Spring 2013



Oregon Renewable Energy Projects Fact Sheet

➤ Over \$9.27 billion invested in new renewables and more than 3,300 MW installed.

Cumulative Project Investment & Benefit Totals¹

Invested: \$9,277,324,383

■ Public Revenue: Over \$110.4 million

■ Installed Capacity: 3,320.19 MW

Estimated Jobs Created: Over 5,000

Wind Investments:

Total Invested: \$7,271,803,262

Total Installed Capacity: 5 3,153 MW

• Total Number of Projects: 29

- Equivalent to **16%** of Oregon's net electricity generation in 2010⁶ and capable of electrifying approximately **750,000** Oregon households annually, nearly half of Oregon's total of 1,507,137 households⁷.
- Pounds of CO₂ mitigated: Over **4.6 million metric tons** annually
 - o CO₂ mitigated is equivalent to a reduction of nearly half of Oregon's 2010 total carbon emissions from electricity generation of just over 10 million metric tons.⁶
- Oregon currently ranks 5th out of any state in wind power capacity installed as of the fourth quarter of 2012.⁹

Job Creation:⁴

Direct Construction: 2,112

Est. Cumulative Total Wages:

\$101,540,736

Permanent On-Site: **181**Estimated Annual Wages:

\$8,145,000

Public Revenue:

• Total Cumulative: \$110,491,003

• Estimated annual land lease payments: 10 \$7.5 million

Solar Investments:

Total Invested:² \$1,665,415,121

Total Installed Capacity: 5 85 MW

• Total Number of Installations: **8,862**

• Total installation jobs created: 4 664

• Estimated Total Wages: \$31,923,792

Solar Manufacturing:

• Estimated Job Creation: 4 1470

• Estimated Annual Wages: \$51,450,000

Public Revenue: 12

• Estimated Future Payments for Utility Scale Solar: \$469,800 Annually

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3Dearees American Wind Energy Assoc. Blattner Energy Bonneville Environmental Foundation **BP Wind Energy** Calpine Center for Energy Efficiency & Renewable Technologies Christenson Electric Citizens' Utility Board Climate Solutions Columbia Gorge Community College Community Renewable Energy Association **E.ON Climate & Renewables** EDF Renewable Energy **EDP** Renewables Element Power **Environment Oregon Environment Washington** Eurus Energy America FirstWind

Eurus Energy America
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Montana Environmental Information Center MontPIRG Natural Capital Partners Natural Resources Defense Council

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Business Council
Northwest SEED
NW Energy Coalition
OneEnergy Renewables
Oregon Tech
Oregon Solar Energy
Industries Association

Portland Energy Conservation, Inc. REC Silicon REpower USA RES America Developments

Solar Oregon SolarCity Stoel Rives, LLP SunPower Corporation

SWCA Environmental Consultants
Tonkon Torp LLP
Vestas Americas
Warm Springs Power &

Water Enterprises
Washington
Environmental Council
WashPIRG

Western Resource Advocates

Geothermal Investments:

Total Invested: \$156,658,000

Total Operating Capacity: 5 23 MW

- Number of installations: 3
- Estimated Capacity in Development: 13 90-114 MW
- Over \$88 million invested in development and exploration²

Public Revenue:

• Estimated Future Annual Payments: 14 \$1.3 million

Estimated Job Creation: 4 320

Bioenergy Investments:

Total Invested: \$183,448,000

Total Installed Capacity: 59.19 MW

• Number of installations: 21

Job Creation:⁴

Direct Construction: 221 Permanent On-Site: 94

■ Est. Cumulative Total Wages: \$10,625,238 ■ Estimated Annual Wages: \$4,230,000

- ❖ All dollar values presented in inflation adjusted 2012 dollars (2012\$)
- 1. Cumulative totals spanning the years 1998 through the first quarter of 2013 for currently operating renewable energy systems.
- 2. Investment data for currently operating renewables was either sourced directly from project reports and news feeds, or based on estimates from the U.S. Energy Information Administration's April 2013 report, *Updated Capital Cost Estimates for Utility Scale Electricity Generating Plants* and NREL's November 2010 report *Cost and Performance Assumptions for Modeling Electricity Generation Technologies*. Estimations are as follows: Biomass \$2.8 mil/MW, Geothermal \$3.2 mil/MW, Wind \$2.0 mil/MW, Solar PV \$3.8 mil/MW.
- 3. Cumulative revenue paid from all renewables, as of the 2012-2013 tax year, to state and local governments through property taxes, Strategic Investment Programs, etc. Data obtained directly from state/county assessors & treasurers.
- 4. Job creation was determined for both direct construction and permanent operations & maintenance positions only. Data was gathered either by directly sourcing information from project reports and news feeds, or were estimated using *The Jobs and Economic Development Impact Model (JEDI)* developed by National Renewable Energy Laboratory (NREL). Wages estimated based on industry averages obtained from the U.S. Bureau of Labor Statistics (http://www.bls.gov/green/greencareers.htm#greendata).
- 5. Installation data sourced from Northwest Power and Conservation Council, county & state reports, and project reports.
- 6. Assuming wind turbine generation efficiency of 33%. Generation data source from EIA's *State Electricity Profiles* (2012) http://www.eia.gov/electricity/state
- 7. Assuming wind turbine generation efficiency of 33% and typical Oregon household electricity consumption of 12 MWh annually. Electricity consumption data obtained from U.S. Energy Information Administration Average Monthly Residential Electricity Consumption. Household information obtained from American Community Survey (2013) (U.S. Census Bureau)
- 8. Assuming wind turbine generation efficiency of 33% and the typical emissions rate from U.S. natural gas-fired electricity generation (1,135 lbs/MWh). U.S. Environmental Protection Agency. *Clean Energy* (http://www.epa.gov/cleanenergy/energy-and-you/affect/air-emissions.html).
- 9. American Wind Energy Association. (January 2013), U.S. Wind Industry Fourth Quarter 2012 Market Report.
- 10. American Wind Energy Association. (October 2012), State Fact Sheets Updated Through 3rd Quarter of 2012. http://www.awea.org/learnabout/publications/factsheets/factsheets_state.cfm
- 11. Estimation for existing utility scale private solar farms that are currently under Oregon's Enterprise Zones. Estimation based on total capital investment at a levy rate of 0.9%.
- 12. Sourced from pending applications, exploration projects, and current projects under development.
- 13. Estimation for new geothermal projects that have been constructed, but yet assessed. Estimation based on total capital investment at a levy rate of 0.9%.

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