Renewable Energy in Montana

Summary

Montana benefits from strong wind speeds, electricity-grade geothermal resources, agricultural feedstocks for biomass, and suitable solar insolation for renewable energy development. A supportive policy portfolio aimed at increasing the state's movement toward a robust renewable energy economy complements its varied resource landscape, with a 15% renewable portfolio standard and an array of personal and corporate tax incentives that support the production of renewable electricity, fuels, and thermal energy. However, besides wind and hydropower, few of its other renewable resources are being developed for large-scale use.

<table>
<thead>
<tr>
<th>Installed Renewable Energy Capacity, 2013</th>
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<tbody>
<tr>
<td>Wind Power</td>
</tr>
<tr>
<td>Solar Photovoltaic</td>
</tr>
<tr>
<td>Solar Thermal Electric</td>
</tr>
<tr>
<td>Geothermal Power</td>
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<tr>
<td>Hydropower</td>
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Sources: See User's Guide for details

Market Spotlight

- With the commissioning of the 10 MW Two Dot project in Teton County, Montana was one of the few states to add utility-scale wind capacity in the Q1-Q2 2014 period.
- In March 2014, the U.S. Department of the Interior awarded a $665,000 grant to help fund the Crow Tribe's Yellowtail Afterbay Dam located on the Bighorn River. The dam will provide economic benefits to the tribe and address nearby water pollution issues affecting wildlife. The project is expected to be 8-12 MW and operational by 2018.
- Strengthening its status as a hub for cutting-edge research in biofuels and innovative energy practices, Montana State University is to be the home to the Biological Electron Transfer and Catalysis Energy Frontiers Research Center, which was funded by a $10 million grant from the U.S. Department of Energy in June 2014. The center will research the role of electron flow in the production of biofuels.
- Geothermal development in the state has mostly been limited to low-temperature (less than 100°C), near-surface geothermal resources, and systems are used to heat buildings, grow plants in greenhouses, or heat water for aquaculture.

Economic Development

<table>
<thead>
<tr>
<th>Employment</th>
<th>2011</th>
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<tbody>
<tr>
<td>Green Goods &amp; Services Jobs</td>
<td>14,306</td>
</tr>
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<table>
<thead>
<tr>
<th>Investment (Grossed-up)</th>
<th>2012</th>
<th>2013</th>
</tr>
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<tbody>
<tr>
<td>Asset Finance</td>
<td>$689m</td>
<td>$13.6m</td>
</tr>
<tr>
<td>Venture Capital &amp; Private Equity</td>
<td>-</td>
<td>-</td>
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## State Policy

### Renewable Portfolio Standard
- 15% by 2015; investor-owned utilities and competitive electricity suppliers (representing 64.4% of state’s electric load)
- Includes eligible renewable energy facilities that began operation after January 1, 2005
- Utilities may purchase renewable energy credits (RECs) that are not bundled with electricity for compliance
- Can be from states that deliver electricity to Montana
- Public utilities must purchase both the RECs and electricity for community renewable energy projects under 25 MW, until projects meet 50 MW in capacity in the period 2012-2014 and 75 MW in 2015 and each following year
- Penalty of $10/MWh for noncompliance

### Net Metering
- Investor-owned utilities
- 50 kW system capacity limit; no aggregate limit specified
- Net excess generation credited to customer’s next bill at retail rate; granted to utility at end of 12-month period

### Interconnection Standards
- Investor-owned utilities and electric cooperatives
- 10 MW system cap
- External disconnect switch required

### Tax Incentives

#### Property Tax Incentives:
- Certain renewable energy production facilities, manufacturing facilities, and renewable energy research and development equipment are assessed for property tax at 50% of their taxable value for up to 19 years
- Renewable energy systems, which cost up to $20,000 at single-family residences and up to $100,000 at other structures, are exempt from property taxes for 10 years post-installation
- New renewable electricity generating facilities of up to 1 MW are exempt from property taxes for five years after operation begins
- An eligible renewable electricity generating facility of 1 MW or more can be taxed at 50% of its taxable value in the first five years after the construction permit is issued
- Equipment used to produce ethanol from grain is exempt from property tax

#### Alternative Energy Investment Tax Credit (Personal or Corporate):
- 35% credit on income generated by commercial and “net metering” alternative energy investments of $5,000 or more, for renewable energy equipment, manufacturing plants, and certain business facilities; unused credit may be carried forward seven years

#### Residential Alternative Energy System Tax Credit (Personal):
- Up to $500 per individual taxpayer and $1,000 per household; can be carried over for up to four years

#### Biofuels credits:
- **Ethanol production**: $0.20 per gallon; **Biodiesel production**: up to 15% of the cost of blending equipment, and/or of production facility construction

## Public Benefits Fund
- All utilities; funds come from surcharge on customer electricity bills, based on 2.4% of utilities’ 1995 revenue
- Maximum incentive of $40,000
- Loan term of up to 10 years; 3.25% interest rate for 2014

## Renewable Fuel Mandate
- Once state is able to produce 40 million gallons of ethanol annually, all gasoline sold for use in vehicles operating on public roads must contain 10% ethanol
- DSIRE Database: [www.dsireusa.org/incentives/index.cfm?state=MT](http://www.dsireusa.org/incentives/index.cfm?state=MT)
- Department of Environmental Quality: [www.deq.mt.gov/energy/Renewable/default.mcpx](http://www.deq.mt.gov/energy/Renewable/default.mcpx)
- Public Service Commission: [http://psc.mt.gov/energy](http://psc.mt.gov/energy)