



WYOMING LEGISLATIVE SERVICE OFFICE

# Memorandum

**DATE** July 5, 2019 (Revised)  
**TO** Members, Joint Revenue Committee  
**FROM** Dean Temte, Senior Fiscal Analyst  
**SUBJECT** Taxation of power generation in other states

**This memo has been revised to include additional context and relevant information previously omitted.**

The Joint Revenue Committee (Committee) discussed electricity taxation modeling at its May 2-3, 2019 meeting in Lander. During the discussion, members of the Committee requested information on how other states tax power generation. In response to this request, I contacted the Fiscal Affairs Program of the National Conference of State Legislatures (NCSL). According to NCSL’s response to my request, states tax electricity in a few different ways. Some states tax electricity production, some tax its distribution or transmission, and some tax its consumption. NCSL also provided information regarding those states that have taxes specifically on the production or generation of electricity.

Table 1 (below) provides a summary of state taxes on electricity production. Table 1 includes information provided by NCSL, along with information I identified from state statutes and state web sites regarding state taxes on electricity production. Information provided by NCSL that was outside of the scope of the Committee’s request is excluded. Most of the taxes are expressed in either kilowatts (kW), cents per kilowatt-hour (kWh) or mills per kWh. I have included conversions to megawatts (MW) or dollars per megawatt hour (MWh) in the second column of the table to make it easier to compare the tax rates.

**Table 1. States Taxes on Electricity Production**

State	Tax Rate	Electricity Production Tax Details
Alabama	0.4 mills/kWh (\$0.40/MWh)	<b>Hydroelectric Power</b> A tax is levied on the manufacture and sale of hydroelectric power equal to 0.4 mills/kWh.
Idaho	3.00% of gross wind or geothermal energy earnings  3.50% of gross solar energy earnings	<b>Wind or Geothermal energy</b> A tax is levied on producers of wind energy or geothermal energy. The tax is 3.00% of the producer’s gross wind or geothermal energy earnings. The wind energy tax and geothermal tax is in lieu of all other taxes on the property of the producer and shall reduce the property tax to be levied to finance an annual budget.  <b>Solar Energy</b> A tax is levied on producers of solar energy. The tax is 3.50% of the producer’s gross solar energy earnings. The solar energy tax is in lieu of all other taxes on the property of the producer and shall reduce the property tax to be levied to finance an annual budget.

State	Tax Rate	Electricity Production Tax Details
Idaho	0.5 mills/kWh (\$0.50/MWh)	<p><b>Hydroelectric Generation</b> A license tax of 0.5 mills/kWh is levied on the generation, manufacture or production of electricity by means of water power. Electricity generated or sold for industrial use or used to irrigate land in Idaho is exempt from the tax.</p>
Iowa	<p>0.06 cents/kWh (\$0.60/MWh)</p> <p>0.1847 cents/kWh (\$1.847/MWh)</p> <p>0.1099 cents/kWh (\$1.099/MWh)</p>	<p><b>Electrical Generation</b></p> <ol style="list-style-type: none"> <li>1. A replacement generation tax of 0.06 cents/kWh is imposed on electricity generated, except electricity from the following: <ul style="list-style-type: none"> <li>• Low capacity factor electrical generating plants</li> <li>• Qualifying facilities owned or leased by a municipal utility</li> <li>• Qualifying wind energy conversion property</li> <li>• Qualifying methane gas conversion property</li> <li>• Facilities owned by or leased by a state university and consumed exclusively by such university</li> <li>• On-site facilities owned by or leased to a self-generator</li> </ul> </li> <li>2. In lieu of the tax imposed in 1 (above) a replacement generation tax of .1847 cents/kWh is levied on electricity generated from hydroelectric plants with capacity of 100 MW or more.</li> <li>3. In lieu of the tax imposed in 1 (above), a replacement generation tax of .1099 cents/kWh is imposed on electric companies with joint interest in a generating plant and joint interest in less than 5 pole miles of transmission lines.</li> </ol>
Minnesota	<p>0.12 cents/kWh (\$1.20/MWh)</p> <p>0.036 cents/kWh (\$0.36/MWh)</p> <p>0.012 cents/kWh (\$0.12/MWh)</p>	<p><b>Wind Energy Conversion</b> A tax is levied on the production of electricity from a wind energy conversion system installed after Jan. 1, 1991 and used as an electric power source at the following rates:</p> <ul style="list-style-type: none"> <li>• 0.12 cents/kWh for a large-scale conversion system (more than 12 MW)</li> <li>• 0.036 cents/kWh for a medium-scale system (over 2 and not more than 12 MW)</li> <li>• 0.012 cents/kWh for a small-scale system (2 MW or less)</li> <li>• Small scale conversion systems with capacity of .25 MW or less are exempt</li> <li>• Small scale systems with capacity of 2 MW or less and owned by political subdivision are exempt</li> </ul> <p>This tax does not apply to electricity produced by wind energy conversion systems located in job opportunity buildings zones. All real and personal property of a wind energy conversion system is exempt from property tax except that the land on which the property is located remains taxable.</p> <p>Wind energy conversion systems that are used as an electric power source, and the materials used to manufacture, install, construct, repair, or replace them, are exempt from sales tax.</p>

State	Tax Rate	Electricity Production Tax Details
Minnesota	\$1.20/MWh	<p><b>Solar Energy Generation</b>                      A tax of \$1.20/MWh is levied on the production of electricity from a solar energy generating system used as an electric power source with a capacity exceeding one megawatt alternating current.                      A solar energy generating system with a capacity of one megawatt alternating current or less is exempt from the tax.                      Personal property consisting of solar energy generating systems is exempt from property tax.                      Solar energy systems, as defined, are exempt from sales tax.</p>
Montana	<p>\$0.0002/kWh                      (\$0.20/MWh)</p> <p>Fee not to exceed 0.5% of total cost of construction in each of the first 3 years</p>	<p><b>Electrical Generation</b>                      A license tax of \$0.0002/kWh is levied on all electricity and electrical energy generated, manufactured or produced.                      New generating facilities with nameplate capacity of less than 1 MW and using an alternative renewable energy source are exempt from property taxes for 5 years after start of operation.                      Generating plants producing 1 MW or more by an alternative renewable energy source are eligible for property tax reduction on the local mill levy during the first 9 years of operation, subject to approval by the local govt. If approved, the facility is taxed at 50% of taxable value in the first 5 years after the construction permit is issued. Each year thereafter, the percentage is increased by equal percentages until the full taxable value is attained in the 10th year. The tax reduction applies to taxes levied for local high schools and elementary schools and for the local govt. offering the reduction.  <b>Initial local government and local school district impact fee</b>                      An owner or operator of a wind generation facility used for a commercial purpose is subject to an initial local governmental and local school impact fee for each year of the first 3 years after construction of the wind generation facility begins. The annual impact fee may not exceed 0.5% of the total cost of constructing the wind generation facility.</p>
North Dakota	<p>\$2.50/kW                      (\$2,500/MW) x rated capacity                      0.5 mills/kWh                      (\$0.50/MWh)</p> <p>\$0.50/kW                      (\$500/MW) x rated capacity                      1 mill/kWh                      (\$1.00/MWh)</p>	<p><b>Wind generation taxation</b>                      Wind generators, wind farms and associated collector systems are subject to taxes consisting of the following 2 components:</p> <ol style="list-style-type: none"> <li>1. A tax of \$2.50/kW times the rated capacity of wind generator.</li> <li>2. A tax of 0.5 mills/kWh is levied on electricity generated by the wind generator.</li> </ol> <p>Grid-connected generators with capacity of 100 kW or more not produced from coal or wind, or produced from coal and not subject to coal conversion taxes are subject to taxes consisting of the following 2 components:</p> <ol style="list-style-type: none"> <li>1. \$0.50/kW times the rated capacity of generation unit</li> <li>2. 1 mill/kWh of electricity generated by the production unit</li> </ol> <p>Wind generation and grid connected taxes are imposed in lieu of all real or personal property taxes, except for property taxes on land.</p>

WYOMING LEGISLATIVE SERVICE OFFICE *Memorandum*

State	Tax Rate	Electricity Production Tax Details
North Dakota	<p>0.65 mills x 60% of installed kW capacity x hours (\$0.65 x 60% of installed MW capacity x hours)</p> <p>0.25 mills/kWh (\$0.25/MWh)</p>	<p><b>Coal Conversion Facilities with electrical generation</b> Coal conversion facilities with electrical generation are subject to two taxes:</p> <ol style="list-style-type: none"> <li>1. 0.65 mills times 60% of installed kW capacity times the number of hours in the taxable period. All electrical generating units that begin construction or complete repowering are exempt from 85% of tax imposed for 5 years. Exemption for remaining 15% may also be granted for up to 5 years.</li> <li>2. 0.25 mills/kWh of electricity produced for sale. All electric generating units that begin construction or complete repowering are exempt from tax imposed for 5 years.</li> </ol> <p>Electrical generating facilities are exempt from sales and use taxes. For wind facilities, the equipment must be purchased between July 2011 and January 2017. For non-wind and non-coal facilities, the facility must sell the electricity it produces or use it on site for a business-related activity.</p>
South Dakota	<p>\$3.00/kW (\$3,000/MW) x nameplate capacity</p> <p>\$0.00045/kWh (\$0.45/MWh)</p> <p>\$0.00090/kWh (\$0.90/MWh)</p>	<p><b>Nameplate Capacity Tax of wind farm or solar facility</b> Wind farms first producing power after June 30, 2007 or solar facilities, with capacities of 5 MW or more, shall pay an annual tax of \$3.00/kW times the nameplate capacity of the renewable facility. The tax is imposed beginning the first calendar year the renewable facility generates gross receipts.</p> <p><b>Tax on electricity produced by wind farm</b> Wind farms producing power for the first time after March 31, 2015 shall pay an annual tax of \$0.00045/kWh of electricity produced.</p> <p><b>Tax on electricity produced by solar facility.</b> Solar facilities shall pay an annual tax of \$.00090/kWh of electricity produced by the solar facility.</p> <p>The taxes described above are in lieu of all taxes levied by the state, counties, municipalities, school districts, or other political subdivisions on the personal and real property of the company which is used or intended for use as a renewable facility. These taxes are not in lieu of the retail sales and service taxes imposed.</p>
Vermont	<p>\$0.0025/kWh (\$2.50/MWh)</p> <p>\$4.00/kW (\$4,000/MW) x plant capacity</p> <p>Exempt if plant capacity is less than 50 kW</p>	<p><b>Electrical Generation</b> A tax of \$0.0025/kWh produced is assessed on electric generating plants with nameplate generating capacities of 200,000 kW or more.</p> <p><b>Renewable Energy Uniform Capacity Tax</b> An annual tax \$4.00/kW of plant capacity is assessed on any renewable energy plant commissioned to generate solar power.</p> <p>A renewable energy plant that generates electricity from solar power shall be exempt from taxation under this section if it has a plant capacity less than 50 kW.</p>

WYOMING LEGISLATIVE SERVICE OFFICE *Memorandum*

State	Tax Rate	Electricity Production Tax Details
Vermont		Solar plants subject to the Uniform Capacity Tax are exempt from the statewide education property tax. A municipality may also vote to exempt or stabilize a solar plant for municipal property tax purposes. Municipalities that impose municipal property taxes on solar plants are required to follow a property valuation methodology specified in law.
Washington	<p>1.5% of wholesale value of energy produced</p> <p>7% of subsection 1 amount</p> <p>2% of revenues; + 5% of first 4 mills/kWh (\$/MWh) of wholesale value of power distributed to customers; + 5% of first 4 mills/kWh (\$/MWh) of revenue from sale of self-generated energy for re-sale</p> <p>7% of subsection 1 amount</p>	<p><b>Thermal electric generating facilities tax</b>            A tax is levied on districts operating a thermal electric generating facility with design capacity of 250,000 kilowatts or more, located on a federal reservation, placed in operation after Sept. 21, 1977.</p> <ol style="list-style-type: none"> <li>The tax is 1.5% of the wholesale value of energy produced for use or sale, except energy used in the operation of the power plant and associated transmission facilities.</li> <li>An additional tax is imposed equal to 7.00% multiplied by the tax payable under subsection 1.</li> </ol> <p><b>Public Utility Tax imposed on utility districts</b>            A tax is levied on plants or facilities operated for the generation, distribution and sale of electric energy.</p> <ol style="list-style-type: none"> <li>For each district, except for thermal electric generating facilities otherwise taxed (above), the tax is the sum of the following amounts: (a) 2.00% of gross revenues from the sale of electric energy distributed; plus (b) 5.00% of the first 4 mills/kWh of wholesale value of self-generated energy distributed to its own customers; plus (c) 5.00% of the first 4 mills/kWh of revenue from the sale of self-generated energy for resale.</li> <li>An additional tax is imposed equal to the rate specified above (7.00%) multiplied by the tax payable under subsection (1) of this section.</li> </ol>
Wyoming	\$1.00/MWh	<p><b>Tax on Production of Electricity from Wind Resources</b>            A tax of \$1.00 per megawatt-hour is levied on the production of electricity produced from wind resources on or after Jan. 1, 2012. The tax is imposed on each megawatt hour of electricity produced, at the point of interconnection with an electric transmission line. Electricity produced from a wind turbine shall not be subject to the tax imposed until 3 years after the turbine first produced electricity for sale.</p>

Source: Legislative Service Office summary of information provided by NCSL, and from review of other states statutes, and state tax websites.

If you have any further questions, do not hesitate to contact me at 307-777-7881.

WYOMING LEGISLATIVE SERVICE OFFICE *Memorandum*