

Renewable Energy Action Plan: Update on Goals

2-4-09 Working Draft

LONG TERM GOALS: 2007-2025

Electricity Generation

	Goal	Status
1	New (post-1999) renewable generation will meet 10% of Oregon's total load by 2015, which is roughly about 1% growth in renewable generation per year. This will increase to or exceed 25% of the load by 2025.	The Oregon Renewable Portfolio Standard (RPS), passed in 2007 as SB 838, requires that all utilities and electricity service suppliers serving Oregon load must include in their portfolio of power sold to retail customers, a percentage of electricity generated from qualifying renewable energy sources. Oregon's Largest Utilities must generate 25% of their load from renewables by 2025 (with interim targets of 5% by 2011, 15% by 2015, and 20% by 2020). The smaller utilities must have 5-10% renewable generation by 2025. Oregon's large utilities are currently on target to meet or exceed their 2011 goals.
2	25% of state government's total electricity needs will be met by new renewable energy sources by 2010 and 100% by 2025.	The Governor moved the 100% state government renewable goal to 2010. The state may not meet this goal because state agencies do not yet have the appropriate authority to purchase or develop renewables; SB 168 is being introduced in 2009 to address the issue of developing renewables on state land.

Transportation Fuels

	Goal	Status
1	All diesel fuel sold in Oregon will contain 5% biodiesel (B5) by 2010, growing to 20% (B20) by 2025. All biodiesel will meet applicable American Society for Testing and Minerals (ASTM) standards.	HB 2210, passed in 2007, established a Renewable Fuel Standard (RFS) for Oregon. The levels are 2%-5% biodiesel in diesel and 10% ethanol in gasoline, based on in-state production of the fuels. It also prohibits the sale of gasoline that contains MTBE and certain other additives. The 2% biodiesel requirement will probably occur in 2009.
2	All standard gasoline sold in Oregon will contain 10% ethanol (E10) by 2010.	The RFS of 10% ethanol in gasoline, was achieved statewide in 2008.
3	5% of all gasoline sold in Oregon will be an E85 blend of ethanol and gasoline (85% ethanol) by the year 2015, growing to 15% by 2025.	The total amount of E85 sold in Oregon is less than 1% of all gasoline sold (in 2008). There are currently 9 stations in Oregon selling E85.
4	100% of the diesel used by state government's fleet vehicles will be B20 by 2010.	The Department of Administrative Services (DAS) fleet currently uses B20 for diesel vehicles at their motorpools. ODOT uses B20 in some of their fleet vehicles and heavy trucks; however the amount varies based on biodiesel availability around the state and the weather.
5	10% of the gasoline used by state government's fleet vehicles will be E85 by 2010. This percentage will grow to 25% by 2025.	The DAS fleet uses E85 at this time while fueling E85-ready vehicles at their motorpools.

SHORT TERM GOALS *(to be achieved by the end of 2006)*

Electricity Generation

	Goal	Status
1	<p>300 MW of new wind energy resources will be developed of which 10% will be from community or locally owned wind energy projects.</p> <p>Note: Community wind projects were stalled due to a delay in setting appropriate PURPA rates and a shortage of available wind turbines. There are currently several in the planning and development stages.</p>	<ul style="list-style-type: none"> • Klondike II (75 MW peak generating capacity) came online in August 2005 and phase one of the Leaning Juniper project (100 MW) near Arlington was completed in September 2006. The total new wind energy developed by the end of 2006 was 175 MW. • Oregon's total new wind energy development in 2007 was about 450 MW. • Oregon's total cumulative operating capacity for wind energy was nearly 1000 MW by the end of 2008.
2	<p>Find and implement effective solutions to the transmission capacity bottleneck(s) between eastern and western Oregon to provide access from renewable and other resources in eastern Oregon to load centers.</p> <p>Notes: Non-wire solutions can be implemented in a relatively short time frame. Delivery of renewable resource energy from locations in eastern Oregon to the Willamette Valley will also require additional north-to-south transmission capacity on BPA's grid.</p>	<ul style="list-style-type: none"> • No real implementation at this time. • Finding solutions includes several processes, e.g., Columbia Grid is being formed, NW Power Pool is conducting planning studies, and BPA released the findings of its study of real-time congestion and reliability studies in April 2006. • BPA held its Network Open Season for transmission in 2008 to focus their queue. • There are ongoing efforts at various levels of government working on the issue.
3	<p>All utilities in Oregon will offer customers a "stable-price" renewable energy product.</p>	<p>Eugene Water and Electric Board and Portland General Electric offered a stabilized renewable energy product for residential and small non-residential customers. However those programs were terminated by 2008.</p>
4	<p>500 additional solar photovoltaic electric systems will be installed in the years 2005 and 2006 for a total of about 1 MW.</p>	<ul style="list-style-type: none"> • 2005 was a problem year because tax legislation was passed that encouraged people to wait until 2006 to build new systems. Therefore, less than 100 systems were installed in 2005. • More than 200 were proposed to be built in 2006, and more than 300 were proposed to be built in 2007. The final numbers of completed projects are currently unknown.
5	<p>5 MW of new biogas generation facilities will be obtained from wastewater treatment, dairies and landfills.</p>	<p>More than 18 MW of biogas projects were completed between 2006 and 2008. They include: Findley Butte (3 MW); Coffin Butte (6 MW expansion); Dry Creek (6 MW); Columbia Wastewater Treatment (3 MW); Hillsboro Landfill (expansion); and MEAD Tillamook (expansion)</p>
6	<p>25 MW of new biomass-fueled electric generation will be built or under construction, in addition to the aforementioned 5 MW of biogas facilities.</p>	<p>25 MW of new woody biomass (or expansions) were completed between 2006 and 2008. Those include Douglas Co. Forest Products (3 MW); Biomass One Expansion (6 MW); Rough & Ready Forest Products (2 MW); and Freres Lumber – Evergreen BioPower (14 MW)</p>

7	25 MW of new combined heat and power generation systems that are at least 10% better than the State standard for siting exemption will be built or under construction.	A 5,000 BTUH/kWh combined heat and power project is complete at Georgia Pacific container-board plant in Toledo, providing 6 MW of capacity.
8	200 5-kilowatt fuel cells will be installed.	Some fuel cells will use renewable fuels but others will use fossil fuels to reach this goal. Approximately 5 fuel cells were in place by the end of 2006 and 10 by the end of 2008.
9	20 MW or more geothermal electric generation will be in the process of being developed.	Three projects were in the exploration and development phase in Oregon at the end of 2008. They include Neal Hot Springs near Vale (26 MW potential), Crump Geyser in south central OR (40-60 MW potential), and Newberry Crater in central OR (120 MW potential). Projects are underway for geothermal electric generation in Klamath Falls. As much as 10 MW may be operating at the end of 2008.
10	1-4 MW of new environmentally sustainable hydroelectric generation will be on line or in the process of being developed (primarily irrigation piping channels).	<ul style="list-style-type: none"> • A 1 MW irrigation district micro-hydroelectric project was developed in Crook County in 2006. • Many small low-impact hydro projects are currently in the development phase.
11	An assessment of the feasibility of a renewable portfolio standard (RPS) for the state will be completed.	The Renewable Energy Working Group completed an assessment of the feasibility an RPS in 2006 and developed the design for the RPS legislation for the 2007 legislative session.

Transportation Fuels

	Goal	Status
1	Diesel sold in Oregon will contain 2% biodiesel (on average). All biodiesel will meet applicable ASTM standards.	The trigger for 2% biodiesel in Oregon's RFS will likely occur in early 2009.
2	15 million gallons of biodiesel will be produced annually from Oregon crops or products and waste oils collected in Oregon.	SeQuential Biofuels produced 1 million gallons of biodiesel in Oregon from Oregon feedstocks in 2006 and 2007. Expansion of this plant to 5 MG/yr in Salem was completed in 2008. Additional producers include Madison Farms (1 MG/yr from canola), Evergreen Fuel (1 MG/yr from canola/camelina), and Beaver Biodiesel (1 MG/yr) as of 2008.
3	Gasoline sold in Oregon will contain 2% ethanol (on average).	Gasoline may be blended with up to 10% alcohol while still maintaining its ASTM requirements. The RFS of 10% ethanol in gasoline was triggered statewide in 2008.
4	100 million gallons of ethanol will be produced annually.	As of 2008, Pacific Ethanol in Boardman was producing ethanol at 40 MG/yr and Cascade Grains in Clatskanie was producing 113 MG/yr.

State Government

	Goal	Status
1	10% of state government's total electricity needs will be met by renewable energy sources (through green tag purchases and/or direct development of renewable energy by state government).	Governor Kulongoski directed state agencies to develop a specific "roadmap" for his approval to accomplish this objective by 2010. Status unknown.

2	25% of the diesel used by state government's fleet vehicles will be B-20.	Diesel vehicles in the DAS fleet uses B20 at this time.
3	75% of the gasoline used by state government's fleet vehicles will be E-10.	DAS fleet sedans, that are not natural gas or hybrid-electric, are E85 ready. New vehicles acquired meet one of these three alternative fuel criteria. New plug-in hybrids are being added to the fleet in 2009.
4	A streamlined one-stop leasing process for state lands to develop renewable energy resources will be in effect.	Status unknown.

Demonstration Projects

	Goal	Status
1	Five public or private energy-efficient buildings that make use of passive solar design features.	Oregon surpassed this goal with no fewer than 10 public projects and several dozen private projects completed by 2006, many of which were featured in "Green+ Solar Building Oregon" magazine and/or on one of the annual solar tours. Many more are added annually.
2	One biodiesel plant using mustard, other agricultural products or "waste" products.	<ul style="list-style-type: none"> • There are 4 biodiesel companies in Oregon using some agricultural feedstocks (canola and camelina) at a total production capacity of 8 MG/yr. • Willamette Biomass Processors became the first seed oil producer in the Willamette Valley, opening in 2008.
3	One ethanol plant.	<ul style="list-style-type: none"> • Cascade Grain facility is now producing 113 MG/Yr of ethanol. • Pacific Ethanol is expanding their Boardman plant to produce 2.7 MG/Yr of cellulosic ethanol. • Summit Energy completed a 3 MG/Yr ethanol plant using food processing waste in 2008.
4	Projects that generate electricity either singularly or through any combination of the sun, wind, geothermal sources, irrigation district micro-hydro, biomass burning, on-farm dairy waste digesters, municipal anaerobic digesters, waste heat recovery systems and renewably fueled fuel cells.	Oregon incentive programs (Energy Trust of Oregon and the Business Energy Tax Credit), partnered to develop at least 10 significant and diverse renewable resource projects for case studies by 2007.
5	Five sites that directly use geothermal energy.	An elementary school in Klamath Falls, an abandoned commercial greenhouse and a commercial building in Hines were retrofitted or restored to be heated with geothermal energy. ODOE assisted in getting a technical assistance grant for the Herald & News building in K-Falls, enabling the GeoHeat Center to work on this HVAC project.
6	One industrial park or renewable energy cluster that integrates renewable energy and sustainability related products or services	Bend has identified an enterprise zone site and has begun specifying conditions for its use as a sustainable business development center. The counties of Hood River, Wasco, and Sherman (in partnership with Klickitat and Skamania in WA) have formed a renewable energy cluster to look at specific areas of energy development.