































































development of the energy source, tax that energy source, and provide incentives for the extraction and development of the energy resource.



## COAL

### Regulatory State Laws Impacting Coal Extraction and Development:

- ① **Article II, section 3, of the Montana Constitution:** Provides that all persons are born free and have certain inalienable rights, including, among other rights, the right to a clean and healthful environment.
- ② **Article IX, section 1, of the Montana Constitution:** Requires that the state and each person maintain and improve a clean and healthful environment in Montana for present and future generations, requires the Legislature to administer and enforce this duty, and requires the Legislature to provide adequate remedies for the protection of the environmental life support system from degradation and provide adequate remedies to prevent unreasonable depletion and degradation of natural resources.
- ③ **Article IX, section 2, of the Montana Constitution:** Requires that all lands that are disturbed by the taking of natural resources be reclaimed and requires the Legislature to provide effective requirements and standards for reclamation of these disturbed lands.
- ④ **"Montana Coal Mining Code":** Imposes certain duties regarding safety requirements to be administered by the Department of Labor and Industry. (Title 50, chapter 73, MCA)
- ⑤ **"Clean Air Act of Montana":** Provides for a permitting process administered by the Department of Environmental Quality (DEQ) to ensure compliance with air emission standards that may apply to coal mining operations. (Title 75, chapter 2, parts 1 through 4, MCA)

- ⑥ Statutes known as the "**Montana Water Quality Act**": Implement a policy of conserving water resources and protecting water quality, establish a permitting process administered by DEQ for discharge of mining and industrial waste water, and provide for enforcement, appeals, and penalties for violation of standards. (Title 75, chapter 5, MCA)
- ⑦ "**The Strip and Underground Mine Siting Act**": Authorizes DEQ to review and regulate new strip-mine and underground mine site location and reclamation plans, imposes permit requirements for strip and underground mines, and provides for the termination and suspension of permits for noncompliance. (Title 82, chapter 4, part 1, MCA)
- ⑧ "**The Montana Strip and Underground Mine Reclamation Act**": Creates a permitting process for strip and underground coal mining administered by DEQ, requires permit applications to contain comprehensive reclamation plans for all affected lands, and gives investigative and enforcement powers to DEQ. (Title 82, chapter 4, part 2, MCA)
- ⑨ **Coal Impact Abatement Funding for Local Governments**: Establishes a special fund to provide grants and loans to assist local governments in dealing with the impacts of large-scale development of coal mines and coal-burning energy facilities. (Title 90, chapter 6, part 2, MCA)
- ⑩ "**Montana Environmental Policy Act (MEPA)**": Is not a regulatory act but requires the State of Montana to conduct an environmental review of the impacts of permitting a coal mine. An environmental review document is required before an agency may issue a permit. (Title 75, chapter 1, parts 1 through 3, MCA)

## **Taxation of Coal:**

- ① **Article IX, section 5, of the Montana Constitution**: Provides for the creation of the coal severance tax trust fund and requires the

Legislature to dedicate not less than one-fourth of the coal severance tax to the trust, from which interest and income may be appropriated. This provision also requires that the trust principal remain intact unless appropriated by three-fourths of the members of each house of the Legislature. One-half (50%) of the severance tax has been dedicated to the coal severance tax trust fund since December 31, 1979.

- ② **Coal severance tax:** Imposes a severance tax on coal mine operators that is computed on each quarter year's worth of production as shown on forms provided by the Department of Revenue. Statutes contain the formula by which the tax is to be computed, with rates based on the heating quality of the coal and the amount of coal produced. (Title 15, chapter 35, MCA)
  
- ③ **"The Montana Resource Indemnity Trust and Ground Water Assessment Act":** Indemnifies the citizens of Montana for the loss of long-term value resulting from the depletion of Montana's mineral resource base and for environmental damage caused by mineral development. This Act establishes a permanent resource indemnity trust, funded through revenue generated from a tax levied on mineral extraction. Proceeds from the trust are to be expended for the purpose of protecting and restoring the environment from damages resulting from mineral development and for supporting a variety of economic development programs to benefit Montana and its citizens. The Act contains provisions that specify the amount of tax to be paid on different types of mineral production. (Title 15, chapter 38, MCA)
  
- ④ **Coal gross proceeds tax:** Provides for a system of reporting by producers and allocation of the tax by the Department of Revenue to local governments and directs the Department of Revenue to tax coal gross proceeds at 5% of reported value. (Title 15, chapter 23, part 7, MCA)

## Incentives for Coal Production:

- ❶ **Property tax exemption:** Provides an exemption from property taxation of one-half the contract sales price of coal sold by a coal producer who extracts less than 50,000 tons of coal each year. (15-6-208, MCA).
- ❷ **"Reclamation and Development Grants Program Act":** Authorizes the Department of Natural Resources and Conservation (DNRC) to fund projects that will indemnify the people of Montana against the effects of coal and other mineral development. The purposes of the program are to repair and mitigate environmental damage resulting from the extraction of nonrenewable resources. (Title 90, chapter 2, part 11, MCA)



## NATURAL GAS

### Regulatory State Laws Impacting Natural Gas Extraction and Development:

- ❶ Like coal, the following laws discussed above apply to natural gas extraction and development: Article II, section 3, and Article IX, sections 1 and 2, of the Montana Constitution, the Clean Air Act of Montana, statutes known as the Montana Water Quality Act, and the Montana Environmental Policy Act.
- ❷ **"Montana Major Facility Siting Act":** Administered by DEQ, requires that any new natural gas pipeline that is greater than 25 inches in diameter and 50 miles in length go through a siting certification process. (Title 75, chapter 20, MCA)
- ❸ **Underground gas storage reservoirs:** Provides that it is the policy of the state that the conservation of natural gas by means of underground storage and the creation of reserves of stored natural gas are in the public interest, gives natural gas public utilities the power of eminent domain in order to develop underground reservoirs, and outlines a certification procedure administered by



the Board of Oil and Gas Conservation. (Title 82, chapter 10, part 3, MCA)

- ④ **Abandoned gas wells and reclamation:** Requires that notice be given to the surface owner before any oil or gas well can be plugged or abandoned and requires the Board of Oil and Gas Conservation to maintain a record of plugged and abandoned oil and gas wells in the state. (Title 82, chapter 10, part 4, MCA)
- ⑤ **Surface owner damage and disruption compensation:** Establishes a procedure for the compensation by means of "surface damage disruption payments" to the surface owner of lands disturbed by gas drilling operations, imposes liability on the part of the oil and gas developer or operator for damages to property, and provides a procedure for the settlement of surface damage claims. (Title 82, chapter 10, part 5, MCA)
- ⑥ **Regulation of gas wells by the Board of Oil and Gas Conservation:** Provides for the regulation of oil and gas development by the Board of Oil and Gas Conservation, sets forth the powers and duties of the Board, establishes requirements for oil and gas operations, and authorizes the Board to establish well spacing units and plans for unit operations. The State of Montana is directed to become a member of the Interstate Compact to Conserve Oil and Gas, and provisions of the Compact are set forth. (Title 82, chapter 11, MCA)
- ⑦ Statutes known as the "**Montana Water Use Act**": Establish an application and permitting process administered by DNRC for the appropriation of water. (Title 85, chapter 2, parts 3 and 4, MCA)

### **Taxation of Natural Gas:**

- ① See discussion of Article IX, section 2, of the Montana Constitution and the Montana Resource Indemnity Trust and Ground Water Assessment Act above.

- ② **"Montana Oil and Natural Gas Production Tax Act"**: Provides for state and local government production taxes on the gross value of petroleum and other mineral crude oil and natural gas and for the allocation of tax revenue to state and local governments with certain exemptions and incentives for new production. (Title 15, chapter 36, part 3, MCA)
- ③ **Oil and gas privilege and license tax**: Authorizes the imposition of a privilege and license tax for the purpose of funding the operations of the Board of Oil and Gas Conservation. The tax is to be collected by the Department of Revenue in the same manner as the Department collects the oil and gas production tax under Title 15, chapter 36, part 3, MCA. The tax may not exceed 3/10 of 1% of the market value of each barrel of crude petroleum or each 10,000 cubic feet of natural gas produced. (82-11-131, MCA)



## **GEOHERMAL**

### **Regulatory State Laws Impacting Geothermal Development:**

- ① Like coal and natural gas, the following laws discussed above apply to geothermal development: Article II, section 3, and Article IX, sections 1 and 2, of the Montana Constitution, the Clean Air Act of Montana, statutes known as the Montana Water Quality Act, and the Montana Environmental Policy Act.
- ② **"Montana Major Facility Siting Act"**: Administered by DEQ, requires that any use of geothermal resources capable of producing power equivalent to 25 million Btu's per hour or more go through a siting certification process. (Title 75, chapter 20, MCA)
- ③ **Geothermal exploration**: Directs the Board of Environmental Review to regulate geothermal exploration. (75-20-1001, MCA)
- ④ Statutes known as the **"Montana Water Use Act"**: Establish an application and permitting process administered by DNRC for the appropriation of water. (Title 85, chapter 2, parts 3 and 4, MCA)

## Incentives for Geothermal Development:

- ❶ **Tax credit:** Provides for a credit against individual income tax liability for taxpayers who install in their principal residence a geothermal energy generation system. A credit of up to \$1,500 against the taxpayer's income tax liability is authorized. (15-32-115, MCA)
- ❷ **Tax credit:** Provides an income tax credit for individual taxpayers who install in the taxpayer's principal dwelling an energy system using a recognized nonfossil form of energy generation. The credit may not exceed \$500. (15-32-201, MCA)
- ❸ **"Reclamation and Development Grants Program Act":** Implements a legislative policy of funding projects designed to indemnify Montana citizens for the impact of mineral development. (Title 90, chapter 2, part 11, MCA)
- ❹ **Property Tax Exemption:** New generating facilities built in Montana with a nameplate capacity of less than 1 MW and using alternative renewable energy sources are exempt from property taxes for 5 years after start of operation.
- ❺ **Property Tax Reduction:** Generating plants using alternative fuels greater than 1 MW (50% taxable value during first 5 years after the construction permit is issued).
- ❻ **Alternative Revolving Loan Program:** Provides loans to individuals and small businesses to install alternative energy systems that generate energy for their own use. Loans up to a maximum of \$10,000 must be repaid within 5 years. (Rate for 2003 of 5.5%.)
- ❼ Geothermal projects are eligible for economic development bonding via the Board of Investments (17-5-1501).
- ❽ **Research and development:** Implements a program administered by DEQ designed to promote research and

development of energy conservation and renewable energy sources and provides funding to meet this objective. DEQ must allocate the funds to five statutory loan and grant categories, but has the discretion to reallocate to ensure that the program offers the greatest possible benefits during a particular fiscal year. (Title 90, chapter 4, part 1, MCA)



## WIND

### Regulatory State Laws Impacting Wind Development:

- ① **Easements:** Imposes certain conditions on easements created for the purpose of ensuring the flow of wind across real property in connection with the generation of wind energy. Wind energy easements are required to be in writing and must include, among other things, a description of both the servient and dominant tenements and a description of the dimensions of the easement, both horizontally and vertically. The easements must specify the restrictions imposed on the servient tenement and the terms, if any, under which the easement may be modified or terminated. (70-17-303, MCA)
- ② Associated activities surrounding wind development that affect air or water quality may require permits from DEQ. MEPA may apply. The federal endangered species and migratory bird acts may be triggered with commercial wind development.

### Incentives for Wind Development:

- ① **Tax credit:** Provides an income tax credit for individual taxpayers who install in the taxpayer's principal dwelling an energy system using a recognized nonfossil form of energy generation. The credit may not exceed \$500. (15-32-201, MCA)
- ② **Wind tax credit:** Provides for an investment tax credit to any individual, corporation, partnership, or small business corporation that makes an investment of \$5,000 or more for a commercial system that generates electricity by means of wind power. With

certain limitations, a credit against individual or corporate income tax of up to 35% of the eligible costs of the system may be taken as a credit against taxes on taxable net income produced by certain specified activities related to wind energy. (15-32-402, MCA)

- ③ **Property Tax Exemption:** New generating facilities built in Montana with a nameplate capacity of less than 1 MW and using alternative renewable energy sources are exempt from property taxes for 5 years after start of operation.
- ④ **Property Tax Reduction:** Generating plants using alternative fuels greater than 1 MW (50% taxable value during first 5 years after the construction permit is issued).
- ⑤ **Alternative Revolving Loan Program:** Provides loans to individuals and small businesses to install alternative energy systems that generate energy for their own use. Loans up to a maximum of \$10,000 must be repaid within 5 years. (Rate for 2003 of 5.5%.)
- ⑥ **Net Metering:** For NorthWestern Energy customers, net metering is allowed for alternative energy systems of 50 kilowatts or less to offset customer requirements for electricity.
- ⑦ **Universal System Benefits Programs:** Supports renewable energy resources including wind energy generation.
- ⑧ Wind projects are eligible for economic development bonding via the Board of Investments (17-5-1501).
- ⑨ See the research and development incentives under geothermal resources.



## SOLAR

### Regulatory State Laws Impacting Solar Development:

- ① **Easements:** Imposes certain conditions on easements created for the purpose of ensuring the unencumbered exposure of solar energy devices across real property in connection with the generation of solar energy. Solar energy easements are required to be in writing and must include, among other things, the vertical and horizontal angles, expressed in degrees, at which the solar easement extends over the servient tenement and any terms or conditions under which the solar easement is granted or may be terminated. (Title 70, chapter 17, part 3, MCA)

### Incentives for Solar Development:

- ① **Tax credit:** Provides an income tax credit for individual taxpayers who install in the taxpayer's principal dwelling an energy system using a recognized nonfossil form of energy generation. The credit may not exceed \$500. (15-32-201, MCA)
- ② **Tax deduction:** Allows a deduction from gross corporate income for computation of net income for expenditures for capital investments in buildings for energy conservation purposes in accordance with a specific schedule set forth in the statute. (15-32-103, MCA)
- ③ **Tax credit:** Provides a resident individual taxpayer with a credit not to exceed \$500 against state income tax for expenditures for capital investments in a building for energy conservation purposes. (15-32-109, MCA)
- ④ **Property Tax Exemption:** New generating facilities built in Montana with a nameplate capacity of less than 1 MW and using alternative renewable energy sources are exempt from property taxes for 5 years after start of operation.

- ⑤ **Property Tax Reduction:** Generating plants using alternative fuels greater than 1 MW (50% taxable value during first 5 years after the construction permit is issued).
- ⑥ **Alternative Revolving Loan Program:** Provides loans to individuals and small businesses to install alternative energy systems that generate energy for their own use. Loans up to a maximum of \$10,000 must be repaid within 5 years. (Rate for 2003 of 5.5%.)
- ⑦ **Net Metering:** For NorthWestern Energy customers, net metering is allowed for alternative energy systems of 50 kilowatts or less to offset customer requirements for electricity.
- ⑧ **Universal System Benefits Programs:** Supports renewable energy resources including wind energy generation.
- ⑨ Solar projects are eligible for economic development bonding via the Board of Investments (17-5-1501).
- ⑩ See the research and development incentives under geothermal resources.



## **FALLING WATER (HYDROELECTRIC FACILITIES)**

### **Regulatory State and Federal Laws Impacting Hydroelectric Development:**

- ① Nonfederal HYDROELECTRIC POWER PLANTS on navigable waters of the United States, those that occupy federal land or use water power from a government dam, or those that, under certain circumstances, affect the interest of interstate or foreign commerce must be licensed by the Federal Energy Regulatory Commission (FERC). Navigable waters of the United States include virtually all waters in Montana and the other 49 states. As a result, FERC is the lead agency in the licensing of new hydropower facilities and in the relicensing of existing facilities. FERC, acting under federal statutory authority, processes and

evaluates the federal applications required for all hydropower dams, diversions, and other hydropower developments; reviews and analyzes environmental impacts of hydropower projects and determines appropriate mitigation and enhancement measures; and sets requirements governing the sale of the hydropower generation at the wholesale level.

- ② There are five primary subject areas in which state regulation of hydroelectric power must be considered in addition to the federal requirements under FERC. These areas are:
  - (a) water rights permits;
  - (b) 310 permit for altering a perennial stream;
  - (c) water quality certification under Section 401 of the federal Clean Water Act;
  - (d) fish and wildlife impact evaluation (no permit required); and
  - (e) Montana Major Facility Siting Act state filing with FERC for hydrofacilities over 50 megawatts.
  
- ③ In addition, a 404 permit is required from the U.S. Department of the Army, Corps of Engineers, for any dredge and fill activity or other work affecting United States' waters or wetlands.

### **Incentives for Hydroelectric Facility Development:**

- ① See incentives in Chapter 4.



## **BIOMASS**

### **Regulatory State Laws Impacting Biomass Development:**

- ① Associated activities surrounding biomass development that affect air or water quality may require permits from DEQ.

### **Incentives for Biomass Development:**

- ① **Property tax abatement:** Provides for the classification of gasohol production facilities, during construction and for the first 3



years of operation, as class five property, taxable at 3% of market value. (15-6-135, MCA)

- ② **Property tax exemption:** Provides a property tax exemption for all property used in the production of ethanol from grain during the course of construction of an ethanol manufacturing facility and for 10 years after initial production of ethanol from the facility. (15-6-201, MCA)
- ③ **Tax credit:** Provides an income tax credit for individual taxpayers who install in the taxpayer's principal dwelling an energy system using a recognized nonfossil form of energy generation. The credit may not exceed \$500. (15-32-201, MCA)
- ④ **Tax incentive:** ("Alcohol Tax Incentive and Administration Act of 1983") Establishes various tax incentives for the production of alcohol to be blended for gasohol and provides for a system of recordkeeping. (Title 15, chapter 70, part 5, MCA)
- ⑤ See the research and development incentives under geothermal resources.



## **COGENERATION:**

### **Regulatory State Laws Impacting Cogeneration Development:**

- ① The PSC regulates "qualifying small power production facilities" and authorizes COGENERATION by qualifying small power production facilities and the sale of the electricity produced under rates and conditions prescribed by the PSC. (Title 69, chapter 3, part 6, MCA)
- ② Associated activities surrounding cogeneration development that affect air or water quality may require permits from DEQ. MEPA may apply.

## Incentives for Cogeneration:

- ❶ **"FEDERAL PUBLIC UTILITY REGULATORY POLICIES ACT OF 1978"**, Pub. L. 95-617: Establishes requirements for the participation by qualifying small power production facilities and arrangements for purchases and sales of electric power with electric utilities under the regulation of the PSC. See also state laws concerning small power production facilities. (Title 69, chapter 3, part 6, MCA)
- ❷ See incentives in Chapter 4.



## HYDROGEN

### Regulatory State Laws Impacting Hydrogen Development:

- ❶ Associated activities surrounding hydrogen development that affect air or water quality may require permits from DEQ. MEPA may apply.

## Incentives for Cogeneration:

- ❶ Alternative Energy Revolving Loan Program: provides loans of up to \$10,000 to individuals and small businesses to install alternative energy systems (including fuel cells), which must be paid back within 5 years.
- ❷ Property tax reduction: generating plants using alternative fuels (including fuel cells) producing 1 MW or more of power get a 50% reduction of taxable value for the first 5 years after the construction permit is issued.
- ❸ Property tax exemption: generating plants using alternative fuels (including fuel cells that don't require hydrocarbon fuel) producing greater than 1 MW are exempt from property taxes 5 years after the start of operation.
- ❹ Property tax exemption for renewable energy systems (including fuel cells) can be claimed for 10 years after installation of the

property. Up to \$20,000 is exempt for a single-family residential dwelling and \$100,000 for a multifamily or nonresidential building.

- ⑤ Residential alternative energy system tax credit: up to \$500 tax credit for installation of an alternative energy system (including fuel cells).
- ⑥ Income tax credit for an individual or business (up to \$500 for vehicle weight of 10,000 pounds or \$1,000 for heavier vehicles) for conversion of a vehicle to use alternative fuels including hydrogen.
- ⑦ Fuel cells and hydrogen electricity generation generally are eligible for economic development bonding via the Board of Investments and industrial development bonding via local government.

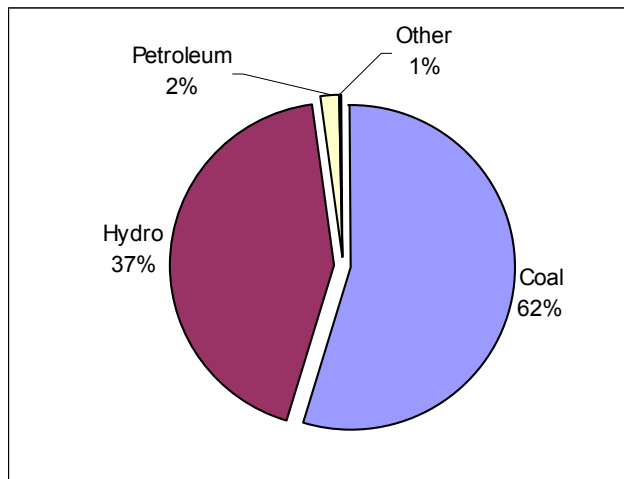
## Chapter 4: Generating Electricity in Montana



### How is electricity generated in Montana?

Montana currently has 45 generating facilities located across the state with an average generating capacity of 3,000 megawatts (DEQ, 2004). Coal-fired generation makes up 62% of Montana's generation capacity for 1999-2002. Hydrofacilities account for 37%, petroleum coke makes up less than 2%, and natural gas and wind account for the remainder for 1999-2002 (DEQ, 2004). See figure 10.

**Figure 10. Generation by fuel**



### Who generates electricity in Montana?

Electricity is generated by a variety of companies and governmental entities in Montana (see table 2). Montanans use an amount equivalent to 56% of the electricity generated in the state, making Montana a net exporter of electricity. Obviously, the policy question arises that if Montana is a net exporter, why should additional generation facilities be built in the state? Much of Montana's power is obligated through contracts to other customers, most of whom are out of state. Utilities from Oregon and Washington own 31% of Montana's power production. The Bonneville Power Administration (BPA) and the Western Area

Power Administration (WAPA) own plants that generate 18.4% of Montana's power production, some of which goes to electric cooperatives in state, and the rest is moved out of state. Seven percent of NorthWestern Energy electricity production is committed to out-of-state customers. The bulk of the remaining power in the state (30.5%) is owned by PPL Montana. The 2001 and 2003 Legislatures opted for creating statutory incentives to build additional electricity generation in the state, but the debate continues.

**Table 2. Average Generation by Company or Governmental Entity in Montana 1999-2003**

<u>Average Generation by Company, 1999-2003</u>		
<b>Company</b>	<b>aMW</b>	<b>Percent</b>
PPL Montana <sup>1,2</sup>	914	30.5%
Puget Sound Power & Light <sup>2</sup>	546	18.2
Avista <sup>2</sup>	360	12.0
Bonneville Power Administration <sup>3</sup>	312	10.4
Western Area Power Administration <sup>3</sup>	239	8.0
Portland General Electric <sup>2</sup>	197	6.6
NorthWestern Energy <sup>2,4</sup>	181	6.0
PacificCorp <sup>2</sup>	122	4.1
Yellowstone Energy Partnership	47	1.6
<u>Other</u>	<u>77</u>	<u>2.6</u>
<b>TOTAL</b>	<b>2,994</b>	<b>100.0%</b>

<sup>1</sup> PPL Montana plants were owned by MPC until mid-December, 1999.  
<sup>2</sup> Public data on output for Colstrip 1-4 are reported for the entire facility, not individual units. In this table, the output was allocated among the partners on the basis of their ownership percentages. NWE actually leases its portion of Colstrip.  
<sup>3</sup> Distributes power generated at U.S. Corps of Engineers and U.S. Bureau of Reclamation dams.



## **What laws regulate the generation of electricity in Montana?**

Chapter 3 inventories those laws that regulate primary fuel sources for electricity in Montana. Many of those regulatory laws in Chapter 3 apply to the operation of electrical generation facilities. Generation facilities typically require

air and water quality permits from DEQ. Some facilities may require a water use permit from DNRC. Those permits trigger the Montana Environmental Policy Act, which requires the State of Montana to conduct an environmental review of a proposed generation facility. Electrical generation facilities are no longer required to go through a state siting certification process. Local governments may regulate the siting of a generation facility through land use and zoning restrictions.

For a public utility in Montana that has not restructured and is planning to construct a generation facility, the utility must undertake a planning process that looks at low-cost alternatives to the proposed generation facility. The PSC must also determine whether a nonrestructured utility's generation facility is used and useful at just and reasonable prices (is a smart investment). Depending on the outcome of this planning process and the PSC's used and useful determination, the PSC has the authority to deny or approve the utility's cost recovery for the generation plant. See Title 69, chapter 3, part 12, MCA, and 69-3-109 and 69-3-201, MCA.



### **What laws tax the generation of electricity in Montana?**

There are a variety of property taxes, corporate licence and income taxes, and equipment taxes that the state and local governments assess energy generating facilities (see Title 15, MCA, generally). The Legislature, in grappling with the changes brought about by the restructuring of Montana's electric industry, found it necessary to make changes to the existing system of property taxation that included reducing the property tax rate applied to electrical generation facilities and imposing a replacement tax called a wholesale energy transaction tax. (Title 15, chapter 72, part 1, MCA)



### **What laws provide incentives for the generation of electricity in Montana?**

In addition to the incentives identified in Chapter 3, the following incentives for electrical generation facilities also apply:

- ① **Property tax exemption for electrical generation facilities:** With certain exceptions, exempted an electrical generation facility and related facilities constructed after May 5, 2001, from property taxation. In order to qualify for the exemption, the owner of the facility must offer contracts to sell at least 50% of the facility's NET generating output to Montana customers at a cost-based rate plus a rate of return not to exceed 12% for a 20-year period from the date of the completion of the facility. The property tax exemption is limited to 5 years for a generation facility powered by oil or natural gas turbines. (Title 15, chapter 24, part 30, MCA)
- ② **Qualifying facility tax exemptions:** The machinery and equipment used in qualifying facilities built and operated after July 1, 2001, are exempt from taxation. A generation facility that has a capacity of less than 1 megawatt of electrical energy is exempt from taxation for 5 years after generation of electricity begins. (Title 15, chapter 6, part 2, MCA)
- ③ **Noncommercial electrical generation machinery and equipment tax exemption:** Subject to certain conditions, noncommercial electrical generation machinery and equipment that are owned or leased by a person and that are used for the production of electrical energy for use by the person in the person's business are exempt from taxation. (Title 15, chapter 6, part 2, MCA)
- ④ **Exempted** electrical generation facilities from the Montana Major Facility Siting Act.
- ⑤ **Revenue bonds:** Allowed electrical energy generation facilities, regardless of size or fuel source, to be eligible for county or municipal revenue bonds issued to finance economic development projects. (Title 90, chapter 5, part 1, MCA)
- ⑥ **Tax credit:** A new or expanding corporation manufacturing energy by means of an alternative renewable energy source may be eligible for a license tax credit. (Title 15, chapter 31, part 1, MCA)

- ⑦ **Commercial or net metering investment tax credit for alternative energy systems:** An individual, corporation, partnership, or small business corporation that makes an investment of \$5,000 or more for property qualifying as a commercial system or a net metering system that is located in Montana and that generates energy by means of an alternative renewable energy source is entitled to a tax credit. (Title 15, chapter 32, part 4, MCA)
  
- ⑧ **"Federal Public Utility Regulatory Policies Act of 1978",** Pub. L. 95-617: Establishes requirements for the participation by qualifying small power production facilities and arrangements for purchases and sales of electric power with electric utilities under the regulation of the PSC. See also state laws concerning small power production facilities. (Title 69, chapter 3, part 6, MCA)



# Chapter 5: Transmitting and Distributing Electricity in Montana

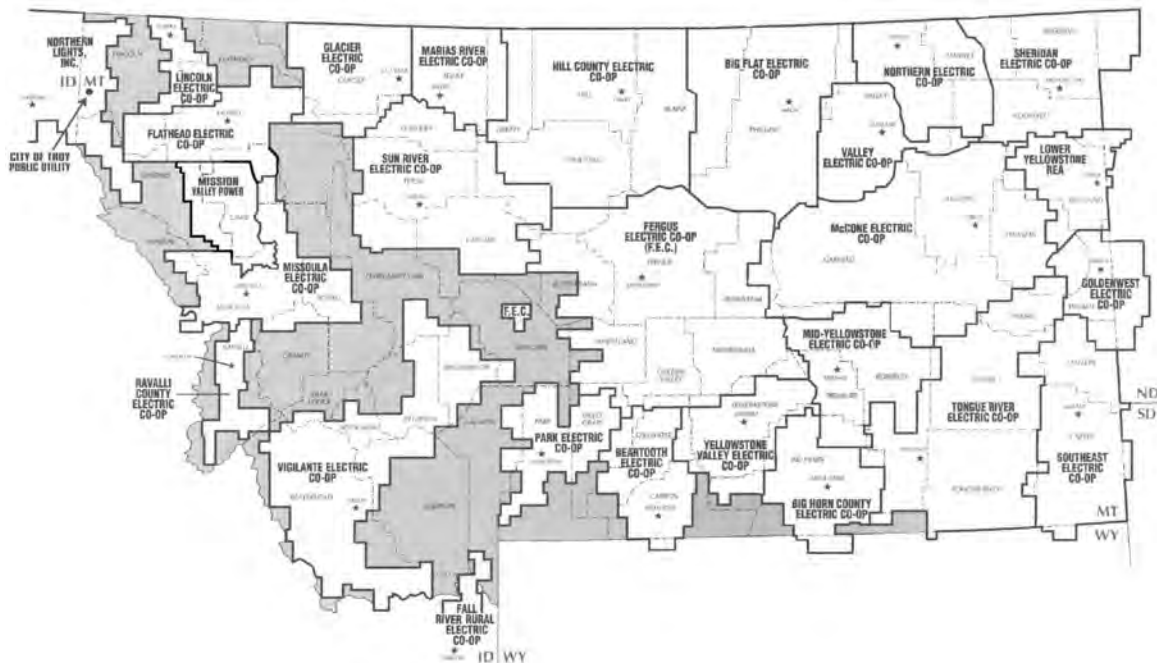


## Who transmits and distributes electricity in Montana?

Chapter 1 provided an overview of how electricity is transmitted and distributed in Montana. Under Montana law, an entity that transmits or distributes electricity is called a distribution services provider (69-8-103, MCA). Transmission and distribution wires seem to criss-cross the state in a haphazard manner, but there is an imposed organization scheme for distribution placement. The State of Montana is divided up into service territories (see figures 11 and 12). As a Montana customer of electricity, you are assigned to a distribution company by virtue of your geographic location. All 26 electric cooperatives, Montana-Dakota Utility, city of Troy, and NorthWestern Energy have their own distribution service territories. State law strictly protects the territorial integrity of each service territory (Title 69, chapter 5, part 1, MCA). NorthWestern Energy, PacificCorp, BPA, and WAPA all own transmission lines in Montana.

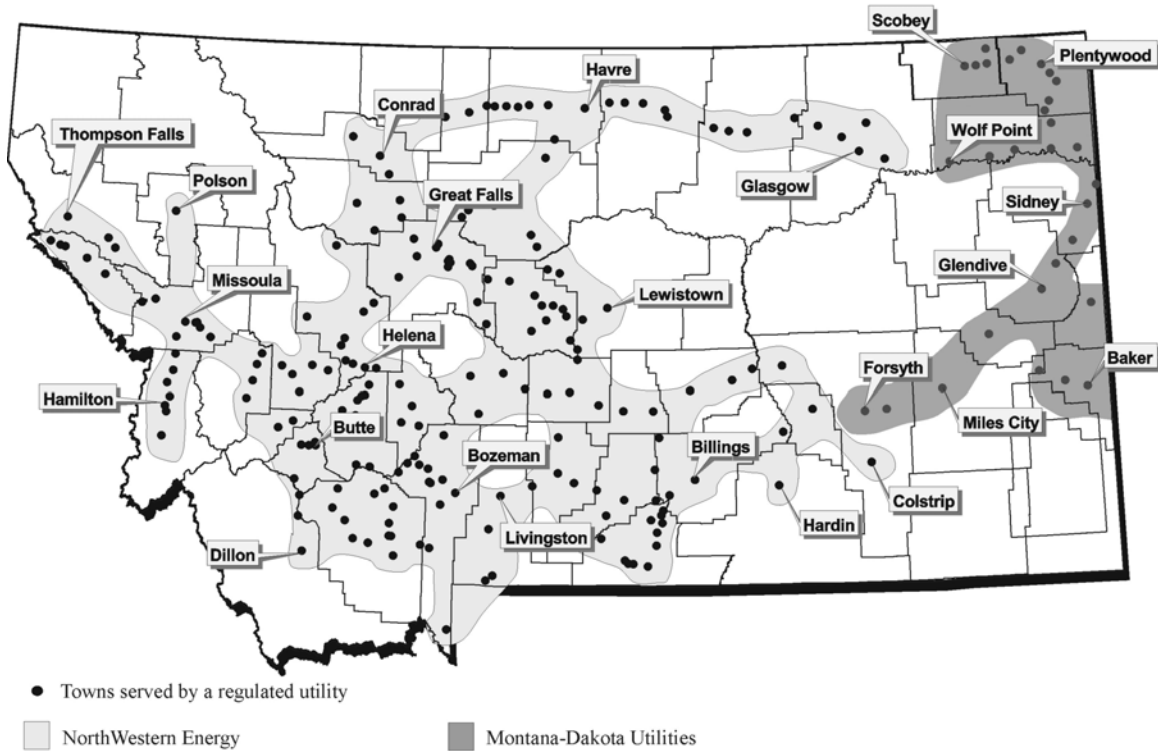
Figure 11.

### ELECTRICITY DISTRIBUTION UTILITIES NOT REGULATED BY THE PUBLIC SERVICE COMMISSION



**Figure 12.**

**ELECTRICITY DISTRIBUTION UTILITIES  
REGULATED BY THE PUBLIC SERVICE COMMISSION**



NOTE: These utilities provide electricity to towns and varying amounts of the surrounding areas. Their service areas are not necessarily continuous town to town. The depictions of service areas in this map are for illustrative purposes only and may include some areas served by rural electric cooperatives.

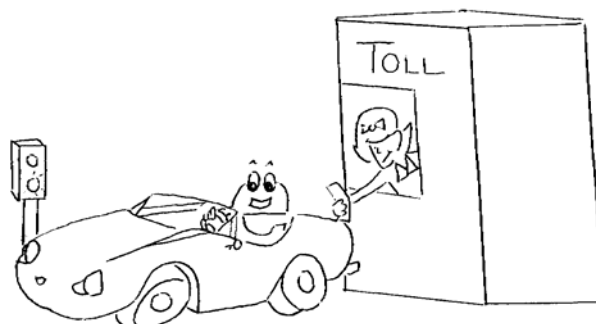


**How do our neighboring states and the federal government impact our electricity transmission?**

As discussed in Chapter 1, Montana's transmission system is a small part of what is known as the Western Interconnection Transmission System, which, in turn, is a part of a three-region system of interconnections that transmits and distributes electricity across the United States as well as parts of Canada and Mexico. We do not transmit electricity in Montana in isolation of our neighboring western states. Because Montana is interconnected, we are interdependent with our neighboring western states.

Because transmission lines cross state boundaries, the federal government, through FERC, has primary regulatory jurisdiction. FERC sets policies and adopts regulations for the management of transmission systems. FERC also establishes transmission rates for transmission customers. In recent years, FERC has been increasingly active in trying to boost the efficiency of the transmission system. The interstate transmission system is made up of multiple owners that control access to their piece of transmission wire on the system. Think of these owners as having toll bridge booths at both ends of their transmission wire (see figure 14). There are literally hundreds of toll booths on the western transmission system. Each toll booth demands a contractual payment before an owner can transmit electricity. Some transmission facility owners historically owned power marketing operations, allowing themselves to charge higher prices for transmission services to other power marketers. In 1997, FERC issued Order 888 requiring transmission owners to functionally separate their power marketing operations. Under Order 888, the transmission owners must allow open access to their systems that does not discriminate against other parties that use their systems. In addition, FERC issued Order 2000 requiring that an independent regional transmission organization (RTO) take over operation and control of the transmission system. The transmission owners and various stakeholders are currently in the process of formulating an organizational and operational structure for RTO West and made a filing with FERC in March 2002.

**Figure 13. The interstate transmission system is made up of multiple owners that control access to their piece of transmission wire**





## **What state laws regulate the transmission and distribution of electricity in Montana?**

Although FERC has primary jurisdiction over transmission pricing and policy, Montana regulates transmission siting through the Montana Major Facility Siting Act (MMFSA) (Title 75, chapter 20, MCA). MMFSA requires that any proposed transmission line receive siting certification before it is constructed. MMFSA supersedes local zoning and land use laws, making siting strictly a state decision. Other water quality, air quality, and stream crossing permits would apply. The Montana Environmental Policy Act would require an environmental review on any proposed transmission line.

The PSC has broad regulatory authority over public utility distribution services providers (see Chapter 2 for a complete discussion of the PSC's authority). The PSC not only has the ability to set distribution rates for customers, but also approves the acquisition or construction of new distribution facilities and regulates reliability and facility maintenance. Montana electric cooperatives self-regulate their distribution services. State law protects the territorial integrity of each service territory (Title 68, chapter 5, part 1, MCA) and prohibits duplication of distribution services.



## **What laws provide incentives for the transmission and distribution of electricity in Montana?**

The PSC is required by statute to include in distribution rates a reasonable rate of return for the public utility distribution services provider. This rate of return gives the public utility an incentive to maintain and expand its services. Electric cooperatives are nonprofit, customer-owned entities that recoup their distribution costs in membership rates.

## Chapter 6: Conserving Electric Energy



### What is electric energy conservation?

Energy conservation refers to activities that reduce the amount of electricity used by a consumer. Examples of energy conservation include efficient appliances and lighting fixtures, high efficiency heating and cooling systems, efficient building design, weatherization of buildings, and the use of advanced electric motors and heat recovery systems.



### How can conserving electricity save Montanans money?

Conservation is really a very simple concept--if you use less electricity, you lower your electricity bill. If a large block of customers use less electricity, it reduces the overall DEMAND on the transmission and generation system, it reduces customer exposure to volatile fuel and electric market prices, and it eliminates the need to purchase or construct new and very expensive generation and transmission facilities. Conservation saves consumers money, and it conserves natural resources.



### What laws provide incentives for electricity conservation in Montana?

There are a variety of state law incentives for electricity conservation:

1. **Universal system benefits programs (USBP):** Among other things, provides for the continued funding of and new expenditures for cost-effective local energy conservation and low-income weatherization. When Montana restructured its electric industry, it created a USBP charge and fund to ensure funding for these types of electricity conservation. Public utilities, cooperatives, and large customers can self-direct and receive credit for cost-effective local energy conservation and low-income weatherization. (69-8-402, MCA)

2. **Tax deduction:** Allows a deduction from gross corporate income for computation of net income for expenditures for capital investments in buildings for energy conservation purposes in accordance with a specific schedule set forth in the statute. (15-32-103, MCA)
3. **Tax credit:** Provides a resident individual taxpayer with a credit not to exceed \$500 against state income tax for expenditures for capital investments in a building for energy conservation purposes. (15-32-109, MCA)
4. **"Montana In-State Investment Act of 1983":** Expresses legislative policy and purposes of the permanent coal tax trust fund, which are to: (1) compensate future generations for the depletion of resources caused by coal development; and (2) develop a strong economy for Montana. The Act states that the Board of Investments shall endeavor to invest up to 25% of the fund in the Montana economy, with special emphasis on local enterprises. Title 17, chapter 6, part 3, MCA, also sets forth authorized investments, limitations on investments, and preferences for investments of revenue from the coal tax trust fund, which, under section 17-6-309(1)(d), expressly includes energy efficiency investments.
5. **Montana state building code:** Designed to accomplish several objectives, including the following: encourage, to the fullest extent feasible, the use of modern technical methods, devices, and improvements for the purpose of reducing the cost of construction, consistent with the conservation of energy and the efficient use of energy; encourage efficient design and installation that will result in consumption of the least possible quantities of energy and reduce the need for heating in the winter and air conditioning in the summer; encourage efficient design of building envelopes with high thermal resistance and low air leakage; and require design and selection practices that will promote the efficient use of energy. The Department of Labor and Industry is responsible for adopting rules relating to the construction of, installation of

equipment in, and standards for materials to be used in all buildings subject to the code. (Title 50, chapter 60, part 2, MCA)

6. **Purchase of conservation:** Authorizes utilities to purchase conservation or directly engage in conservation investments that have been approved by the PSC, with the cost-effective conservation measures to be at the customer's discretion, installed by either a private firm, the customer, or the utility. The statutes also authorize the PSC to make onsite audits to ensure compliance with the criteria set out in Title 69, chapter 3, part 7, MCA, and prohibit a utility that has placed the conservation in its rate base from claiming a conservation tax credit. (Title 69, chapter 3, part 7, MCA)
7. **Research and development of energy conservation:** Implements a program administered by DEQ designed to promote research and development of energy conservation and renewable energy sources and provides funding to meet this objective. The DEQ must allocate the funds to five statutory loan and grant categories, but has the discretion to reallocate to ensure that the program offers the greatest possible benefits during a particular fiscal year. (Title 90, chapter 4, part 1, MCA)
8. **Low-income weatherization:** Appropriates to DPHHS all federal funds and grants available under the U.S. Department of Energy low-income weatherization assistance program, U.S. Department of Health and Human Services low-income home energy assistance program, or any similar federal program designed to increase the energy efficiency of dwellings inhabited by low-income individuals. The DPHHS is directed to allocate at least 5% of funds received from the U.S. Department of Health and Human Services low-income home energy assistance program, if federal law allows. (90-4-201, MCA)
9. **Energy supply emergency powers:** Establishes the necessary planning, information gathering, and energy emergency powers for the Governor and defines the conditions under which these powers are to be exercised. The regular monitoring of energy

supplies and demand is provided for. Title 90, chapter 4, part 3, MCA, is intended to enable the Governor and other state agencies to deal with possible energy shortage emergency situations. The Governor is granted emergency powers that are intended to enable the Governor's Office to gather information, to regularly monitor energy supplies and demand, to formulate plans, and to institute appropriate emergency measures designed to reduce or allocate the usage of energy. (Title 90, chapter 4, part 3, MCA)

10. **Participation in the Pacific Northwest Electric Power and Conservation Planning Council:** Expresses legislative agreement to participate in the Pacific Northwest Electric Power Planning and Conservation Act and the Pacific Northwest Electric Power and Conservation Planning Council. The governor is authorized to appoint two members to the Council. (Title 90, chapter 4, part 4, MCA)
  
11. **"State Building Energy Conservation Act":** Requires DEQ to work with state agencies to identify buildings that have potential for energy savings, based on age, energy use, function, and condition of the building. DEQ is required to compile a report to be submitted to the Governor before September 1 of each even-numbered year. The Governor is required to submit proposed projects to be funded as a part of the budget. If two-thirds of the Legislature approves, energy conservation bonds may be issued to finance energy conservation projects. (Title 90, chapter 4, part 6, MCA)



### **Who can you contact about energy conservation in your home, school, or business?**

For local conservation programs, contact your public utility or local electric cooperative. If you have questions about state building energy conservation programs, contact DEQ at (406) 444-6778.



## Chapter 7: Pricing Electricity Supply, Transmission, and Distribution



### **Who sets our retail electricity supply prices in Montana? How is this done?**

The process for determining retail electricity supply prices in Montana depends on whom you receive utility services from and, in some circumstances, what type of customer you are. If you are a member of a Montana electric cooperative, the elected board of the cooperative sets the rates for electricity supply. If you are a customer of Montana-Dakota Utility, the PSC sets the rates for electricity supply. If you are a small customer served by NorthWestern Energy who has not chosen an alternative electricity supplier, then you are part of the default supply load that is regulated by the PSC. Because NorthWestern Energy is a distribution services provider that does not currently own sufficient generation assets to cover the default supply load, NorthWestern must purchase electricity from the market. The PSC must determine whether those purchases were prudently incurred. If you are a large or small NorthWestern customer who has chosen an alternative electricity supplier, the price of your electricity supply is negotiated between you and your electricity supplier.



### **Who sets our transmission and distribution costs in Montana? How is this done?**

FERC has jurisdiction over transmission pricing. FERC sets transmission rates that transmission owners can charge, and those charges are passed on to customers. For NorthWestern and Montana-Dakota Utility customers, the PSC regulates the distribution costs. A public utility may request a distribution rate increase, but that rate increase must be approved through a formal PSC rate hearing process. If you are a Montana electric cooperative member, distribution costs are set by an elected governing board for that particular cooperative .

## Chapter 8: Montana's Electric Industry Restructuring Laws



### What is electric industry restructuring?

Montana's electricity laws and policies have received significant public attention and scrutiny since 1997 when Montana decided to deregulate electricity supply and eventually allow all Montana consumers to choose, given a competitive market, their own electricity supplier. This was, and continues to be, a fundamental policy shift for the State of Montana from regulating the price of electricity supply to allowing competitive markets to set the price of electricity supply. Competitive choice has not yet developed for small residential and commercial customers in the state.

Specifically, if you are a NorthWestern customer or a member of an electric cooperative that has opened itself up to competition, electric industry restructuring is the mechanism that allows a competitive market to determine electricity prices and allows the customer to choose an electricity supplier that gives the best service. If you are member of a cooperative that has not opened up to competition or a Montana-Dakota Utility customer, the price of your retail electricity supply is set by either the cooperative board or the PSC, respectively. The original Montana electricity restructuring law set up a transition period for all NorthWestern customers to choose an electricity supplier by July 1, 2002. Market volatility and the lack of significant small-customer retail competition forced the 2001 Montana Legislature to delay full customer choice until July 1, 2007. Subsequent changes made by the 2003 Montana Legislature further extended the date for full customer choice until July 1, 2027.



### Why did Montana decide to restructure its electric industries?

The fundamental premise of Montana's restructuring law is that competition will provide greater benefits to consumers than they would otherwise have received under a historically regulated environment. One of the driving forces

behind restructuring was FERC's decision in 1996 to deregulate electricity supply markets at the wholesale level. Wholesale transactions involve the sale of electricity from large suppliers (i.e., power producers) to large electricity buyers and sellers (utilities, power marketers, etc.).

Therefore, in January 1997, the Montana Power Company (now NorthWestern Energy) and a number of Montana's large customers brought forward a legislative proposal (Senate Bill No. 390) to deregulate retail electricity supply. The reasons stated in the testimony before the Montana Legislature to pass Senate Bill No. 390 were:

- ⇒ Competitive markets would provide Montana electricity consumers with cheaper prices over the long term.
- ⇒ Congress was seriously contemplating national deregulation legislation, and Montana should take a leadership position so that the federal government would grandfather in our policy choices.
- ⇒ Montana's large industrial customers were looking at an electricity supply market that was cheaper than the traditional regulated utility supply. If they could get better prices, it would enhance plant profitability and promote economic development in Montana.
- ⇒ Montana Power Company needed to be proactive in a competitive environment that was emerging, as opposed to reactive.
- ⇒ Competition is here, wholesale power supply markets are competitive, and large customers are demanding retail access.

In passing Senate Bill No. 390, the 1997 Legislature noted that competitive markets exist, that Montana customers should have the freedom to choose their electricity supplier, that Montana consumers should be protected, and that the financial integrity of Montana utilities should be maintained. (69-8-102, MCA)<sup>2</sup>

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<sup>2</sup> For text of testimony in support and in opposition, see the committee minutes of Senate Bill No. 390 during the 1997 legislative session.



## **What is the status of electric restructuring today?**

Market volatility and the lack of significant small-customer retail competition forced the Montana Legislature to effectively put full customer choice on hold until July 1, 2027. If you are a small customer of NorthWestern who has not chosen an alternative electricity supplier, you are part of the default electricity supply load that is regulated by the PSC. Because NorthWestern Energy is a distribution services provider that does not currently own sufficient generation assets to cover the default supply load, NorthWestern must purchase electricity from the competitive wholesale market. The PSC must approve those purchases. Small NorthWestern customers started paying market-based rates for their electricity supply on July 1, 2002. For the most part, competitive markets have developed to serve large industrial electricity customers, and most of those customers have chosen alternative electricity suppliers. Small NorthWestern Energy customers also have the opportunity to purchase a separately marketed product composed of electricity from renewable resources.

## Glossary of Electricity Terms

**Ampere:** The unit of measurement of electrical current produced in a circuit by 1 volt acting through a resistance of 1 OHM.

**Capacity:** The amount of electric power that a generator, turbine, transformer, transmission CIRCUIT, station, or system is capable of producing or delivering.

**Circuit:** A conductor or a system of conductors through which electric current flows.

**Coal:** A black or brownish-black solid combustible substance formed by the partial decomposition of vegetable matter without free access to air and under the influence of moisture and, often, increased pressure and temperature. The rank of coal (anthracite, bituminous, subbituminous, and lignite) is determined by its heating value.

**Cogeneration:** A process that sequentially produces useful energy (thermal or mechanical) and electricity from the same energy sources.

**Contract Path:** A path across portions of the interconnected grid, owned by two or more different owners, for which a transaction has gained contractual permission from the owners or other rights holders with transferable rights.

**Current (Electric):** A flow of electrons in an electrical conductor. The strength or rate of movement of the electricity is measured in amperes.

**Demand:** The rate at which electric energy is delivered to a system, part of a system, or piece of equipment at a given instant or during a designated period of time (see Load).

**Distribution:** Relatively small, low-voltage wires used for delivering power from the transmission system to the local electric substation and to electric consumers.

**FERC:** Federal Energy Regulatory Commission (formerly the Federal Power Commission). The federal agency that regulates interstate and wholesale

power transactions, including power sales and transmission services, as well as licensing of dams on rivers under federal jurisdiction.

**Fossil Fuel:** Any naturally occurring fuel of an organic nature, such as coal, crude oil, and natural gas.

**Fuel:** Any substance that, for the purpose of producing energy, can be burned, otherwise chemically combined, or split or fused in a nuclear reaction.

**Generation (Electric):** The production of electric energy from other forms of energy; also, the amount of electric energy produced, expressed in kilowatt-hours (kWh).

**High voltage:** Voltage levels generally at above 69 kV. Some utilities also count 50 and 69 kV lines as transmission lines. Transmission lines in Montana are built at voltage levels of 100 kV, 115 kV, 161 kV, 230 kV, and 500 kV. In other states, lines have also been built at 345 kV and 765 kV. Canadian utilities build at still other voltage levels. Direct current transmission lines have been built at +/- 400 kV, which may sometimes be described as 800 kV.

**Horsepower:** A unit of power equal to 746 watts.

**Hydroelectric Power Plant:** A plant in which the turbine generators are driven by falling water.

**Inadvertent Flows:** Portions of power transactions that flow over portions of the interconnected grid that are not on the contract path for the transaction.

**Load (Electric):** The amount of electric power delivered or required at any specific point or points on a system. The requirement originates at the energy-consuming equipment of the consumers.

**Natural Gas:** A mixture of hydrocarbon compounds and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in natural underground reservoirs at reservoir conditions. The principal hydrocarbons usually contained in the mixture are methane, ethane, propane, butane, and pentanes.

**Ohm:** The unit of measurement of electrical resistance. The resistance of a circuit in which a potential difference of 1 volt produces a current of 1 ampere.

**Power:** The rate at which energy is transferred. Electrical energy is usually measured in watts. Also used for a measurement of capacity.

**PURPA:** Public Utility Regulatory Policies Act of 1978. This act first required utilities to buy power from qualifying independent power producers.

**Public Utility:** any investor owned utility that is regulated by the Montana Public Service Commission.

**Qualifying Facilities:** Small power producers or cogenerators that meet the Federal Energy Regulatory Commission's or the Montana Public Service Commission's size, fuel source, and operational criteria as authorized by PURPA.

**Renewable Energy:** Energy obtained from sources that are essentially sustainable (unlike, for example, the fossil fuels, of which there is a finite supply). Renewable sources of energy include wood, waste, solar radiation, falling water, wind, and geothermal heat.

**Transmission:** High-voltage electric wires used for bulk movement of large volumes of power across relatively long distances. Compare with distribution, which is composed of relatively smaller, lower-voltage wires used for delivering power from the transmission system to the local electric substation and to electric consumers.

**Volt:** A unit of electromotive force. It is the amount of force required to drive a steady current of 1 ampere through a resistance of 1 ohm. Electrical systems of most homes and offices have 120 volts.

**Watt:** The electrical unit of power or rate of doing work. A watt is the rate of energy transfer equivalent to 1 ampere flowing under pressure of 1 volt. It is analogous to horsepower or foot-pound-per-minute of mechanical power. One horsepower is equivalent to approximately 746 watts.

**Western Interconnection:** The interconnected, synchronous transmission grid extending from British Columbia and Alberta in the north to the U.S.-Mexican border in the south and from the Pacific Coast to a line extending from the Alberta-Manitoba border through eastern Montana, eastern Wyoming, western Nebraska, and the extreme west part of Texas.



## Appendix A: State Energy Information Resources

Consumer Counsel	(406) 444-2771
Department of Commerce, Board of Investments	(406) 444-0001
Department of Environmental Quality	(406) 444-6697
Legislative Services Division	(406) 444-3064
Department of Public Health and Human Services Low Income Energy Assistance Program	(406) 447-4260
Northwest Power Planning and Conservation Council	(406) 444-3952
Public Service Commission	(406) 444-6199
Energy Share of Montana	(406) 442-4900
Human Resource Development Councils	(406) 586-1572
Montana-Dakota Utility	(800) 638-3278
NorthWestern Energy	(888) 467-2669
Montana Electric Cooperatives' Association	(406) 761-8333