility's compliance obligation and 50% of a large consumer-owned utility's obligation. RECs procured before March 31 of a given year may be used for a previous year's compliance, and RECs may be banked and carried forward indefinitely for future compliance.

The OPUC is charged with ensuring the Oregon's IOUs are in compliance with the incremental goals in the large utility RPS. The state's public utilities are self-regulated and report only to their customers; the OPUC therefore has no power to ensure the compliance or to enforce the non-compliance of EWEB. Non-IOU compliance (including compliance of both EWEB and the state's small electric utilities) must be monitored closely by the Oregon Department of Energy and the public.

Oregon Administrative Rule 860-083-0350 requires each electric company to file an annual report with the OPUC beginning June 1, 2012, demonstrating compliance or explaining in detail its failure to comply with the applicable RPS. An electric company that fails to meet its RPS requirement may be assessed an alternative compliance payment, required to pay a penalty, or both.

| OREGON'S RPS | | | | | | | | | | | | | |
|-------------------|--|------------|--------------------------------|-----------------------------------|-------------|--------------------------------|-----------------|--------|-------------|-----|-----------------|---------------|--|
| LARGE UTILITY RPS | <p>Legal Authority: ORS 469A.052</p> <p>Definition: A large utility is one that makes sales to retail customers totaling 3% or more of all retail electricity sales in the state.</p> <p>Utilities Included: PacifiCorp, PGE, and EWEB.</p> | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>Years</th> <th>% Retail Sales from Renewables</th> </tr> </thead> <tbody> <tr> <td>2011 - 2014</td> <td>5%</td> </tr> <tr> <td>2015 - 2019</td> <td>15%</td> </tr> <tr> <td>2020 - 2024</td> <td>20%</td> </tr> <tr> <td>2025 and beyond</td> <td>25%</td> </tr> </tbody> </table> | | Years | % Retail Sales from Renewables | 2011 - 2014 | 5% | 2015 - 2019 | 15% | 2020 - 2024 | 20% | 2025 and beyond | 25% | |
| Years | % Retail Sales from Renewables | | | | | | | | | | | | |
| 2011 - 2014 | 5% | | | | | | | | | | | | |
| 2015 - 2019 | 15% | | | | | | | | | | | | |
| 2020 - 2024 | 20% | | | | | | | | | | | | |
| 2025 and beyond | 25% | | | | | | | | | | | | |
| SMALL UTILITY RPS | <p>Legal Authority: ORS 469A.055</p> <p>Definition: A small utility is one that makes sales to retail customers totaling less than 3% of all retail electricity sales in the state.</p> <p>Utilities Included: All six People's Utility Districts in the state, all eighteen electric cooperatives, and all twelve municipal electric utilities except EWEB. Central Lincoln PUD, Clatskanie PUD, Umatilla Electric Cooperative, McMinnville Water & Light, and Springfield Utility Board must meet the 10% requirement. All others must meet the 5% requirement.</p> | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>Years</th> <th>Utility's % of Total Retail Sales</th> <th>% of State</th> <th>% Retail Sales from Renewables</th> </tr> </thead> <tbody> <tr> <td>2025 and beyond</td> <td>< 1.5%</td> <td></td> <td>5%</td> </tr> <tr> <td>2025 and beyond</td> <td>1.5% > x > 3%</td> <td></td> <td>10%</td> </tr> </tbody> </table> | | Years | Utility's % of Total Retail Sales | % of State | % Retail Sales from Renewables | 2025 and beyond | < 1.5% | | 5% | 2025 and beyond | 1.5% > x > 3% | |
| Years | Utility's % of Total Retail Sales | % of State | % Retail Sales from Renewables | | | | | | | | | | |
| 2025 and beyond | < 1.5% | | 5% | | | | | | | | | | |
| 2025 and beyond | 1.5% > x > 3% | | 10% | | | | | | | | | | |

¹⁸ Information on Oregon’s RPS obtained from the Oregon Department of Energy, *Summary of Oregon’s Renewable Portfolio Standard* (Oct. 2007), http://www.oregon-rps.org/ENERGY/RENEW/docs/Oregon_RPS_Summary_Oct2007.pdf, and the Database of State Incentives for Renewables and Efficiency, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=OR22R&re=1&ee=1. See Appendix C for more information on Oregon state incentives.

Business Energy Tax Credit (BETC)¹⁹: Oregon’s Business Energy Tax Credit (BETC) provides a tax credit for costs directly related to renewable energy project development, including permitting costs, equipment costs, engineering and design fees, materials, supplies, installation costs, and loan fees. However, maintenance costs are not eligible. Eligible technologies include solar heating, solar thermal electric, photovoltaics, landfill gas, wind, biomass, hydroelectric, geothermal, cogeneration facilities, hydrogen, industrial waste, wave, and fuel cells using renewable fuels.

In July 2007, the Oregon legislature increased the BETC to 50% of the total project cost for renewable energy resource generation and high-efficiency combined heat and power (CHP) projects (up to a maximum \$10 million credit), and renewable energy equipment manufacturing facilities (up to a maximum \$20 million credit). Other projects are eligible for up to 35% of total project costs. The entire credit may be taken in one year if eligible project costs do not exceed \$20,000.²⁰ For other projects, the credit will be extended over five years (10% per year) and any unused portion may be carried forward for an additional eight years.²¹

Under the BETC’s pass-through option, a project owner may transfer a tax credit to a pass-through partner in return for a lump-sum cash payment (the net-present value of the credit) upon completion of the project. The pass-through option allows non-profit organizations, government agencies, tribes, and other public entities without tax liability to take advantage of the BETC by transferring their tax credit for an eligible partner with a tax liability. The BETC sunsets on January 1, 2016.

Small-Scale Energy Loan Program²²: Oregon’s Small-Scale Energy Loan Program (SELP) was created in 1981 and is administered by the Oregon Department of Energy. The SELP provides 5- to 15-year, low-interest loans to small-scale energy projects that generally range from \$20,000 to \$20 million. Eligible projects include those that use alternative fuels as well as those that produce energy from renewable resources such as water, wind, geothermal, solar, biomass, waste materials, or waste heat. SELP loans are available to businesses (e.g., public and private corporations, nonprofits, cooperatives), government entities (e.g., municipal, county, special districts, tribes), intergovernmental entities, and state and federal agencies. Businesses that qualify for SELP loans often also qualify for Oregon’s BETC.

Energy Trust of Oregon, Open Solicitation Program²³: In 1999, Oregon’s Electricity Restructuring Law, SB 1149, required PGE and PacifiCorp to assess their customers a 3% public purpose charge to support renewable energy and energy-efficiency programs in the state. The OPUC authorized the Energy Trust of Oregon (ETO), an independent, nonprofit organization, to manage funds received from the 3% public purpose charge and to create incentive programs through which the funds could be disbursed. In 2002, ETO launched the Open Solicitation Program to support energy projects that do not have an established ETO incentive program.

¹⁹ OAR 330-090-0105 to 330-090-0150. See Database of State Incentives for Renewables and Efficiency, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=OR03F&re=1&ee=1.

²⁰ <http://egov.oregon.gov/ENERGY/CONS/BUS/BETC.shtml>.

²¹ *Id.*

²² OAR 330-110-0005; ORS § 470.050. See Database of State Incentives for Renewables and Efficiency, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=OR04F&re=1&ee=1.

²³ See <http://www.energytrust.org/grants/up/index.html>; See also Database of State Incentives for Renewables and Efficiency, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=OR22F&re=1&ee=1.

Currently, funding is available for innovative commercial technologies, including wave energy. ETO expects that \$2 million will be set aside each year for the program, an amount it expects will fund 4-6 projects annually. Projects must be located in the Oregon service territory of PGE or PacifiCorp, or must have a power purchase agreement with one of the two. However, ETO does *not* fund any non-grid connected projects. Therefore, pre-commercial activities including research, development, or demonstration projects are not eligible for project funds.

Solar Incentive Bill²⁴: Enacted in July 2009, Oregon’s solar incentive bill includes three key features: a pilot feed-in tariff, a RPS multiplier, and a carve-out.

Pilot Feed-In Tariff. The new legislation requires the OPUC to establish a pilot program for each electric company to demonstrate the use and effectiveness of volumetric incentive rates and payments for electricity delivered from solar photovoltaic energy systems that are installed by retail electricity consumers. The OPUC must establish the pilot program prior to April 1, 2010.

A retail electricity consumer participating in a pilot program may receive payments based on the actual electricity generated from solar photovoltaic energy system output for 15 years from the consumer’s date of enrollment in the program, at rates or through a rate formula in a rate schedule established at the time of enrollment. The consumer thereafter may receive payments based upon the actual electricity generated from the qualifying system at a rate equal to the resource value.

RPS Multiplier. The solar incentive bill is the first legislation that implements an RPS multiplier in the state. For each kWh of electricity produced from a qualifying solar photovoltaic system that generates at least 500 kilowatts and becomes operational before January 1, 2016, the electric company will be credited with two kWh of qualifying electricity toward the company’s RPS requirement, up to a maximum of 20 MW of capacity.

RPS Carve Out. The solar incentive bill requires that at least 20 MW of solar generating capacity from qualifying facilities be in place by January 1, 2020.²⁵ By that date, each electric utility is required to maintain a minimum generating capacity from solar equal to 20 megawatts multiplied by the percentage of total statewide retail electricity sales made by that utility in 2008.

²⁴ The full text of HB.3039, Oregon’s Pilot Solar Feed-In Tariff (as enrolled) is available at <http://www.leg.state.or.us/09reg/measpdf/hb3000.dir/hb3039.en.pdf>.

²⁵ Qualifying facilities must generate at least 500 KW; but no single project may be larger than 5 MW. See HB 3039, Section 3(1). The full text of HB.3039, Oregon’s Pilot Solar Feed-In Tariff (as enrolled) is available at <http://www.leg.state.or.us/09reg/measpdf/hb3000.dir/hb3039.en.pdf>.

Regional Renewable Portfolio Standards and Other State Policies and Programs

Washington

Renewable Portfolio Standard²⁶: Washington's RPS passed by ballot initiative in 2006 and requires investor-owned utilities, municipal utilities, rural electric cooperatives, and public utility districts to obtain 15% of their electricity from new renewable resources by 2020. Qualifying electricity includes electricity generated from solar thermal electric, photovoltaics, landfill gas, wind, hydroelectric, geothermal electric, anaerobic digestion, tidal energy, wave energy, ocean thermal, biodiesel (subject to specified standards), and biomass (except combustion of municipal solid waste, wood treated with chemical preservatives, black liquor byproduct from paper production, or wood from old growth forests).

The Washington Utilities and Transportation Commission (WUTC) and the Department of Community, Trade, and Economic Development are charged with enforcing the state's conservation and renewable resource targets.

Beginning in 2012, each utility subject to the RPS must file a report with the WUTC and the Department of Community, Trade, and Economic Development detailing its progress toward meeting the RPS mandate. Failure to meet the energy conservation or renewable energy targets may result in a \$50/MWh (inflation-adjusted) administrative penalty paid to the state of Washington.

WASHINGTON'S RPS

Legal Authority: Wash. Rev. Code § 19.285; Wash. Admin. Code 480-109

Utilities Included: Investor-owned utilities, municipal utilities, rural electric cooperatives, and public utility districts. In all, 17 of the state's 62 utilities are subject to the RPS.

| Years | % Retail Sales from Renewables |
|-----------------|--------------------------------|
| 2012 - 2015 | 3% |
| 2016 - 2019 | 9% |
| 2020 and beyond | 15% |

California

Renewable Portfolio Standard²⁷: California's RPS was passed in 2002. Eligible electricity includes electricity generated from renewable resources including solar thermal electric, photovoltaics, landfill gas, wind, biomass, geothermal electric, municipal solid waste conversion (not combustion), anaerobic digestion, small hydroelectric, tidal energy, wave energy, ocean thermal, biodiesel, or fuel cells using renewable fuels.

²⁶ Information on Washington's RPS obtained from the Database of State Incentives for Renewables and Efficiency, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=WA15R&re=1&ee=1. See Appendix D for more information on Washington state incentives.

²⁷ Information on California's RPS obtained from the Database of State Incentives for Renewables and Efficiency, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=CA25R&re=1&ee=1. See Appendix E for more information on California state incentives.

Under the original formulation, the state's investor-owned electric utilities (but not local, publicly-owned utilities) were required to increase their sales of eligible renewable-energy resources by at least 1% percent per year to reach 20% of retail sales by the end of 2010. The 20% by 2010 mandate is still in effect, but it has been modified by the Governor's recent executive order. On September 15, 2009, the Governor signed Executive Order S-21-09, which increased the requirement to 33% by 2020, and made the requirement apply to all utilities, including publicly-owned municipal utilities.

CALIFORNIA'S RPS

Legal Authority: Pub. Util. Code § 399.11 et seq.; Pub. Res. Code § 25740 et seq.; Exec. Order S-21-09

Utilities Included: All investor-owned utilities and all publicly-owned municipal utilities in the state.

| Years | % Retail Sales from Renewables |
|-----------------|--------------------------------|
| 2010 - 2019 | 20% |
| 2020 and beyond | 33% |

Prior to the Executive Order, the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) were responsible for implementing and overseeing the RPS. The Executive Order shifted that responsibility to the California Air Resources Board (CARB), requiring them to adopt regulations by July 31, 2010. Until the CARB regulations are adopted, the CEC and CPUC will continue serving in their current roles to administer the 20% by 2010 standard.

The RPS Eligibility Guidebook published by the CEC describes the eligibility requirements and process for certifying renewable resources as eligible for California's RPS and describes the Energy Commission's implementation of a tracking system to verify compliance with the RPS.

Small-Scale Generation Feed-In Tariffs²⁸: California's small-scale generation feed-in tariffs set the price at which specified utilities are required to purchase electricity generated at small renewable resource facilities in the state. The tariff was originally designed to support electricity generation by public water and wastewater agencies in the state. In 2007, the California legislature expanded the tariff. The state now requires its three major investor-owned utilities (Pacific Gas & Electric, San Diego Gas & Electric, and Southern California Edison) to offer both a full buy/sell option and an excess-sale option to small, customer-owned renewable-generation facilities in each tariff. Under the state's RPS program, utilities may sign contracts for renewable projects over 1.5 MW in size. The feed-in tariffs are therefore intended for systems smaller than the RPS minimum contract size of 1.5 MW. Projects of less than 1.5 MW that generate power from solar thermal electric facilities, photovoltaics, landfill gas, wind, biomass, geothermal electric, municipal solid waste conversion (not combustion), anaerobic digestion, small hydroelectric, tidal and wave energy converters, ocean thermal, biodiesel, and fuel cells using renewable fuels are eligible under the tariff.

Eligible customer-generators may enter into 10-, 15-, or 20-year standard contracts with these utilities to sell the electricity produced by renewable energy systems smaller than 1.5 MW at time-differentiated, market-based prices. These prices are shown in the market-price referent table in CPUC Resolution E-4137. Unlike feed-in tariffs in Germany and Spain, the price is based on the value of electrical generation, but is not intended to embed a subsidy or rebate in the price offering.

²⁸ Information on California's feed-in tariffs obtained from the Database of State Incentives for Renewables and Efficiency, <http://www.dsireusa.org/incentives/index.cfm?re=1&ee=1&spv=0&st=0&srp=1&state=CA>, and from the California Public Utility Commission, <http://www.cpuc.ca.gov/PUC/energy/Renewables/feedintariff.htm>. See also Pub. Util. Code § 399.20; Cal. Pub. Util. Commission Resolution E-4137 (market-price referent table); Cal. Pub. Util. Commission Decision D.07-07-027.

Oregon Utility Data Summary

| | NAME & CONTACT INFO. | ANNUAL LOAD | | PLANNING PROCESS | RPS REQUIREMENT ²⁹ | | | | NOTES |
|---|---|------------------------------|------------------------|--------------------------------|-------------------------------|------|------|------|--------------------------------|
| | | Avg. | Peak | | 2011 | 2015 | 2020 | 2025 | |
| OREGON INVESTOR-OWNED UTILITIES ³⁰ | Pacific Power (PacifiCorp) 825 NE Multnomah Portland, OR 97232 (888) 221-7070 www.pacificcorp.com | 66,707,000 MWh ³¹ | | Integrated Resource Plan (IRP) | 5% | 15% | 20% | 25% | |
| | Portland General Electric (PGE) P.O. Box 4404 Portland, OR 97232 (503) 464-8000 www.portlandgeneral.com | 23,184,000 MWh ³² | | Integrated Resource Plan (IRP) | 5% | 15% | 20% | 25% | |
| OREGON PEOPLE'S UTILITY DISTRICTS ³³ | Central Lincoln PUD P.O. Box 1126 Newport, OR 97365 (541) 265-3211 www.clpud.org | 1,312,197 MWh ³⁴ | 270.5 MW ³⁵ | Board of Directors | No interim targets | | | 10% | BPA full-requirements customer |
| | Clatskanie PUD P.O. Box 216 Clatskanie, OR 97016 (503) 728-2163 www.clatskaniepud.com | 1,068,889 MWh ³⁴ | 113.8 MW ³⁵ | Board of Directors | No interim targets | | | 10% | Post-2011 BPA Slice customer |
| | Columbia River PUD P.O. Box 1193 St. Helens, OR 97051 (503) 397-0590 www.crpud.net | 512,677 MWh ³⁴ | 0.09 MW ³⁵ | Board of Directors | No interim targets | | | 5% | BPA full-requirements customer |
| | Emerald PUD 33733 Seavey Loop Eugene, OR 97405 (541) 746-1583 www.epud.org | 455,482 MWh ³⁴ | 110.6 MW ³⁵ | Board of Directors | No interim targets | | | 5% | Post-2011 BPA Slice customer |

²⁹ Oregon's Renewable Portfolio Standard (RPS) is codified at ORS §§ 469A.005 – 469A.210. Applicable standards, exemptions, compliance methods, and implementation plans are set out in ORS §§ 469A.050 – 469A.075.

³⁰ IOUs are privately-owned electric utilities, regulated by the OPUC, whose stock is publicly traded.

³¹ Data for 2008. PacifiCorp's annual load includes total power generated in Utah, Oregon, Wyoming, Washington, Idaho, and California. In 2008, Oregon represented 26% of PacifiCorp's total retail sales: 54,362,000 MWh. Data from PacifiCorp's Form 10-K 2008 Annual Report, available at <http://www.hoovers.com/free/co/secoutline.xhtml?ID=11142&ipage=6446376>.

³² Data for 2008 from PGE's Form 10-K 2008 Annual Report, Item 7, available at <http://investors.portlandgeneral.com/annuals.cfm>.

³³ A People's Utility District (PUD) is a publicly-owned utility formed pursuant to Chapter 291 of the Oregon Constitution. PUDs provide electric service to customers located inside and outside District boundaries. PUDs are governed by a Board of Directors that is elected within the District it represents.

³⁴ 2006 annual load information from Northwest Public Power Association, *2007-2008 Northwest Electric Utility Directory*.

³⁵ Oregon People's Utility District Association (OPUDA), *Operating and Data Statistics for the Year 2007*, available at <http://www.opuda.org/2007%20OPUDA%20Data%20Stats%20Report.pdf>.

| | NAME & CONTACT INFO. | ANNUAL LOAD | | PLANNING PROCESS | RPS REQUIREMENT ²⁹ | | | | NOTES |
|--|---|---------------------------|------------------------|--------------------|-------------------------------|--------------------|------|------|--------------------------------|
| | | Avg. | Peak | | 2011 | 2015 | 2020 | 2025 | |
| OREGON PUDs ³³ | Northern Wasco Co. PUD 2345 River Road The Dalles, OR 97058 (541) 296-2226 www.nwasco.com | 393,881 MWh ³⁴ | 0.09 MW ³⁵ | Board of Directors | | No interim targets | | 5% | BPA full-requirements customer |
| | Tillamook PUD P.O. Box 433, 1115 Pacific Ave. Tillamook, OR 97141-0433 (503) 842-2535 www.tpud.org | 402,184 MWh ³⁴ | 110.0 MW ³⁵ | Board of Directors | | No interim targets | | 5% | BPA full-requirements customer |
| OREGON ELECTRIC COOPERATIVES ³⁶ | Blachly-Lane Electric Cooperative P.O. Box 70 Junction City, OR 97448 (541) 688-8711 www.blachlylane.coop | 144,733 MWh ³⁴ | 36.4 MW ³⁷ | Board of Directors | | No interim targets | | 5% | PNGC Member |
| | Central Electric Cooperative, Inc. P.O. Box 846 Redmond, OR 97756-0187 (800) 924-8736 www.centralelectriccoop.com | 623,050 MWh ³⁴ | 202.5 MW ³⁷ | Board of Directors | | No interim targets | | 5% | PNGC Member |
| | Columbia Basin Electric Co-op 171 Linden Way Heppner, OR 97836-0398 (541) 676-9146 www.heppner.net/cbec | 89,124 MWh ³⁴ | | Board of Directors | | No interim targets | | 5% | |
| | Columbia Power Association 311 Wilson Street Monument, OR 97864 (541) 934-2311 | 24,198 MWh ³⁴ | | Board of Directors | | No interim targets | | 5% | |
| | Consumers Power, Inc. P.O. Box 1180 Philomath, OR 97370 (541) 929-3124 www.consumerspower.org | 382,306 MWh ³⁴ | 106.6 MW ³⁷ | Board of Directors | | No interim targets | | 5% | PNGC Member |
| | Coos-Curry Electric Cooperative P.O. Box 1268, 43050 Highway 101 Port Orford, OR 97465 541-332-3931 www.cooscurryelectric.com | 339,032 MWh ³⁴ | 94.9 MW ³⁷ | Board of Directors | | No interim targets | | 5% | PNGC Member |

³⁶ An electric cooperative is a private, non-profit corporation organized under the laws of the state and owned by the customers it serves. It is governed by a locally-elected board of directors. Cooperatives are not rate-regulated by the Oregon Public Utility Commission. Unlike public utility districts and municipal utilities, electric cooperatives are not government entities and do not have governmental powers such as taxing authority or the ability to issue bonds. Cooperatives are private companies. Oregon's 18 electric cooperatives are distribution utilities serving approximately 10% of the state's electricity consumers. Electric cooperatives are located in 32 Oregon counties, covering 65% of the state's geography and traversing some of its most rugged terrain with over 26,000 miles of distribution line. Cooperatives average 7 customers per line-mile.

³⁷ Peak load from 2007, as reported in PNGC's Corporate Profile, <http://www.pngc.com/documents/corporateProfile.pdf>.

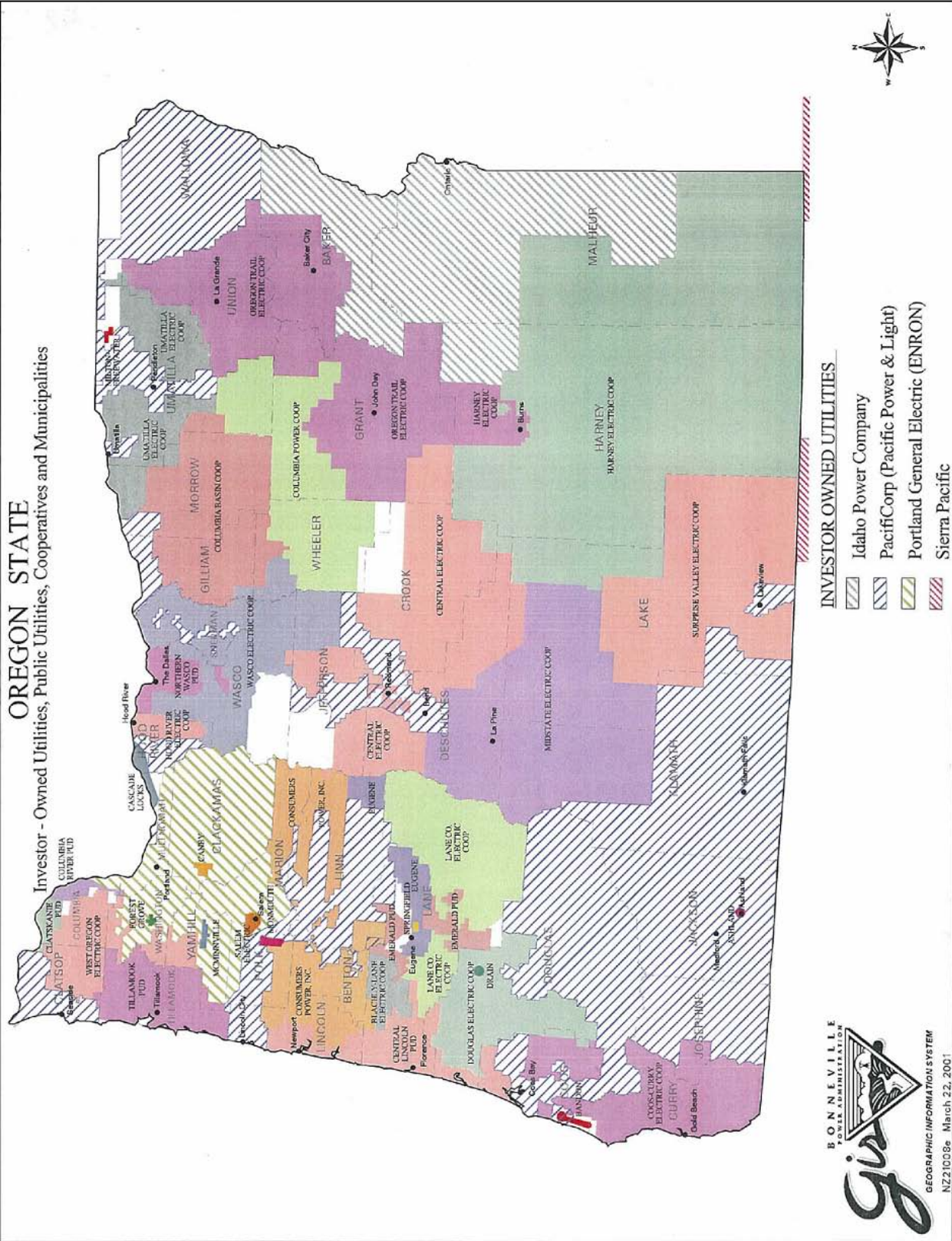
| | NAME & CONTACT INFO. | ANNUAL LOAD | | PLANNING PROCESS | RPS REQUIREMENT ²⁹ | | | | NOTES |
|--|---|---------------------------|------------------------|--------------------|-------------------------------|------|------|------|---|
| | | Avg. | Peak | | 2011 | 2015 | 2020 | 2025 | |
| OREGON ELECTRIC COOPERATIVES ³⁶ | Douglas Electric Cooperative P.O. Box 1327, 1981 NE Stephens Roseburg, OR 97470 (541) 673-6616 www.douglaselectric.com | 151,597 MWh ³⁴ | 46.7 MW ³⁷ | Board of Directors | No interim targets | | | 5% | PNGC Member |
| | Harney Electric Cooperative 1326 Hines Blvd Burns, OR 97720 (541) 573-2061 www.harneyelectric.org | 145,530 MWh ³⁴ | | Board of Directors | No interim targets | | | 5% | BPA full-requirements customer |
| | Hood River Electric Cooperative P.O. Box 125 Odell, OR 97044 (541) 354-1233 www.hrec.coop | 95,157 MWh ³⁴ | | Board of Directors | No interim targets | | | 5% | BPA full-requirements customer |
| | Lane Electric Cooperative, Inc. 787 Bailey Hill Road, P.O. Box 21410 Eugene, OR 97402-0407 (541) 484-1151 www.laneelectric.com | 227,835 MWh ³⁴ | 72.4 MW ³⁷ | Board of Directors | No interim targets | | | 5% | PNGC Member; BPA full-requirements customer |
| | Midstate Electric Cooperative P.O. Box 127 La Pine, OR 97739 (541) 536-2126 www.midstateelectric.coop | 364,420 MWh ³⁴ | | Board of Directors | No interim targets | | | 5% | |
| | Oregon Trail Electric Consumers Co-op P.O. Box 226 Baker City, OR 97814 (541) 523-3616 www.otec.coop | 659,510 MWh ³⁴ | | Board of Directors | No interim targets | | | 5% | |
| | Salem Electric P.O. Box 5588, 633 7th St. NW Salem, Oregon 97304-0055 (503) 362-3601 www.salemelectric.com | 327,033 MWh ³⁴ | | Board of Directors | No interim targets | | | 5% | |
| | Surprise Valley Electric Corp. Lakeview Highway, PO Box 691 Alturas, CA 96101 (530) 233-3511 ***no website available*** | | | Board of Directors | No interim targets | | | 5% | |
| | Umatilla Electric Cooperative 750 West Elm, PO Box 1148 Hermiston, OR 97838 (541) 567-6414 www.ueinet.com | 807,173 MWh ³⁴ | 260.8 MW ³⁷ | Board of Directors | No interim targets | | | 10% | PNGC Member |
| | Umpqua Indian Utility Cooperative 2371 NE Stephens St., Suite 500 Roseburg, OR 97470 (541) 677-5569 www.cowcreek.com | 20,903 MWh ³⁴ | | | | N/A | N/A | N/A | N/A |

| | NAME & CONTACT INFO. | ANNUAL LOAD | | PLANNING PROCESS | RPS REQUIREMENT ²⁹ | | | | NOTES |
|--|---|---------------------------|-----------------------|--------------------|-------------------------------|--------------------|------|------|--------------------------------|
| | | Avg. | Peak | | 2011 | 2015 | 2020 | 2025 | |
| OREGON CO-OPS ³⁶ | Wasco Electric Cooperative 105 E. 4th St., P.O. Box 1700 The Dalles, OR 97058 (541) 296-2740 www.wascoelectric.com | 88,785 MWh ³⁴ | | Board of Directors | | No interim targets | | 5% | |
| | West Oregon Electric Cooperative, Inc. 715 Maple St., P.O. Box 69 Vernonia, OR 97064 (503) 429-3021 www.westoregon.org | 68,296 MWh ³⁴ | 23.6 MW ³⁷ | Board of Directors | | No interim targets | | 5% | PNGC Member |
| OREGON MUNICIPAL UTILITIES ³⁸ | City of Ashland Electric Dept. 90 N Mountain Ave. Ashland, OR 97520 (541) 488-5357 http://www.ashland.or.us/ | 178,000 MWh ³⁴ | | City Council | | No interim targets | | 5% | BPA full-requirements customer |
| | City of Bandon Electric Dept. P.O. Box 67 Bandon, OR 97411 (541) 347-2437 http://www.ci.bandon.or.us/ | 59,580 MWh ³⁴ | | City Council | | No interim targets | | 5% | BPA full-requirements customer |
| | Canby Utility 154 NW First Avenue Canby, OR 97013 (503) 266-1156 http://www.ci.canby.or.us/cityservices/cityserv.htm#Water/Electric | 156,941 MWh ³⁴ | | City Council | | No interim targets | | 5% | BPA full-requirements customer |
| | Cascade Locks City Light 140 SW WaNaPa, P.O. Box 308 Cascade Locks, OR 97014 (541)374-8484 x15 http://www.cascade-locks.or.us/services/electricity.htm | 20,719 MWh ³⁴ | | City Council | | No interim targets | | 5% | BPA full-requirements customer |
| | City of Drain P. O. Box 158 Drain, OR 97435 (541) 836-2417 http://www.354.com/drain/draincity.htm | 20,250 MWh ³⁴ | | City Council | | No interim targets | | 5% | BPA full-requirements customer |

³⁸ Municipal utilities are city-owned utilities that are governed by either the local city council or a utility board. In Oregon, municipal utilities are governed by (and granted authority through) ORS § 225. Because they are entities of local government, municipal utilities are NOT eligible for state or federal tax credits for renewable energy development. In Oregon, virtually all municipal utilities are full-requirements customers of the Bonneville Power Administration (BPA). BPA's long-term-sales contracts expire in December 2010. New 20-year contracts post-2011 will have a tiered rate structure: Tier One will be the utility's share of the Federal Base System; Tier Two will be either BPA or non-BPA (build or purchase contract) energy. According to the Oregon Municipal Electric Utility Association (OMEUA), in 2011, all OMEUA members will likely continue as load-following customers for Tier One. OMEUA members will also likely choose to buy Tier Two from BPA, particularly in early years.

| | NAME & CONTACT INFO. | ANNUAL LOAD | | PLANNING PROCESS | RPS REQUIREMENT ²⁹ | | | | NOTES |
|--|--|-----------------------------|----------------------|------------------------|-------------------------------|------|------|------|---|
| | | Avg. | Peak | | 2011 | 2015 | 2020 | 2025 | |
| OREGON MUNICIPAL UTILITIES ³⁸ | Eugene Water & Electric Board P.O. Box 10148 Eugene, OR 97440-2148 (541) 685-7000 www.eweb.org | 4,293,620 MWh ³⁹ | 550 MW ³⁹ | Board of Commissioners | 5% | 15% | 20% | 25% | Post-2011 BPA Slice customer |
| | Forest Grove Light & Power 1818 "B" Street, P.O. Box 326 Forest Grove, OR 97116 (503) 992-3250 http://www.forestgrove-or.gov | 247,274 MWh ³⁴ | | City Council | No interim targets | | | 5% | BPA requirements (75%); Grant County hydro projects (25%) |
| | Hermiston Energy Services 750 W. Elm Ave., P.O. Box 1148 Hermiston, OR 97838 (541) 289-2000 http://www.hermiston.or.us/energyservices | 105,150 MWh ³⁴ | | City Council | No interim targets | | | 5% | BPA full-requirements customer |
| | McMinnville Water & Light 855 NE Marsh Lane McMinnville, OR 97128 (503) 472-6158 www.mc-power.com | 874,216 MWh ³⁴ | | Board of Commissioners | No interim targets | | | 10% | BPA full-requirements customer |
| | Milton-Freewater Light & Power 722 S. Main, P.O. Box 6 Milton-Freewater, OR 97862 (541) 938-8231 www.mfcity.com/electric/index.html | 106,040 MWh ³⁴ | | City Council | No interim targets | | | 5% | BPA requirements customer & Grant County hydro contract |
| | City of Monmouth Power & Light 401 N. Hogan Road Monmouth, OR 97361 (503) 838-3526 www.ci.monmouth.or.us | 66,103 MWh ³⁴ | | City Council | No interim targets | | | 5% | BPA full-requirements customer |
| | Springfield Utility Board 250 "A" Street, P.O. Box 300 Springfield, OR 97477 (541) 746-8451 www.subutil.com | 772,765 MWh ³⁴ | | Utility Board | No interim targets | | | 10% | BPA full-requirements customer |

³⁹ EWEB: 2007 Facts & Figures, available at <http://www.eweb.org/Public/documents/ewebFacts.pdf>.



Appendix A: Summary of PacifiCorp and PGE Integrated Resource Plans

PacifiCorp's Integrated Resource Plan⁴⁰:

PacifiCorp filed its 2008 IRP with state regulatory agencies in May 2009. The IRP preferred portfolio consists of a diverse mix of resources including renewables, demand-side management, gas-fired resources, and firm market purchases. The major resources for the 2009-2018 planning period consist of the following:

- Renewables: Wind (1,313 MW); Geothermal (35 MW); Major hydroelectric upgrades in 2012-2014 (75 MW)
- Demand-side management: Energy efficiency (904 MW); Dispatchable load control (205-325 MW)
- Gas-fired capacity in the 2014-2016 period (831 MW)
- Emissions-free coal-plant turbine upgrades (170 MW)
- From 50 MW to 1,400 MW of annual firm-market purchases, contingent on the timing and amounts of long-term resource acquisitions

According to the IRP, PacifiCorp is on pace to exceed the previous renewable resource amount identified in its 2007 Renewable Energy Action Plan⁴¹ (1,400 MW by 2015), and the amount identified in its 2007 IRP Update report⁴² (2,000 MW by 2013). The plan states that since 2005, PacifiCorp's projected renewable resource inventory has grown by 1,404 MW, accounting for existing resources and those under construction, contract, or included in its capital budget. The incremental renewables identified in the 2008 IRP preferred portfolio and action plan bring the target to about 2,040 MW by 2013. The projected renewable inventory exceeds 2,540 MW by 2018, which represents 18.5% of PacifiCorp's owned generation capability in that year.

PGE's Integrated Resource Plan⁴³:

PGE filed an IRP with the OPUC in June 2007 covering the years 2008 through 2015. It proposed additional energy efficiency programs as well as renewable and demand-side resources. It also proposed power purchase agreements of varying terms and the acquisition of additional peaking capacity. The IRP Action Plan proposed the following:

- Continued development of the Bigelow Canyon wind project to provide a total maximum generating capacity of 400 to 450 MW. Phase I and Phase II are complete. Phase III is expected to be completed by the end of 2010.

⁴⁰ The most current version of PacifiCorp's 2008 IRP can be found on the company's website at <http://www.pacificcorp.com/Navigation/Navigation23807.html>.

⁴¹ <http://www.pacificcorp.com/File/File74767.pdf>.

⁴² <http://www.pacificcorp.com/File/File82304.pdf>.

⁴³ Information on PGE's most recent IRP, filed with the OPUC in June 2007, was taken from PGE's *Form 10-K Annual Report* filed with the Securities and Exchange Commission on February 25, 2009, available at <http://investors.portlandgeneral.com/secfiling.cfm?filingID=1193125-09-36730>. The most current version of the IRP is available on PGE's website at http://www.portlandgeneral.com/our_company/news_issues/current_issues/energy_strategy/2007_irp.aspx.

- Procurement of an additional 218 MWA of renewable power. Combined with Bigelow Canyon and existing renewable resources, PGE expects to meet Oregon's RPS.
- Expansion of energy efficiency programs in partnership with the Energy Trust of Oregon (ETO). PGE proposes to increase the amount of load met through efficiency measures by an additional 45 MW by 2012.
- Purchase power agreements with five- to ten-year durations, intended to reduce reliance on spot-market purchases, to help stabilize customer prices, and to meet electricity demand while giving new technologies time to mature and become cost-effective.
- Acquisition of 100 MW of peaking capacity, through ownership or contract, to meet an increase in forecasted winter and summer peak requirements and to facilitate the integration of variable wind generation.
- Seasonal capacity purchases of 508 MW.

The OPUC did not officially acknowledge PGE's IRP, but found key elements of the plan to be reasonable and directed PGE to proceed with a Request for Proposal (RFP) for up to 218 MWA of new renewable resources. PGE issued the RFP in 2008 and developed a final short list of proposals in November, with negotiations to be completed in 2009. PGE completed the construction of Phase II of Bigelow Canyon in August 2009 and the construction of Phase III is underway. Also during 2008, PGE began evaluating proposals received in response to an RFP issued for 50 MW of demand response measures, with agreements expected to be completed in 2009.

PGE anticipates that it will meet its 2011 renewable-resource requirement under Oregon's Renewable Portfolio Standard (RPS) with existing or currently planned assets. PGE also expects that, with additional resources included in its current planning process, it will meet the 2015 requirement. Subsequent years' requirements will likely be met by acquiring additional renewable resources pursuant to its IRP process.

As requested by the OPUC, PGE updated its IRP to address resource requirements through 2020 and submitted the draft for comment on September 4, 2009.⁴⁴

⁴⁴ PGE's press release regarding the draft filing is available on their website at http://www.portlandgeneral.com/our_company/news_issues/news/09_04_2009_pge_draft_resource_plan_focus.aspx.

Appendix B: Federal Incentives for Renewables & Efficiency⁴⁵

Financial Incentives

Corporate Depreciation

- [Modified Accelerated Cost-Recovery System \(MACRS\) + Bonus Depreciation \(2008-2009\)](#)

Corporate Tax Credit

- [Business Energy Investment Tax Credit \(ITC\)](#)
- [Renewable Electricity Production Tax Credit \(PTC\)](#)

Federal Grant Program

- [Tribal Energy Program Grant](#)
- [U.S. Department of Treasury - Renewable Energy Grants](#)
- [USDA - Rural Energy for America Program \(REAP\) Grants](#)

Federal Loan Program

- [Clean Renewable Energy Bonds \(CREBs\)](#)
- [Qualified Energy Conservation Bonds \(QECBs\)](#)
- [U.S. Department of Energy - Loan Guarantee Program](#)
- [USDA - Rural Energy for America Program \(REAP\) Loan Guarantees](#)

Industry Recruitment/Support

- [Qualifying Advanced Energy Manufacturing Investment Tax Credit](#)

Personal Tax Credit

- [Residential Renewable Energy Tax Credit](#)

Production Incentive

- [Renewable Energy Production Incentive \(REPI\)](#)

Rules, Regulations & Policies

Green Power Purchasing/Aggregation

- [U.S. Federal Government - Green Power Purchasing Goal](#)

Interconnection

- [Interconnection Standards for Small Generators](#)

⁴⁵ Information and links in Appendix B are taken from the Database of State Incentives for Renewables & Efficiency (DSIRE), <http://www.dsireusa.org/incentives/index.cfm?state=us&re=1&EE=1>. The DSIRE is an ongoing project of the North Carolina Solar Center and the Interstate Renewable Energy Council (IREC). It is funded by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE), primarily through the Office of Planning, Budget, and Analysis (PBA). The site is administered by the National Renewable Energy Laboratory (NREL).

Appendix C: Oregon State Incentives for Renewables & Efficiency⁴⁶

Financial Incentives

Corporate Tax Credit

- [Business Energy Tax Credit](#)

Industry Recruitment/Support

- [Tax Credit for Renewable Energy Equipment Manufacturers](#)

Production Incentive

- [Northwest Solar Cooperative - Green Tag Purchase](#)
- [Oregon Pilot Solar Feed-in-Tariff](#)

Property Tax Exemption

- [Renewable Energy Systems Exemption](#)

Property Tax Financing Authorization

- [Local Option - Local Improvement Districts](#)

State Grant Program

- [Energy Trust - Open Solicitation Program](#)

State Loan Program

- [GreenStreet Lending Program](#)
- [Small-Scale Energy Loan Program](#)

Rules, Regulations & Policies

Contractor Licensing

- [Renewable Energy Contractor Licensing](#)

Green Power Purchasing/Aggregation

- [Portland - Green Power Purchasing & Generation](#)

Interconnection

- [Interconnection Standards](#)

Mandatory Utility Green Power Option

- [Mandatory Utility Green Power Option](#)

⁴⁶ Information and links in Appendix C are taken from the Database of State Incentives for Renewables & Efficiency (DSIRE), <http://www.dsireusa.org/incentives/index.cfm?re=1&ee=1&spv=0&st=0&srp=1&state=OR>. The DSIRE is an ongoing project of the North Carolina Solar Center and the Interstate Renewable Energy Council (IREC). It is funded by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE), primarily through the Office of Planning, Budget and Analysis (PBA). The site is administered by the National Renewable Energy Laboratory (NREL).

Net Metering

- [Ashland Electric - Net Metering](#)
- [Oregon - Net Metering](#)

Public Benefits Fund

- [Oregon Energy Trust](#)

Renewables Portfolio Standard

- [Renewable Portfolio Standard](#)

Appendix D: Washington State Incentives for Renewables & Efficiency⁴⁷

Financial Incentives

Production Incentive

- [Chelan County PUD - Sustainable Natural Alternative Power Producers Program](#)
- [Northwest Solar Cooperative - Green Tag Purchase](#)
- [Okanogan County PUD - Sustainable Natural Alternative Power Program](#)
- [Orcas Power & Light - Production Incentive](#)
- [Washington Renewable Energy Production Incentives](#)

Sales Tax Exemption

- [Renewable Energy Sales and Use Tax Exemption](#)

Rules, Regulations & Policies

Interconnection

- [Interconnection Standards](#)

Mandatory Utility Green Power Option

- [Mandatory Utility Green Power Option](#)

Net Metering

- [Grays Harbor PUD - Net Metering](#)
- [Washington - Net Metering](#)

Renewables Portfolio Standard

- [Renewable Energy Standard](#)

⁴⁷ Information and links in Appendix D are taken from the Database of State Incentives for Renewables & Efficiency (DSIRE), <http://www.dsireusa.org/incentives/index.cfm?re=1&ee=1&spv=0&st=0&srp=1&state=WA>. The DSIRE is an ongoing project of the North Carolina Solar Center and the Interstate Renewable Energy Council (IREC). It is funded by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE), primarily through the Office of Planning, Budget and Analysis (PBA). The site is administered by the National Renewable Energy Laboratory (NREL).

Appendix E: California State Incentives for Renewables & Efficiency⁴⁸

Financial Incentives

Local Loan Program

- [Berkeley - Financing Initiative for Renewable and Solar Technology \(FIRST\)](#)
- [Palm Desert - Energy Independence Program](#)
- [Sonoma County - Energy Independence Program](#)

Production Incentive

- [California Feed-In Tariff](#)

Property Tax Financing Authorization

- [Local Option - Municipal Energy Districts](#)

State Rebate Program

- [Emerging Renewables Program](#)

Rules, Regulations & Policies

Green Power Purchasing/Aggregation

- [Davis - Green Power Purchasing](#)
- [San Diego - Green Power Purchasing](#)
- [San Francisco - Renewable Energy Purchasing](#)
- [Santa Monica - Green Power Purchasing](#)

Interconnection

- [Interconnection Standards](#)

Net Metering

- [California - Net Metering](#)

Public Benefits Fund

- [Public Benefits Funds for Renewables & Efficiency](#)

Renewables Portfolio Standard

- [Renewables Portfolio Standard](#)

⁴⁸ Information and links in Appendix E are taken from the Database of State Incentives for Renewables & Efficiency (DSIRE), <http://www.dsireusa.org/incentives/index.cfm?re=1&ee=1&spv=0&st=0&srp=1&state=CA>. The DSIRE is an ongoing project of the North Carolina Solar Center and the Interstate Renewable Energy Council (IREC). It is funded by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE), primarily through the Office of Planning, Budget and Analysis (PBA). The site is administered by the National Renewable Energy Laboratory (NREL).