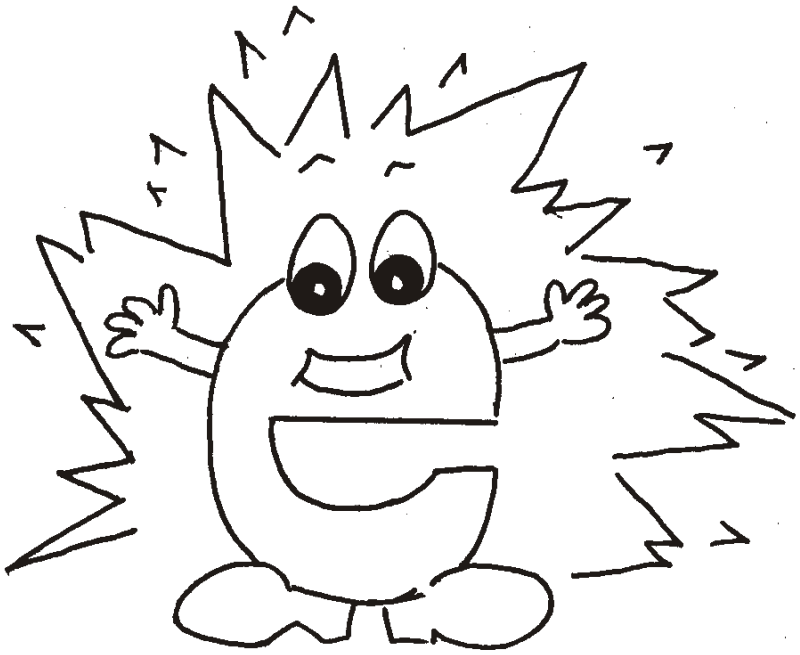
The Electricity Law Handbook: A Montanan's Guide to Understanding Electricity Law



Revised 2008

Cover and other artwork by Chelly Hasquet

Members and Staff

Energy and Telecommunications Interim Committee

House Members
Rep. Harry Klock, Chair
Rep. Duane Ankney
Rep. Robyn Driscoll
Rep. Brady Wiseman

Senate Members
Sen. Greg Lind, Vice chair
Sen. Jerry Black
Sen. Verdell Jackson
Sen. Don Ryan

Staff
Todd Everts, Legislative Environmental Analyst; Sonja Nowakowski, Research Analyst; Dawn Field, Secretary; Maureen Theisen, Research and Publications

Legislative Services Division
Energy and Telecommunications Interim Committee
State Capitol
PO Box 201706
Helena, MT 59620-1706
(406) 444-3064
http://leg.mt.gov/css/committees/interim/2007_2008/energy_telecom/default.asp

Table of Contents

Acknowledgments i

Disclaimer i

Foreword iii

Chapter 1: Introduction: Electricity and Montanans—How Does It All Work? 1
What is electricity? 1
What is electricity law? 9
Who are the electricity players in Montana? What role do they play? 10

Chapter 2: The Montana Electricity Consumer 15
Who and what is a "Montana electricity consumer"? 15
Which electricity laws protect you as a Montana consumer? How do they work? 16
Who is the Montana Consumer Counsel? What is the Montana Consumer Counsel's role? 18
Are there laws and programs that help low-income Montana electricity consumers? 18

Chapter 3: The Fuels That Feed Montana's Electric Energy Engine . 22
What are the fuels or processes that produce electricity in Montana? 22
What are the laws that regulate, tax, and provide incentives for electricity production fuel sources? 22

Chapter 4: Generating Electricity in Montana 44
How is electricity generated in Montana? 44
Who generates electricity in Montana? 44
What laws regulate the generation of electricity in Montana? 46
What laws tax the generation of electricity in Montana? 47
What laws provide incentives for the generation of electricity in Montana? 47

Chapter 5: Transmitting and Distributing Electricity in Montana . . . 50
Who transmits and distributes electricity in Montana? 50
How do our neighboring states and the federal government impact our electricity transmission? 51
What state laws regulate the transmission and distribution of electricity in Montana? 53
What laws provide incentives for the transmission and distribution of electricity in Montana? 54

Chapter 6: Conserving Electric Energy 56
What is electric energy conservation? 56
How can conserving electricity save Montanans money? 56
What laws provide incentives for electricity conservation in Montana? 56
Who can you contact about energy conservation in your home, school, or business? 60

Chapter 7: Pricing Electricity Supply, Transmission, and Distribution 61
Who sets our retail electricity supply prices in Montana? How is this done? 61
Who sets our transmission and distribution costs in Montana? How is this done? 61

Chapter 8: Montana's Electric Industry Restructuring and Reintegration Laws 62
What is electric industry restructuring? 62
Why did Montana decide to restructure its electric industries? 63
What is the status of electric restructuring today? 69

Glossary of Electricity Terms 72

Appendix A: State Energy Information Resources 77

Figures and Tables

Figure 1. Electricity is the flow of charged particles 1
Figure 2. Electricity is produced by converting fuel sources 2
Figure 3. A generator converts chemical or mechanical energy to electricity 3

Figure 4. Distribution lines carry electricity to our homes and businesses 4
Figure 5. Western Interconnection Transmission System 5
Figure 6. The entire transmission and distribution network is like a giant swimming pool of electricity produced from thousands of generators 6
Figure 7. It is necessary to purchase capacity to transmit electricity on a transmission or distribution line. 7
Figure 8. Illustration of kilowatt usage 8
Figure 9. Consumers in Montana are divided into several classes 15
Figure 10. Generation by fuel 44
Figure 11. Electricity distribution utilities not regulated by the PSC 50
Figure 12. Electricity distribution utilities regulated by the PSC 51
Figure 13. The interstate transmission system is made up of multiple owners that control access to their piece of transmission wire 53

Table 1. Electricity players in Montana 10
Table 2. Average generation by company or governmental entity in Montana 2001-2005 45

Acknowledgments

This Electricity Law Handbook was first developed by the legislative Environmental Quality Council in 2002 and revised in 2004. In 2007, the Energy and Telecommunications Interim Committee agreed to update the document in an effort to help Montana citizens better understand our electricity laws and the most recent changes to those laws. The information contained in this handbook is a result of input and review from legislators, consumers, public interest groups, industry representatives, state regulators, and interested citizens.

Disclaimer

The Electricity Law Handbook should not be used as a legal reference. This handbook was developed to serve solely as an educational tool. When in doubt, always refer to the applicable statutes, case law, or the agency's administrative rules.

Foreword

Electricity. Shockingly, we can't do without it. It has become a necessity in our daily lives. We take it for granted until we receive our monthly power bill. Most of us don't think about where our electricity comes from or who delivers it to us unless the power goes out. However, Montana's electricity laws, especially those concerning deregulation and partial reregulation of our energy supply and environmental considerations regarding electricity generation, have evoked a lot of public attention and scrutiny over the past decade.

The morass of laws governing electricity generation, transmission, distribution, conservation, price, and consumption is complicated, sometimes conflicting, very voluminous, full of technical jargon, and downright tough to understand. We continually receive countless inquiries from Montana legislators, citizens, and businesses seeking understandable and usable information on our electricity laws.

The purpose of this handbook is to explain in a straightforward, easy-to-understand manner how electricity law works in Montana and, more importantly, how those laws impact Montana's consumers. Our goal is to encourage thoughtful, effective involvement in Montana's electricity law development and implementation.

Energy and Telecommunications Interim Committee, Fall 2008
Produced and Revised by Todd Everts, 2002 and 2004
Revised by Sonja Nowakowski, 2008

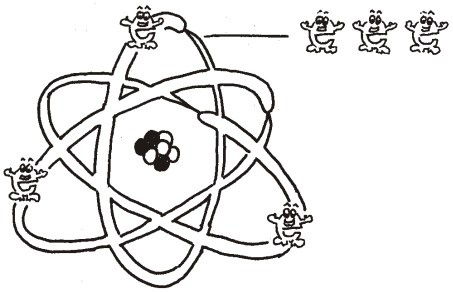
Chapter 1: Introduction: Electricity and Montanans—How Does It All Work?

A simplified primer on electricity: What is electricity? How is it generated, transmitted, and measured?

What is electricity?

Montanans, like most Americans, do not stop to think about the electricity that powers our computers, lights our houses, washes our clothes, cooks our meals, heats our houses, powers the tools that we use in our jobs, directs traffic around town, and profoundly touches all facets of our lives. Electricity is easy to take for granted because we do not see it, smell it, taste it, or feel it. Electricity is just there at our beck and call. What would life be like without electricity? The only time that we don't seem to take electricity for granted is when we pay our power bills. So what is electricity? Electricity is a form of energy. If you get down to the very basics, electricity is the flow of little charged particles, called electrons, that were separated from atoms by some outside force (see **figure 1**). The free movement of those electrons constitutes an electric CURRENT.[1] Visualize the flow of these electrons as analogous to the flow of water through a garden hose. The pressure in the garden hose is the VOLTAGE, and the amount of electrons flowing through the hose is the current or AMPERAGE. The product of the current and the voltage is the energy available to do work—WATTS.

Figure 1. Electricity is the flow of charged particles

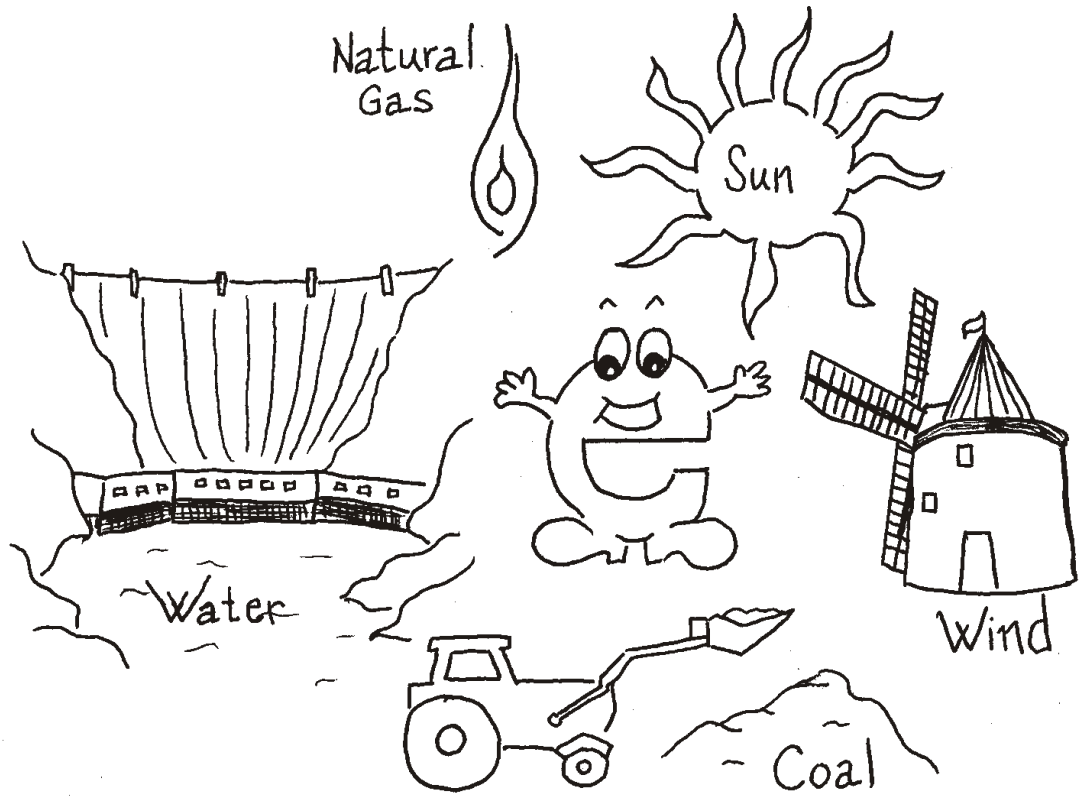


[1]Terms that are capitalized and underlined are further defined in the Glossary at the end of the publication.

How is electricity generated?

Electricity is considered a secondary source of energy. In order to produce electricity, we need to convert other sources of energy, like water, COAL, oil, NATURAL GAS, geothermal heat and steam, biomass, wind, and solar, called primary sources, into electricity (see **figure 2**). The process of converting primary sources of energy to electricity is called electricity GENERATION. When the wind blows, the water flows, the sun shines, or coal and natural gas are burned to heat water to create pressurized steam, any of these primary sources of energy creates what is called chemical or mechanical (or working) energy.

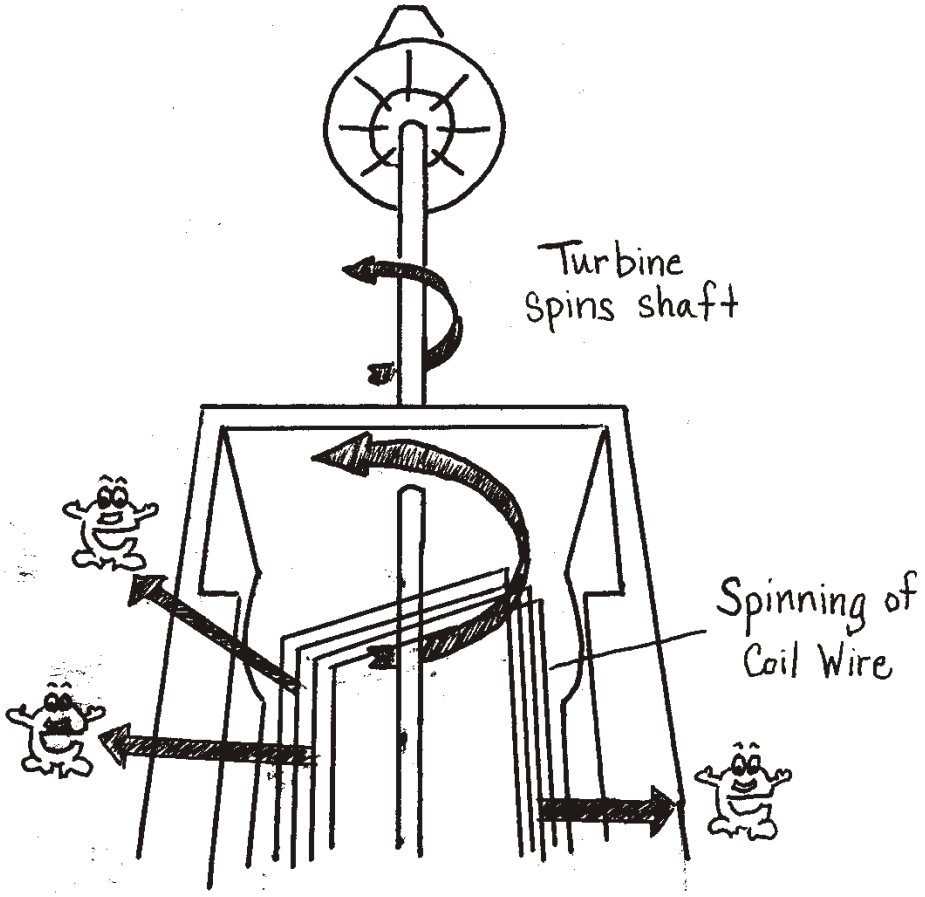
Figure 2. Electricity is produced by converting fuel sources



This workhorse energy drives a generator that converts chemical or mechanical energy to electricity by forcing electrons to separate from atoms and begin flowing over wires (see **figure 3**). Electric generators

include steam turbines, wind turbines, water turbines, gas combustion turbines, photovoltaics, FUEL cells, and internal combustion engines.

Figure 3. A generator converts chemical or mechanical energy to electricity

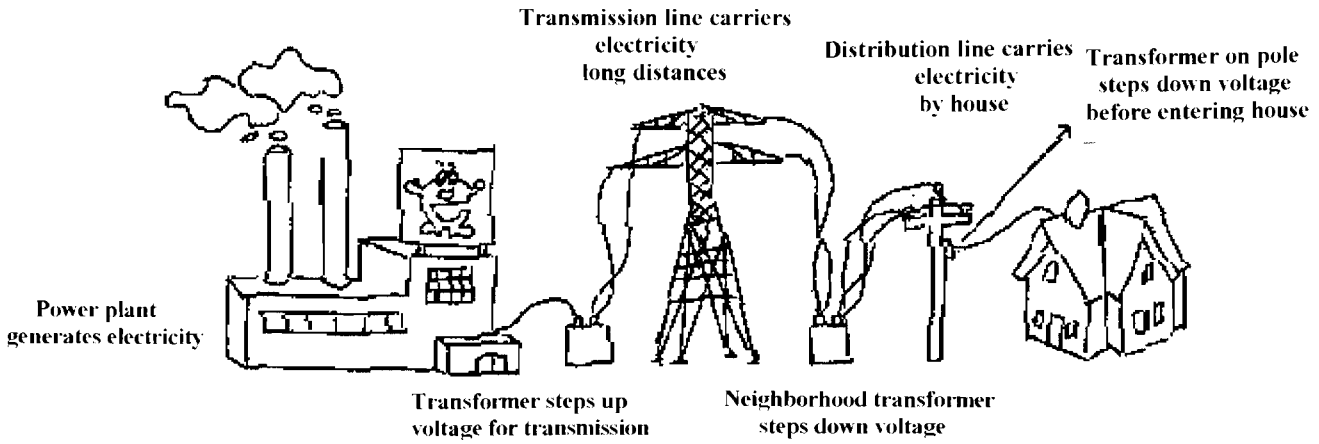


Once electricity is generated, how does it get to my house or business?

When a generator produces electricity, the electricity moves along cables to a substation that has transformers. A transformer is a device that converts electricity from HIGH VOLTAGE to low voltage or vice versa. It is more efficient to move electricity over long distances using high voltage. High-voltage electricity is transported over TRANSMISSION lines to other substations that convert high-voltage electricity into lower-voltage

electricity. From there, the lower-voltage electricity moves over DISTRIBUTION lines to our homes and businesses (see **figure 4**).

Figure 4. Distribution lines carry electricity to our homes and businesses

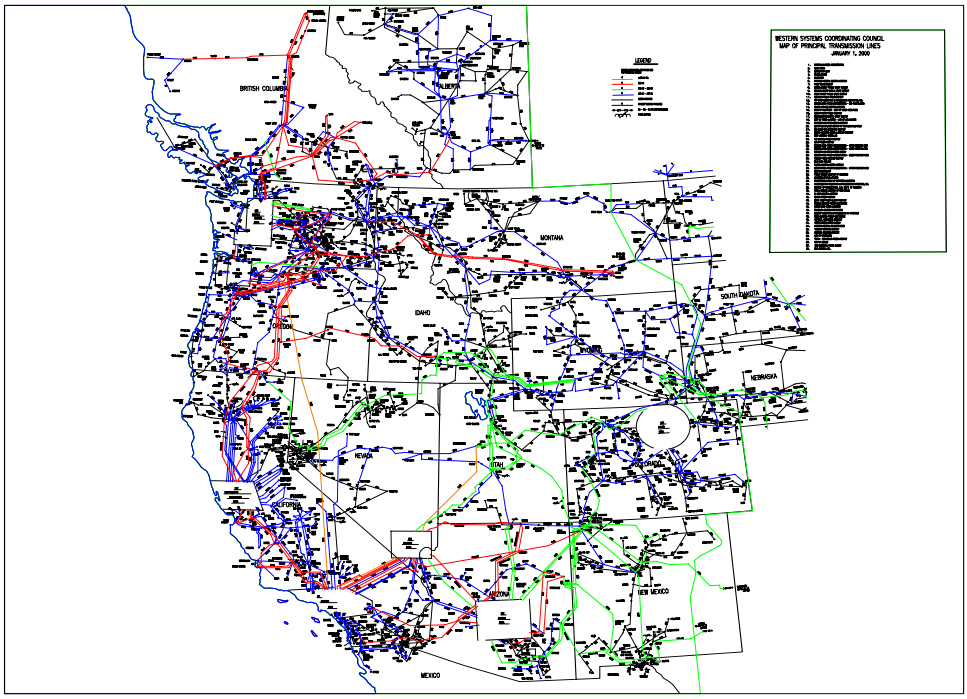


The physical operation of transporting electricity gets complicated when you think in terms of multiple generators pouring electricity onto transmission and distribution systems owned by multiple entities and then delivering that electricity to millions of customers throughout the system. How does it all work? Think of the transmission systems as interstate highways and the distribution systems as your typical two-lane roads. The interconnection of this electrical highway and road system makes up what is known as the POWER grid.

Most of Montana's transmission and distribution 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 (see **figure 5**). The key point here is that we don't produce, consume, or transmit electricity in Montana in isolation of our neighboring western states. Because Montana is interconnected, we are interdependent, and whatever happens in Washington, Oregon, or California, for example, could potentially impact us here in Montana. Being a part of the western interconnection also increases reliability in Montana.

California, for example, could potentially impact us here in Montana. Being a part of the western interconnection also increases reliability in Montana.

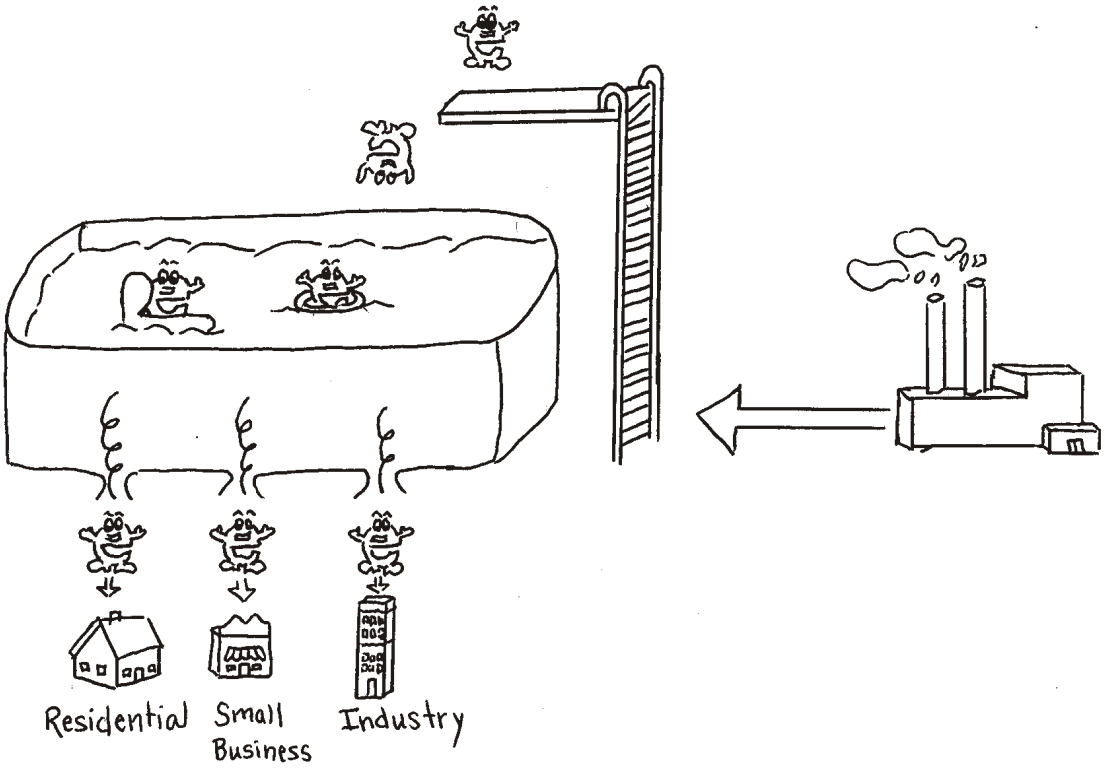
Figure 5. Western Interconnection Transmission System



How does electricity flow over this spider web network of transmission and distribution lines? Visualize the flow of electricity as pressurized water flowing down the transmission and distribution lines. When electricity is generated at a point on the system and sent to a distant point on the system, the electricity flows over all of the connected network of roads. Like water, electricity flows and distributes itself over the paths with the least amount of resistance (or impedance). It is difficult to constrain the flow of electricity to any given path. Unlike water, electricity can flow in opposite directions at the same time and over the same cable or wire. Also unlike water, electricity cannot be easily stored, so entities that generate and transmit electricity must coordinate and plan production and transmission of electricity very carefully. The amount of available energy in a particular LOAD center (an area where the electricity is being consumed) depends on the amount of electricity generated and where it's generated, as well as the amount of electrical energy that the transmission and distribution lines can carry.

The flow of electricity on the entire transmission and distribution network is really like one big giant swimming pool of electricity produced from thousands of generators (see **figure 6**). This giant swimming pool has millions of spigots that funnel the electricity to electricity users or loads (see figure 6). Once electricity has been produced and dumped into the giant transmission and distribution swimming pool, you can't tell a Montana-produced electron from a Canadian-produced electron—you can't paint a label on an electron that says something like "produced in Montana". Sometimes this swimming pool of transmission lines becomes physically congested—meaning that the lines (or the pool) are fully loaded with electrons or that the contractual rights to a particular line are fully allocated.

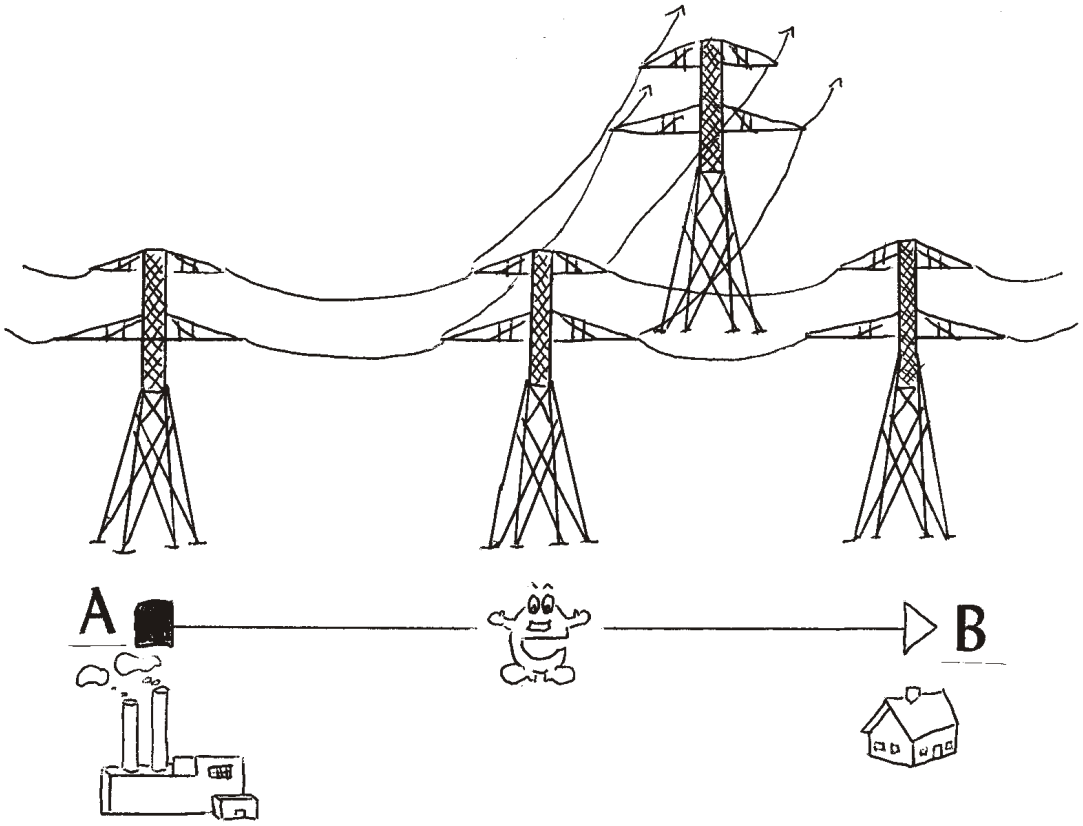
Figure 6. The entire transmission and distribution network is like a giant swimming pool of electricity produced from thousands of generators



The physical realities of electricity transmission do not necessarily reflect the way that electricity is bought, sold, and transmitted. Typically, if you want to transmit electricity produced at point A to point B, you must

purchase CAPACITY (if available) on any transmission or distribution path that connects the two points (see **figure 7**). This is called a "CONTRACT PATH". Physically, a substantial portion of that electricity may flow from point A to point B, but some of the electricity may inadvertently flow across other paths (see figure 7). The contract must account for INADVERTENT FLOWS. If you want to guarantee that your electricity gets from point A to point B, you must contract for "firm" scheduled flows of electricity over the power lines. In getting your power from point A to point B, you may have to contract with multiple transmission or distribution owners for firm transmission access.

Figure 7. It is necessary to purchase capacity to transmit electricity on a transmission or distribution line.



How is electricity measured?

If you are a typical consumer, you receive a monthly bill that quantifies the amount of electricity that you use each month. The utility installs a meter at your home or business that measures your electricity use. Electricity is measured in units of power called "watts", named after the inventor of the steam engine, James Watt. One watt is a small unit of power. One unit of HORSEPOWER is about 750 watts. The typical units of electricity measurement include:

1 kilowatt (kW) = 1,000 watts

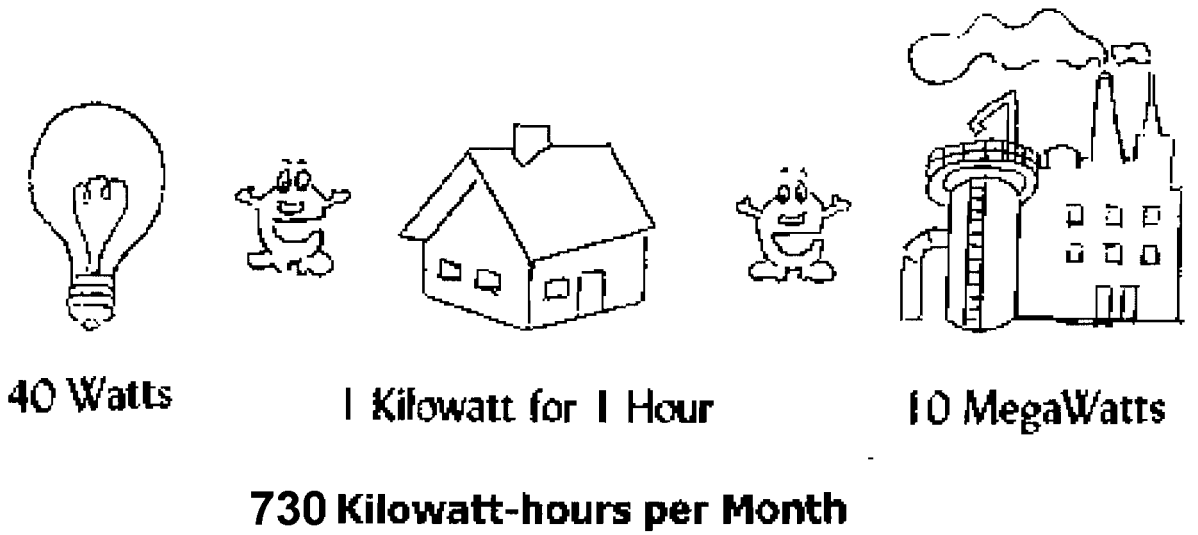
1 kilowatt hour (kWh) = the energy of 1,000 watts working for 1 hour

1 megawatt (MW) = 1,000,000 watts

1 megawatt hour (MWh) = the energy of 1,000,000 watts working for 1 hour

Figure 8 illustrates what these measurements mean in the real world.

Figure 8. Illustration of kilowatt usage



What is electricity law?

As discussed above, there are the physical laws governing electricity, but there are also statutory, administrative, and judicial laws that govern electricity. Given the large infrastructure involved in delivering such an essential service, it is no surprise that electricity law covers many different and very diverse activities that either directly or indirectly involve electricity. Broadly speaking, electricity law can be organized into four areas:

❶ statutes that articulate state, regional, and federal energy policy;

❷ statutes, rules, orders, or local ordinances that regulate or tax primary fuels, electrical generation, service, service territories, transmission, and price;

❸ statutes, rules, orders, or local ordinances that provide incentives for primary fuels, electrical generation, service, transmission, and price; and

❹ court cases that provide legal opinions on the regulation and taxation of primary fuels, electrical generation, service, service territories, transmission, and price.

In addition to these four organizational electricity law areas, there are three governmental sources of energy law:

❶ the federal government;

❷ Montana state government; and

❸ local governments in Montana.

Regional guidelines also contribute to some degree. This handbook's primary focus is on Montana state government electricity law. When possible, this handbook will explain the interrelationships between federal, regional, state, and local laws and the impact that those laws have on Montanans.

Who are the electricity players in Montana? What role do they play?

Some of the chapters of this handbook explain in more detail the electricity players in Montana, but a quick overview of all the players is helpful here. **Table 1** summarizes who the electricity players are in Montana and the role that they play in electricity law.

Table 1. Electricity players in Montana	
Type of electricity player	**Electricity role and function**
GOVERNMENTAL ENTITIES	
State Government:	
⇨ Montana State Legislature	Sets state electricity policy by passing legislation. The 2003 Legislature established the Energy and Telecommunications Interim Committee to provide legislative oversight over the Public Service Commission and to provide policy direction on energy and telecommunications issues. The legislative Environmental Quality Council also has general energy policy statutory authority.
⇨ Montana Governor's Office	Provides direction on implementation of state policies regarding electricity and energy development. Montana's Northwest Power and Conservation Council members and the Economic Development Office are entities attached to the Governor's Office that are heavily involved in electricity and energy policy issues.
⇨ Montana Public Service Commission (PSC)	The PSC has broad regulatory, supervisory, and investigative powers over investor-owned public utilities. The PSC can investigate the management of the business of all public utilities. PSC jurisdiction includes customer service and reliability standards and rates charged to retail electricity customers.
⇨ Montana Consumer Counsel	Represents Montana consumers in electric utility proceedings before the Public Service Commission.

Table 1. Electricity players in Montana	
Type of electricity player	**Electricity role and function**
⇨ Montana Department of Environmental Quality	Issues air and water permits for electrical generation facilities and regulates those facilities; conducts Montana Environmental Policy Act reviews; is responsible for the Montana Major Facility Siting Act review process for certain transmission facilities; provides assistance with energy efficiency projects; maintains an energy library facility.
⇨ Montana Department of Natural Resources and Conservation (DNRC)	Issues water right permits for electrical generation facilities and other energy developments; manages state trust lands that have mineral rights, including coal, oil, and natural gas; QUALIFYING FACILITY owner.
⇨ Montana Department of Public Health and Human Services	Operates the low-income energy assistance program.
⇨ Montana Department of Commerce Board of Investments	Offers low-interest loans for energy generation and transmission projects.
⇨ Montana Department of Commerce Energy Infrastructure, Promotions and Development Division	Facilitates the planning, development, analysis, and coordination of energy infrastructure allowing for the development of Montana's energy resources.
⇨ Montana District Courts and Supreme Court	If initiated through a lawsuit, judicially reviews and provides legal opinions on state law electricity issues in Montana.
Federal Government:	
⇨ United States Congress	Sets federal electricity policy by passing federal legislation.
⇨ FEDERAL ENERGY REGULATORY COMMISSION (FERC)	Regulates transmission and wholesale sales of electricity in interstate commerce and licenses hydroelectric projects.

Table 1. Electricity players in Montana	
Type of electricity player	**Electricity role and function**
⇨ Bonneville Power Administration (BPA)	Is a federal agency headquartered in Portland, Oregon, that markets wholesale electricity and transmission to the Pacific Northwest's public and private utilities and other customers. BPA provides about 40% of the electricity used in the Northwest and operates about three-fourths of the region's high-voltage transmission.
⇨ Northwest Power and Conservation Council	Created by federal legislation to give the citizens of Idaho, Montana, Oregon, and Washington a stronger voice in determining the future of key resources common to all four states—namely, the electricity generated at and fish and wildlife affected by the Columbia River Basin hydroelectric dams.
⇨ Regional Transmission Organizations (RTO)	Formed under a FERC order to manage the transmission of electricity in specific regions of the United States.
⇨ Western Area Power Administration (WAPA)	Markets and delivers reliable, cost-based hydroelectric power and related services within a 15-state region of the central and western U.S. In Montana, WAPA generates electricity from Canyon Ferry, Fort Peck, and Yellowtail hydrofacilities.
⇨ U.S. Federal District Courts, Court of Appeals	If initiated through a lawsuit, judicially reviews and provides legal opinions on federal electricity law issues.
Local Government:	
⇨ Montana cities, towns, and counties	Can impact electrical generation through local taxation and zoning. Local governments are also consumers of electricity. One municipality (the city of Troy) is its own PUBLIC UTILITY. The cities of Great Falls, Helena, and Missoula are licensed electricity suppliers, but Great Falls is the only currently active supplier.

Table 1. Electricity players in Montana	
Type of electricity player	**Electricity role and function**
ELECTRIC UTILITIES	
⇨ Montana Electric Cooperative Utilities	There are 26 not-for-profit distribution electric cooperatives in the State of Montana that are locally owned and operated by their cooperative members with about 216,846 meters served. The elected board of each cooperative makes electricity policy and pricing decisions. Electric cooperatives are not regulated by the Montana Public Service Commission.
⇨ NorthWestern Energy LLC Utility	An investor-owned public utility that provides electricity transmission, distribution, and supply services. They serve 339,938 electric customers and 185,980 natural gas customers. A customer is considered a meter, so some homes may have more than one. This utility is regulated by the Public Service Commission.
⇨ Montana-Dakota Utilities Co.	An investor-owned public utility that provides electricity supply, transmission, and distribution services to 24,320 customers (meters) in Montana. This utility is regulated by the Public Service Commission.
⇨ City of Troy Municipal Electric Utility	Montana's only municipal electric utility. Rate and policy decisions are made by the city's governing body.
ELECTRICITY SUPPLIERS THAT PROVIDE ELECTRICITY TO MONTANANS	
⇨ PPL Montana	An exempt wholesale generator in Montana that owns and operates 11 hydroelectric plants along the Missouri River, the Flathead River, the Clark Fork River, Rosebud Creek, and the Madison River. In the summer, these (PPL) dams have 595 megawatts of generating capacity, and in the winter capacity is 576 megawatts. PPL Montana also has ownership interests in Colstrip and J. E. Corrette coal-fired electrical generation plants, totaling about 683 megawatts of generating capacity. PPL EnergyPlus markets the energy to end users in Montana. PPL Montana is regulated by FERC.

Table 1. Electricity players in Montana	
Type of electricity player	**Electricity role and function**
⇨ Qualifying Facilities	Federal legislation and avoided-cost rates established by the Montana PSC facilitated the emergence of small, nonutility electricity generating companies called qualifying facilities. In Montana, we have about 20 qualifying facilities that produce about 100 megawatts of electricity.
⇨ Green Electricity Buying Cooperative	A statewide cooperative created under state law to act as an electrical energy supplier and promoter of RENEWABLE ENERGY and conservation. It is not currently supplying electricity to Montanans and is exploring conservation and other options.
⇨ Montana Electric Cooperative Utilities	There are four not-for-profit electric cooperatives in the State of Montana that either buy electricity on the wholesale markets on behalf of their member retail distribution co-ops or represent them in negotiations with wholesale power suppliers.
⇨ Federal Agencies	BPA, Mission Valley Power, and Western Area Power Administration account for 16% of the electricity sold in Montana.
⇨ Other Energy Suppliers	Other investor-owned utilities supplying Montana customers with electricity include Avista, Black Hills Power, and Energy Northwest. The city of Great Falls also is a supplier.
MONTANA CONSUMERS (End Users)	
⇨ Residential Consumers	Montana residential consumers are private households.
⇨ Commercial Consumers	Montana commercial consumers are nonmanufacturing business establishments, including motels; restaurants; wholesale businesses; retail stores; health, social, and educational institutions; and local, state, and federal governments.
⇨ Industrial Consumers	Montana industrial consumers are manufacturing, construction, mining, agriculture, fishing, and forestry establishments.

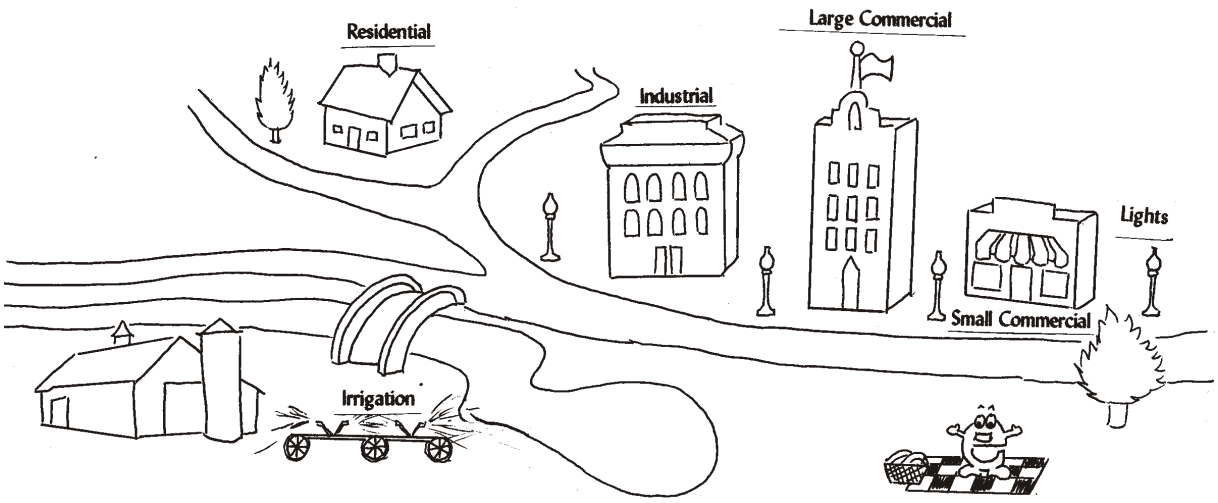
Chapter 2: The Montana Electricity Consumer

Who and what is a "Montana electricity consumer"?

Montana electricity consumers come in all shapes and sizes. Typical Montana electricity consumers include residential, small commercial, large industrial, local schools, cities, towns, hospitals, agricultural operations, large retail outlets, universities, and state and federal government operations and buildings. Montana consumers are divided into classes based on factors such as volume of electricity use, transformer and voltage needs, when and how the consumer uses electricity, the location of the consumer, the timing of electricity consumption, etc. Consumers in Montana are often divided into the following classes: residential, industrial, large commercial, small commercial, lighting, and irrigation (see **figure 9**).

The type of consumer that you are dictates your share of the electricity transmission, distribution, and supply costs that you pay.

Figure 9. Consumers in Montana are divided into several classes



Which electricity laws protect you as a Montana consumer? How do they work?

Electricity has become one of modern life's basic necessities. Power outages not only can cause extensive economic damage, but can result in physical harm and death. Electricity prices can dramatically impact almost every facet of Montana's economy. Most of Montana's electricity consumers do not have a choice of who provides them with electricity or who transmits and distributes that electricity. Electricity potentially impacts the health, safety, and welfare of every single Montanan. For all of these reasons, electricity transmission, distribution, generation, reliability, metering, billing, etc., have traditionally been highly regulated activities in Montana and the United States generally. These regulations are designed to protect Montana consumers while ensuring that the entities that serve those customers recover their legitimately incurred costs or receive a reasonable rate of return for their electricity services. The type of consumer protection laws that apply to you depend on what type of entity you receive your electricity and electricity services from.

Public Utility Customers

If you are a customer of a Montana public utility, such as NorthWestern Energy or Montana-Dakota Utilities Co., you can look to the Montana Public Service Commission (PSC) as the state statutory agency that is charged with ensuring that Montana public utilities provide adequate service at reasonable rates. The Montana Consumer Counsel is the constitutional entity that is responsible for representing residential and small business interests in matters before the PSC.

The PSC has very broad regulatory, supervisory, and investigative powers over public utilities. The PSC can investigate the management of the business of all public utilities. It can investigate and inspect the books, accounts, papers, records, and memoranda of any public utility and can examine under oath any officer or employee of a public utility. The PSC is charged with investigating accidents at public utilities. It may formally investigate complaints filed against a public utility. The PSC sets standards for electricity products and services, including discontinuation and

reestablishment of service. The PSC is charged with encouraging efficient utility operations, effective use of utility services, and efficient rates. It ensures that every public utility furnishes reasonably adequate electricity services and facilities and reasonable and just prices.

When the PSC sets electricity rates, it must provide public notice of the proposed changes and conduct a hearing on those proposed changes. Electricity customers affected by the proposed change in rates may formally intervene and participate in the rate case proceeding or participate more informally by submitting comments to the PSC either in writing or in person at the public hearing.

Electric Cooperative Customers

If you are a customer of a Montana electric cooperative, you are considered a part owner of that cooperative. Electric cooperatives are not-for-profit entities that are democratically controlled (one person/one vote) by the members of the cooperative. Electric cooperatives are not regulated by the PSC. The electric cooperatives are self-regulated by their members. Cooperative members democratically elect a board of directors that sets customer protection policies and establishes the rates for electricity distribution and supply.

Municipal Utility Customers

A municipal electric utility has the power and authority to regulate, establish, and change, as it considers proper, rates, charges, and classifications imposed for electricity services to its citizens. Rates and charges must be reasonable and just. If a municipality proposes a change in electricity rates, it must hold a public hearing. A municipal electric utility is required to adopt rules with the concurrence of the governing body of the municipality for the operation of the utility that protects municipal customers.

Who is the Montana Consumer Counsel? What is the Montana Consumer Counsel's role?

The Montana Consumer Counsel is a state office created by the Montana Constitution. Under Article XIII, section 2, of the Constitution, the Consumer Counsel is charged with the duty of representing consumer interests in hearings before the PSC or any other successor agency. The Consumer Counsel office is made up of five individuals. There is a Legislative Consumer Committee made up of four legislators that appoints and advises the Consumer Counsel. The goals of the Consumer Counsel are to:

- represent Montana consumers in public utility and transportation proceedings before the PSC;
- represent Montana consumers in appropriate proceedings before the Federal Energy Regulatory Commission, Federal Communications Commission, and other federal administrative agencies;
- represent Montana consumers in appropriate state and federal court proceedings;
- monitor proposed legislation and participate in the legislative process for Montana consumers before the Montana Legislature and U.S. Congress; and
- participate in activities that will help develop competitive markets in restructured utility industries.

If you have any questions or concerns regarding the activities that the Consumer Counsel is involved in or should be involved in, contact the Consumer Counsel by telephone at (406) 444-2771 or by e-mail at robnelson@mt.gov.

Are there laws and programs that help low-income Montana electricity consumers?

There are private and governmental programs in Montana that assist low-income electricity consumers. Mechanisms for assisting low-income

consumers include bill discounts, deferred or delayed payment, direct financial assistance, and home weatherization programs. Many of the low-income electricity programs are funded either through federal money allocated to the state or through a universal system benefits program (USBP) charge assessed to electricity and gas consumers. The entities that provide these low-income electricity assistance services are described below.

Low-Income Energy Assistance Program (LIEAP)

LIEAP is a federal program administered by the State of Montana that pays a portion of eligible households' winter heating costs. In most cases, payments are made directly to utility companies and fuel vendors. The state Department of Public Health and Human Services (DPHHS) administers LIEAP throughout Montana. LIEAP is operated by 10 private, nonprofit Human Resource Development Councils (HRDCs) and one Area Agency on Aging. Eligibility for LIEAP funds is limited to those at or below 150% of the federally defined poverty level. The maximum amount that a family of four can earn in order to be eligible for LIEAP funds in 2007 is $30,975.

LIEAP also provides funding for low-income household weatherization. Weatherization includes heating system tuneups, air infiltration reduction, and attic, wall, and floor insulation. The weatherization program is operated statewide by 10 private, nonprofit HRDCs and two tribal governments.

For LIEAP contact information, see Appendix A.

Energy Share of Montana

Energy Share of Montana is a nonprofit organization funded by USBP dollars and private and corporate donations. Energy Share helps Montanans faced with energy emergencies meet their needs by providing bill assistance, furnace safety, and weatherization. Energy Share also has an endowment designed to assist with energy emergency needs of future generations.

Energy Share works with HRDCs to determine eligibility. Energy Share's private funds have no income eligibility restrictions. In order to receive USB assistance from Energy Share, an individual or family must have an annualized income of 150% of the defined poverty level or less, with documented exceptions. For any of Energy Share's funds, successful bill assistance applicants must meet the following guidelines:

- An external force damages the home, causing it to be difficult to heat.
- Hazardous or potentially hazardous conditions exist in the household's heating system.
- The household's source of heating is threatened.

The recommended maximum amount of financial assistance from Energy Share is $700. Assistance from Energy Share is provided only once in a lifetime, unless there are unusual or extreme circumstances or a portion of assistance is repaid.

From time to time, Energy Share also does other pilot projects that benefit low-income families. For Energy Share contact information, see Appendix A.

Local Human Resource Development Councils

Local HRDCs are private, nonprofit local organizations that play a critical role in operating LIEAP programs and determining LIEAP and Energy Share eligibility. The HRDCs also operate the low-income weatherization programs across the state.

For HRDC contact information, see Appendix A.

Public Utilities and Electric Cooperatives

Public utilities and some electric cooperatives assist low-income Montanans by providing their LIEAP customers with an additional discount on their electric bills. Discounts range from 15% to 30%, depending on the utility and the fuel source. Some utilities and cooperatives also provide flexible payment options and make every effort to avoid discontinuing

electric service. Public utilities and electric cooperatives also help fund low-income weatherization.

For public utility and electric cooperative contact information, see Appendix A.

Chapter 3: The Fuels That Feed Montana's Electric Energy Engine

What are the fuels or processes that produce electricity in Montana?

As explained in Chapter 1, electricity is considered a secondary source of energy. It takes another source of energy to produce electricity. In Montana, we have such primary sources of energy as water, coal, petroleum, natural gas, geothermal heat and steam, biomass, wind, and the sun that are converted into a usable form of working energy that drives an electric generator. Primary sources of energy can be further broken down into renewable and nonrenewable sources. Renewable energy is obtained from sources that are essentially sustainable, unlike, for example, FOSSIL FUELS such as coal and natural gas, of which there is a finite supply. Renewable energy sources include falling water, geothermal steam or heat, biomass, wind, and the sun. In Montana, we are endowed with an abundance and a variety of primary sources of energy. Montana's coal reserves total 119.2 billion tons, roughly 25% of the United States' total reserves. Montana has also been described as the Saudi Arabia of wind. We have an extensive system of hydroelectric dams. We are a resource-rich state when it comes to fuels that can and do feed Montana's electric energy engines.

What are the laws that regulate, tax, and provide incentives for electricity production fuel sources?

A variety of state laws have evolved over time to regulate, tax, and provide incentives for the extraction of primary sources of energy used in the production of electricity. The list of these laws is voluminous and will not be recited in its entirety in this handbook. Generally, Montana law allows for controlled energy resource extraction and allocation. The regulatory controls are usually in the form of environmental restrictions. Incentives for energy resource extraction and development are in the form of tax incentives or low-interest state loans. Set out below is a very abbreviated, noninclusive summary of state laws, organized by energy source, that

regulate the extraction and 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:

❶ **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.

❷ **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.

❸ **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.

❹ **"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)

❺ **"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)

❻ 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)

❼ **"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)

❽ **"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)

❾ **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)

❿ **"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:

❶ **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.

❷ **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)

❸ **"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)

❹ **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)

Incentives for Advanced Coal Technologies:

❶ **Property tax abatement for equipment**: Provides an abatement from property taxation of clean advanced coal research and development equipment, up to the first $1 million of the value of the equipment, of 50% of the taxable value for the first 15 years after the equipment is purchased. Equipment placed into service after June 30, 2007, is eligible. The total time may not exceed 19 years, and there are additional conditions. The equipment must be certified by the Department of Environmental Quality. (Title 15, chapter 24, part 31, MCA).

❷ **Property tax abatement for facilities:** Provides an abatement from property taxation on coal gasification facilities that sequester at least 65% of the carbon dioxide produced at the operation of 50% of the taxable value for the first 15 years after the facility commences operation. Construction of the facility must have commenced after June 1, 2007. The total time may not exceed 19 years, and there are additional conditions.

Integrated gasification combined cycle facilities that apply for a permit after December 31, 2014, do not qualify. (Title 15, chapter 24, part 31, 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)

❹ **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)

❺ **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, establishes notice requirements for 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)

❻ **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)

❼ **"Montana Water Use Act":** Establishes 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:

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

❷ **"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)

❸ **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)

Incentives for Advanced Technologies:

❶ **Property tax abatement for facilities**: Provides an abatement from property taxation of natural gas combined cycle facilities that offset a portion of the carbon dioxide produced through carbon offsets of 50% of the taxable value for the first 15 years after the facility commences operation. Construction of the facility must have commenced after June 1, 2007. The total time may not exceed 19 years, and there are additional conditions. (Title 15, chapter 24, part 31, MCA)

GEOTHERMAL

Regulatory State Laws Impacting Geothermal Development:

❶ 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.

❷ **"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 (7.3 megawatts) go through a siting certification process. (Title 75, chapter 20, MCA)

❸ **Geothermal exploration:** Directs the Board of Environmental Review to regulate geothermal exploration. (75-20-1001, MCA)

❹ **"Montana Water Use Act":** Establishes an application and permitting process administered by DNRC for the appropriation of water. (Title 85, chapter 2, parts 3 and 4, MCA)

Taxation of Geothermal:

❶ All property of a geothermal facility is class fourteen property taxed at 3% of its market value. (15-6-157, MCA)

Incentives for Geothermal Development:

❶ **Tax credit:** Provides for a credit against individual income tax liability for taxpayers constructing a new residence who install a geothermal system (heat pump) in the taxpayer's principal dwelling or in a residence constructed by the taxpayer. 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 **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 or net metering system that generates electricity by means of an alternative renewable resource. 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 alternative energy. If this tax credit is claimed, other related tax credits and property tax reductions may not apply. (15-32-402, MCA)

❹ **"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)

❺ **Property tax exemption:** New generating facilities built in Montana with a nameplate capacity of less than 1 megawatt and using alternative renewable energy sources are exempt from property taxes for 5 years after start of operation. (15-6-225, MCA)

❻ **Property tax reduction:** Generating plants using alternative fuels that produce at least 1 megawatt are taxed at 50% taxable value during the first 5 years after the construction permit is issued. (Title 15, chapter 24, part 14, MCA)

❼ **Alternative energy revolving loan program:** Provides loans to individuals, small businesses, units of local government, units of the university system, and nonprofit organizations to install alternative energy systems that generate energy for their own use or for capital investments for energy conservation purposes when done in conjunction with alternative energy systems. Loans up to a maximum of $40,000 must be repaid within 10 years. The rate for 2007 is 5%. (75-25-101, MCA)

❽ **Property tax abatement for facilities**: Provides an abatement from property taxation of geothermal facilities of 50% of its taxable value for the first 15 years after the facility commences operation. Construction of the facility must have commenced after June 1, 2007. The total time may not exceed 19 years, and there are additional conditions. (Title 15, chapter 24, part 31, MCA)

❾ **Tax exemption**: Provides for the appraised value of a capital investment in a nonfossil form of energy generation to be exempt from taxation for 10 years on $20,000 in a single-family residential dwelling or $100,000 in a multifamily residential dwelling or nonresidential structure. (15-6-224, MCA)

WIND

Regulatory State Laws Impacting Wind Development:

❶ **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)

❷ 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.

Taxation of Wind:

❶ Wind generation facilities with a nameplate capacity greater than 1 megawatt are generally class fourteen property taxed at 3% of market value. (15-6-157, MCA)

❷ **Impact fee:** Owners and operators of wind generation facilities for commercial purposes are subject to an initial local government and local school impact fee for the first 3 years after construction begins. The fee may not exceed .5% of the total construction cost. (15-24-3004, MCA)

Incentives for Wind Development:

❶ **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)

❷ **Tax exemption**: Provides for the appraised value of a capital investment in a nonfossil form of energy generation to be exempt from taxation for 10 years on $20,000 in a single-family residential dwelling or $100,000 in a multifamily residential dwelling or nonresidential structure. (15-6-224, MCA)

❸ **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 or net metering system that generates electricity by means of an alternative renewable resource. 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 alternative energy. If this tax credit is claimed, other related tax credits and property tax reductions may not apply. (15-32-402, MCA)

❹ **Property tax exemption:** New generating facilities built in Montana with a nameplate capacity of less than 1 megawatt and using alternative renewable energy sources are exempt from property taxes for 5 years after start of operation. (15-6-225, MCA)

❺ **Property tax reduction:** Generating plants using alternative fuels that produce at least 1 megawatt are taxed at 50% taxable value during the first 5 years after the construction permit is issued. (Title 15, chapter 24, part 14, MCA)

❻ **Alternative energy revolving loan program:** Provides loans to individuals, small businesses, units of local government, units of the university system, and nonprofit organizations to install alternative energy systems that generate energy for their own use or for capital investments for energy conservation

purposes when done in conjunction with alternative energy systems. Loans up to a maximum of $40,000 must be repaid within 10 years. The rate for 2007 is 5%. (75-25-101, MCA)

❼ **Net metering:** NorthWestern Energy must allow net metering if a customer chooses to generate his or her own energy using solar, wind, or hydropower to offset customer requirements for electricity. Its generating capacity can't be greater than 50 kilowatts. Electric cooperatives also offer net metering. (Title 69, chapter 8, MCA)

SOLAR

Regulatory State Laws Impacting Solar Development:

❶ **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:

❶ **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)

❷ **Tax exemption**: Provides for the appraised value of a capital investment in a nonfossil form of energy generation to be exempt from taxation for 10 years on $20,000 in a single-family

residential dwelling or $100,000 in a multifamily residential dwelling or nonresidential structure. (15-6-224, MCA)

❸ **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 or net metering system that generates electricity by means of an alternative renewable resource. 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 alternative energy. If this tax credit is claimed, other related tax credits and property tax reductions may not apply. (15-32-402, MCA)

❹ **Property tax exemption:** New generating facilities built in Montana with a nameplate capacity of less than 1 megawatt and using alternative renewable energy sources are exempt from property taxes for 5 years after start of operation.(15-6-225, MCA)

❺ **Property tax reduction:** Generating plants using alternative fuels that produce at least 1 megawatt are taxed at 50% taxable value during the first 5 years after the construction permit is issued. (Title 15, chapter 24, part 14, MCA)

❻ **Alternative energy revolving loan program:** Provides loans to individuals, small businesses, units of local government, units of the university system, and nonprofit organizations to install alternative energy systems that generate energy for their own use or for capital investments for energy conservation purposes when done in conjunction with alternative energy systems. Loans up to a maximum of $40,000 must be repaid within 10 years. The rate for 2007 is 5%. (75-25-101, MCA)

❼ **Net metering:** NorthWestern Energy must allow net metering if a customer chooses to generate his or her own energy using

solar, wind, or hydropower to offset customer requirements for electricity. Its generating capacity can't be greater than 50 kilowatts. Electric cooperatives also offer net metering. (Title 69, chapter 8, MCA)

FALLING WATER (HYDROELECTRIC FACILITIES)

Regulatory State and Federal Laws Impacting Hydroelectric Development:

❶ 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.

❷ 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.

❸ 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:

❶ **Net metering:** NorthWestern Energy must allow net metering if a customer chooses to generate his or her own energy using solar, wind, or hydropower to offset customer requirements for electricity. Its generating capacity can't be greater than 50 kilowatts. Electric cooperatives also offer net metering. (Title 69, chapter 8, MCA)

❷ **Property tax exemption:** New generating facilities built in Montana with a nameplate capacity of less than 1 megawatt and using alternative renewable energy sources are exempt from property taxes for 5 years after start of operation. (15-6-225, MCA)

❸ See additional incentives in Chapter 4.

BIOMASS

Regulatory State Laws Impacting Biomass Development:

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

Taxation of Biomass:

❶ All property of a biomass gasification facility is class fourteen property taxed at 3% of its market value. (15-6-157, MCA)

Incentives for Biomass Development:

❶ **Tax exemption**: Provides for the appraised value of a capital investment in biomass combustion devices to be exempt from

taxation for 10 years on $20,000 in a single-family residential dwelling or $100,000 in a multifamily residential dwelling or nonresidential structure. (15-6-224, MCA)

❷ **Property tax exemption:** New generating facilities built in Montana with a nameplate capacity of less than 1 megawatt and using alternative renewable energy sources are exempt from property taxes for 5 years after start of operation. (15-6-225, MCA)

❸ **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)

❹ **Property tax abatement for facilities**: Provides an abatement from property taxation of biomass gasification facilities of 50% of its taxable value for the first 15 years after the facility commences operation. Construction of the facility must have commenced after June 1, 2007. The total time may not exceed 19 years, and there are additional conditions. (Title 15, chapter 24, part 31, MCA)

❺ **Alternative energy revolving loan program:** Provides loans to individuals, small businesses, units of local government, units of the university system, and nonprofit organizations to install alternative energy systems that generate energy for their own use or for capital investments for energy conservation purposes when done in conjunction with alternative energy systems. Loans up to a maximum of $40,000 must be repaid within 10 years. The rate for 2007 is 5%. (75-25-101, MCA)

❻ **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 or net metering system that generates electricity by means of an alternative renewable resource. 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 alternative energy. If this tax credit is claimed, other related tax credits and property tax reductions may not apply. (15-32-402, MCA)

❼ **Property tax reduction:** Generating plants using alternative fuels that produce at least 1 megawatt are taxed at 50% taxable value during the first 5 years after the construction permit is issued. (Title 15, chapter 24, part 14, MCA)

Ethanol and Biodiesel

Regulatory State Laws Impacting Ethanol and Biodiesel Development:

❶ Associated activities surrounding ethanol and biodiesel development that affect air or water quality may require permits from DEQ. Licensing requirements for suppliers also are established.

Taxation of Ethanol and Biodiesel:

❶ All property of a biodiesel production or ethanol production facility that commences construction after June 1, 2007, is class fourteen property taxed at 3% of its market value. (15-6-157, MCA)

Incentives for Ethanol and Biodiesel Development:

❶ **Property tax abatement:** Provides for the classification of personal or real property used in the production of ethanol-blended fuel, during construction and for the first 3 years of operation, as class five property, taxable at 3% of market value. (15-6-135, MCA)

❷ **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. (15-6-220, MCA)

❸ **Fuel use:** All branches of state government and state institutions of higher education owning or operating a motor vehicle capable of burning ethanol-blended fuel must take reasonable steps to ensure that ethanol-blended fuel when commercially available is used. (2-17-414, MCA)

❹ **Tax incentive:** ("Ethanol Tax Incentive and Administration Act of 1983") Establishes various tax incentives for the production of ethanol to be blended for ethanol-blended gasoline and provides for a system of recordkeeping. (Title 15, chapter 70, part 5, MCA)

❺ **Tax incentive:** Establishes various tax incentives for biodiesel producers. (Title 15, chapter 70, part 6, MCA)

❻ **Tax credit:** Establishes various tax credits for biodiesel production, blending, and storage. (Title 15, chapter 32, part 7, MCA)

❼ **Tax refund:** Ethanol distributors may see a refund of the gasoline license tax. (15-70-221, MCA) A biodiesel distributor may see a refund equal to 2 cents a gallon on the fuel tax on biodiesel made from Montana ingredients. The owner or operator of a retail motor fuel outlet may claim a refund of 1 cent a gallon. (15-70-369, MCA)

❽ Requires use of gasoline blended with ethanol once Montana produces 40 million gallons of denatured ethanol. (82-15-121, MCA) Triggers reduction in motor fuel tax on ethanol-blended gasoline. (15-70-204, MCA)

❾ **Tax credit**: 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 E-85. (15-30-164, MCA)

❿ Property tax abatement for facilities: Provides an abatement from property taxation of ethanol and biodiesel production facilities of 50% of its taxable value for the first 15 years after the facility commences operation. Construction of the facility must have commenced after June 1, 2007. The total time may not exceed 19 years, and there are additional conditions. (Title 15, chapter 24, part 31, MCA)

COGENERATION:

Regulatory State Laws Impacting Cogeneration Development:

❶ 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)

❷ 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 Hydrogen:

❶ **Alternative energy revolving loan program:** Provides loans to individuals, small businesses, units of local government, units of the university system, and nonprofit organizations to install alternative energy systems, including fuel cells that do not require hydrocarbon fuel, that generate energy for their own use or for capital investments for energy conservation purposes when done in conjunction with alternative energy systems. Loans up to a maximum of $40,000 must be repaid within 10 years. The rate for 2007 is 5%. (75-25-101, MCA)

❷ **Property tax exemption:** New generating facilities built in Montana with a nameplate capacity of less than 1 megawatt and using alternative renewable energy sources, including fuel cells that don't use hydrocarbons, are exempt from property taxes for 5 years after start of operation. (15-6-225, MCA)

❸ **Property tax reduction:** Generating plants using alternative fuels that produce at least 1 megawatt are taxed at 50% taxable value during the first 5 years after the construction permit is issued. (Title 15, chapter 24, part 14, MCA)

❹ **Tax exemption**: Provides for the appraised value of a capital investment in a nonfossil form of energy generation, including fuel cells that don't require hydrocarbon fuel, to be exempt from taxation for 10 years on $20,000 in a single-family residential

dwelling or $100,000 in a multifamily residential dwelling or nonresidential structure. (15-6-224, MCA)

❺ **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, including fuel cells that don't require hydrocarbon fuel. The credit may not exceed $500. (15-32-201, MCA)

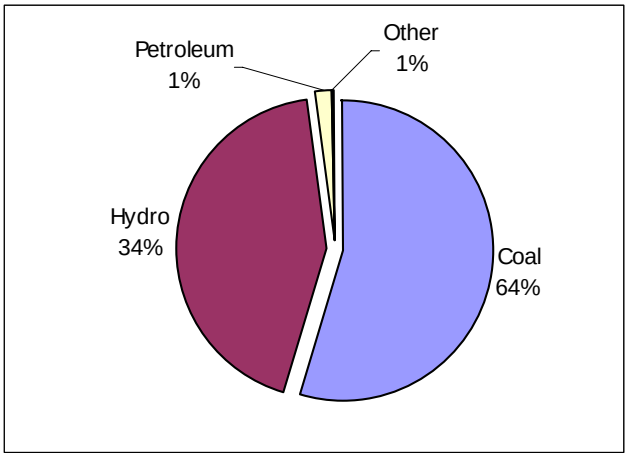
❻ **Tax credit**: Income tax credit for an individual or business (up to $500 for vehicle weight of 10,000 pounds or $1,000 for heavier vehicles) for conversion of a vehicle to use alternative fuels, including hydrogen. (15-30-164, MCA)

Chapter 4: Generating Electricity in Montana

How is electricity generated in Montana?

Montana currently has 44 generating facilities located across the state with nameplate generating capacity of 5,500 megawatts (DEQ, 2007). Coal-fired generation made up 64% of Montana's generation capacity in 2005. Hydrofacilities accounted for 34%, petroleum coke made up less than 1%, and natural gas and wind accounted for the remainder (DEQ, 2007). Since the most recent compilation of the statistics (see **figure 10**), other projects have come online. For example, the 116-megawatt Hardin Generating Station, owned by Rocky Mountain Power, began operating in April 2006. Additional generating facilities to recently come online include, but aren't limited to, the 19.5-megawatt Diamond Willow Wind Farm near Baker.

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 52% of the electricity generated in the state, making Montana a net exporter of electricity. 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 43% of Montana's power production. The

Bonneville Power Administration (BPA) and the Western Area Power Administration (WAPA) own plants that generate about 16% of Montana's power production, some of which goes to electric cooperatives in state, and the rest is moved out of state. The bulk of the remaining power in the state (30.5%) is owned by PPL Montana. Past Legislatures created a variety of statutory incentives to build additional electricity generation in various forms in the state.

Table 2. Average generation by company or governmental entity in Montana 2001-2005

Average Generation by Company, 2001-2005
Source: Department of Environmental Quality

Company	aMW	Percent
PPL Montana[1,2]	906.8	30.5%
Puget Sound Power & Light[2]	561.8	18.9
Avista[2]	356.9	12.0
Bonneville Power Administration[3]	309.8	10.4
Portland General Electric[2]	245.6	8.3
NorthWestern Energy [2,4]	185.6	6.2
Western Area Power Administration[3]	157.7	5.3
PacificCorp[2]	125.7	4.2
Yellowstone Energy Partnership	45.6	1.5
Montana-Dakota Utilities	36.8	1.2
Colstrip Energy Partnership	31.7	1.06
MT DNRC	4.8	.16
Tiber LLC	3.5	.12
Northern Lights Cooperative	2.8	.09
Hydrodynamics	0.8	.03
NWE QF — other hydro[5]	0.7	.03
Mission Valley Power	0.2	.007
NWE QF — wind[5]	0.1	.003
Mission Valley Power	0.1	.003
TOTAL	2,977	100.0%

[1] PPL Montana plants were owned by MPC until mid-December 1999.
[2] 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. In late 2007 NWE announced plans to acquire an additional 143 megawatts of capacity from Colstrip.
[3] Distributes power generated at U.S. Corps of Engineers and U.S. Bureau of Reclamation dams.
[4] MPC sold its plants, contracts, and leases to NWE in February 2002.
[5] NWE plants and contracts were owned by Montana Power Company until

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.

Pursuant to 69-3-1201 through 69-3-1206, 69-8-419, and 69-8-420, MCA, and PSC rules, NorthWestern Energy and Montana-Dakota Utilities Co. (MDU) submit their long-range plans for acquiring electricity supply resources to the PSC for review and comment every 2 years. If either utility 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.

In the case of MDU, the PSC must determine whether a generation facility that is proposed to be included in the rate base 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, 69-3-109, and 69-3-201, MCA, for additional details.

In the case of NorthWestern Energy, the utility may request PSC approval of an electricity supply resource acquisition, which could be a generation facility, either prior to the acquisition or after the fact. The PSC may approve or deny the request in whole or in part. The PSC may approve the acquisition if it finds that procurement of the resource is in the public interest and is consistent with the statutory requirements and objections in 69-8-419 and 69-3-201, MCA, and with PSC rules. If the PSC approves a

NorthWestern Energy resource acquisition, it may not subsequently disallow the utility's recovery of the approved costs associated with the resource.

What laws tax the generation of electricity in Montana?

There are a variety of property taxes, corporate license and income taxes, and equipment taxes that the state and local governments assess on 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 in 1997, 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) With certain exceptions, the Legislature also exempted an electrical generation facility and related facilities constructed after May 5, 2001, and before January 1, 2006, from property taxation. The tax exemption has not been extended to plants built after January 1, 2006. (Title 15, chapter 24, part 30, 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. **Exempted** electrical generation facilities from the Montana Major Facility Siting Act.

2. **Revenue bonds:** Electrical energy generation facilities, regardless of size or fuel source, are eligible for county or municipal revenue bonds issued to finance economic development projects. (Title 90, chapter 5, part 1, MCA)

3. **Tax credit:** A new or expanding corporation manufacturing energy by means of an alternative renewable energy source

may be eligible for the new or expanded industry tax credit against corporate income tax. The credit is equal to 1% of new wages paid in the state during the first 3 years of operation. (Title 15, chapter 31, part 1, MCA)

4. **Research and commercialization loans and grants:** The Board of Research and Commercialization Technology gives grants and loans for renewable resource and clean coal research and development. (Title 90, chapter 3, part 10, MCA)

5. **Microbusiness loan program:** Businesses that produce energy using alternative renewable energy sources are eligible for microbusiness loans, which are capped at $100,000. A microbusiness is Montana-based and has less than 10 full-time employees and gross annual revenue of less than $1 million. (Title 17, chapter 6, part 4, MCA)

6. **Retail green power:** Public utilities must offer customers the option of purchasing a product made of or supporting power from environmentally preferred resources, including solar, geothermal, and biomass. The options are subject to review and approval by the PSC. (69-8-210, MCA)

7. **Universal system benefits programs (USBP):** A portion of each utility's annual retail sales revenue support renewable energy resources, energy conservation, and low-income energy assistance. (69-8-402, 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. See also state laws concerning small power production facilities. (Title 69, chapter 3, part 6, MCA). The **"Energy Policy Act of 2005"**, Pub. L.109-58, also addresses portions of the 1978 act with respect to net metering, time-

based metering and communications, interconnection, fuel sources, and fossil fuel generation efficiency.

9. **Renewable portfolio standard:** "The Montana Renewable Power Production and Rural Economic Development Act" requires that public utilities and competitive electricity suppliers procure a minimum of 5% of their retail sales from eligible renewable resources through 2009, 10% between 2010 and 2014, and 15% starting January 1, 2015. Cooperative utilities with 5,000 or more customers are responsible for implementing their own renewable standards. (Title 69, chapter 3, part 20, MCA)

10. **Economic development bonds:** Energy projects are generally eligible for economic development bonding via the Board of Investments. (Title 17, chapter 5, part 15, MCA)

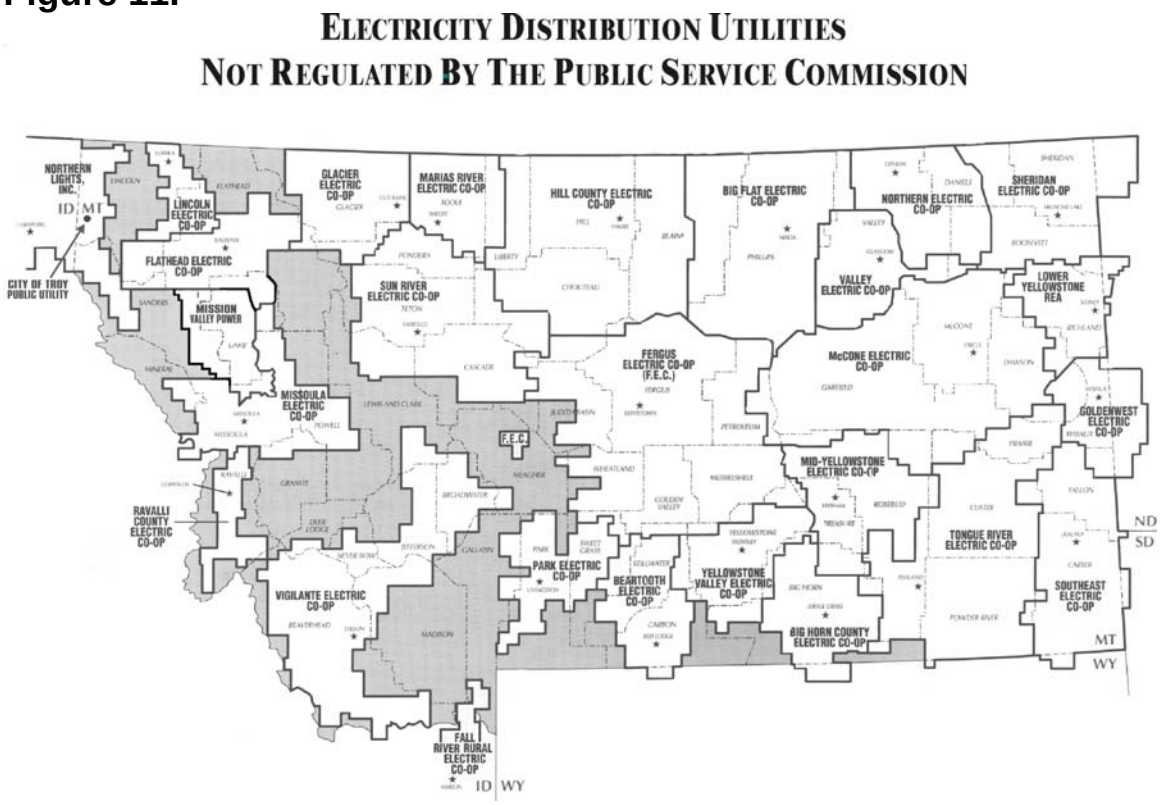
11. **Bonding:** "The Montana Clean Renewable Energy Bond Act" authorizes Montana local governmental bodies and tribal governments to participate as qualified issuers or qualified borrowers under the federal Energy Tax Incentives Act of 2005 to better access financial investments for community renewable energy projects or alternative renewable energy sources. (Title 90, chapter 4, part 12, MCA) Federal law is found in 26 U.S.C., Section 54(d), and for the 2007 funding regulations visit http://apps.irs.gov/pub/irs-tege/n-07-26a.pdf.

Chapter 5: Transmitting and Distributing Electricity in Montana

Who transmits and distributes electricity in Montana?

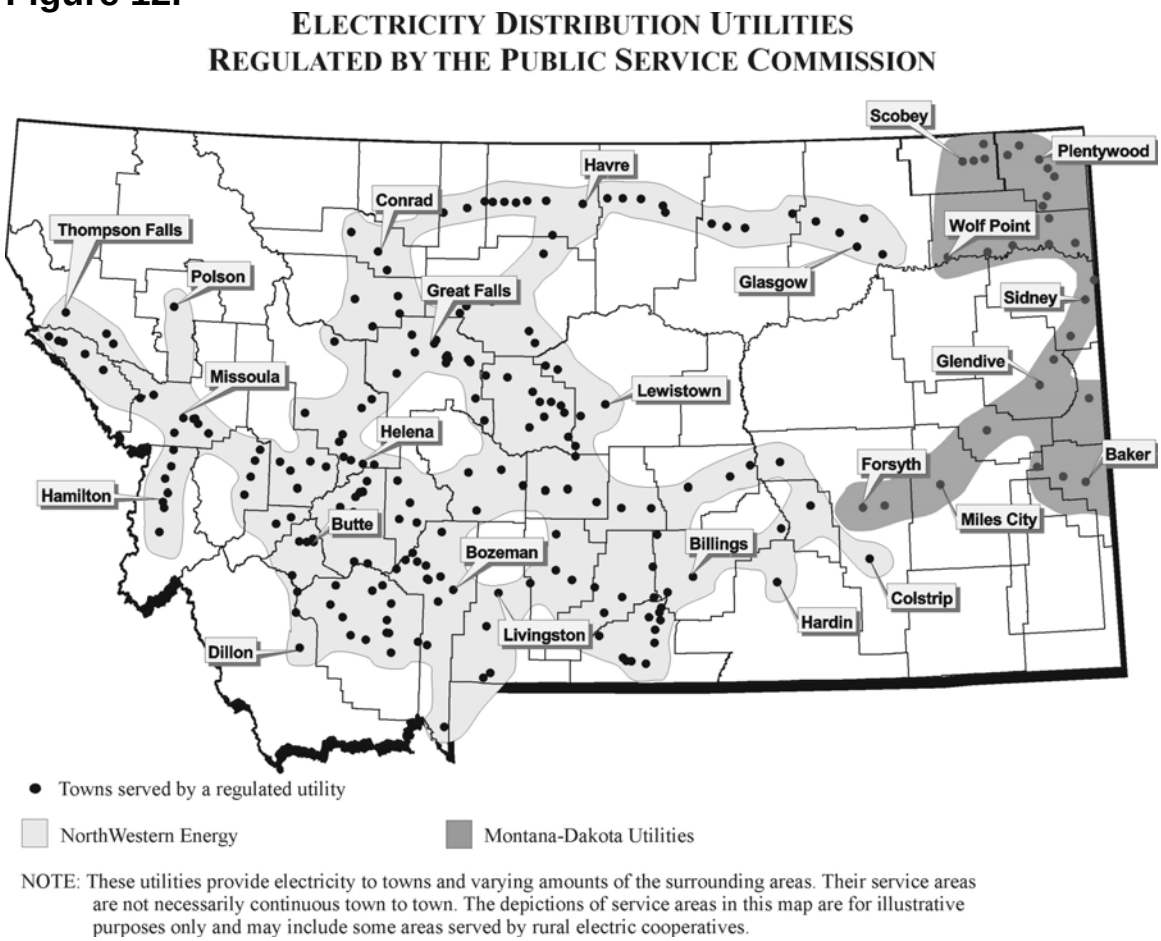
Chapter 1 provided an overview of how electricity is transmitted and distributed in Montana. Transmission and distribution wires seem to criss-cross the state in a haphazard manner, but there is an imposed organization scheme for distribution placement. Montana is divided up into service territories (see **figures 11 and 12**). Distribution services providers are determined largely by grandfathered service connections or, for new loads, the costs of alternative service providers to connect to a new load from an existing facility. All 26 electric cooperatives, Montana-Dakota Utilities Co., city of Troy, and NorthWestern Energy have distribution service territories. State law strictly protects the territorial integrity of each service territory (Title 69, chapter 5, part 1, MCA). The Territorial Integrity Act outlines these provisions. It should be noted that in some instances new customers can provide self-service for distribution and transmission,

Figure 11.



but facilities can't duplicate existing facilities. NorthWestern Energy, PacificCorp, BPA, and WAPA all own transmission.

Figure 12.



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 Canada and parts of 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.

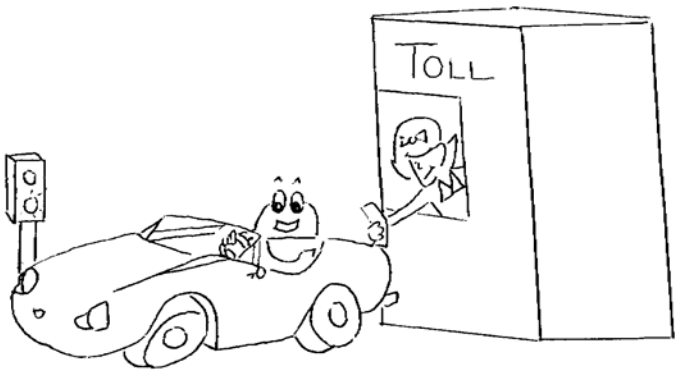
Because transmission lines cross state boundaries, the federal government, through FERC, has primary regulatory jurisdiction. FERC sets policies and adopts regulations for the management of transmission systems. FERC also establishes transmission rates for transmission customers. In recent years, FERC 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 13**). 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 in the process of forming an organizational and operational structure for these organizations. There are now seven independent system operators (ISOs) or RTOs overseeing the delivery of about two-thirds of the electricity used in the United States. Montana-Dakota Utilities Co. is a member of the Midwest Independent System Operator (MISO), which serves as a regional transmission organization. Utilities in five western states, including NorthWestern Energy in Montana, are setting up the Northern Tier Transmission Group. It will be an independent entity and will not serve as an RTO. ColumbiaGrid is a nonprofit membership corporation formed to improve the efficiency, reliability, and potential expansion of the Northwest transmission grid, and it includes the Bonneville Power Administration.

In February 2007 FERC issued Order 890, reforming aspects of the open access transmission tariff. The order mandates that transmission providers implement a coordinated, transparent, and participatory transmission

planning process. Each transmission provider was required to develop a proposal describing a transmission planning process that complies with the order.

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 (MFSA) (Title 75, chapter 20, MCA). MFSA requires that any proposed transmission line, with exceptions for shorter lengths and different generation sources, receive siting certification before it is constructed. MFSA 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 regulatory authority over a public utility's electricity distribution and intrastate transmission (see Chapter 2 for a complete discussion of the PSC's authority). Montana electric cooperatives self-regulate their distribution services. State law protects the territorial integrity of each service territory (Title 69, chapter 5, part 1, MCA) and prohibits duplication of distribution services. Again, some customers are able to

construct, own, and operate their own facilities; however, there can't be a duplication of facilities.

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 public utilities. 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.

During the May 2007 Special Session, the Legislature approved the "Jobs and Energy Development Incentives Act," providing a variety of tax incentives for certain transmission lines:

❶ High-voltage direct-current converter stations that direct power to two different regional power grids are taxed at 2.25% and considered class sixteen property.

❷ Land that is within 660 feet on either side of the midpoint of a transmission line right-of-way or easement beginning after December 31, 2007, is exempt from property taxes. An owner or operator of the line must apply for the exemption, and there are limits on where the exemption is allowed.

❸ High-voltage direct-current transmission lines and associated equipment and structures, other than those that direct power to two different regional grids, that are certified under the Montana Major Facility Siting Act are class fourteen property taxed at 3% of market value. The converter station must be located in Montana east of the continental divide and be constructed after June 1, 2007. Those lines also must provide access to energy markets for Montana generation facilities constructed after June 1, 2007. The facilities include wind, biodiesel, biomass, coal gasification, ethanol, geothermal, integrated gasification combined cycle, renewable energy manufacturing, and natural

gas combined cycle. The portion of an alternating current transmission line and associated equipment and structures that contract for electricity generated by the above facilities built after June 1, 2007, also is considered class fourteen property. All property of electric transmission lines that originate at the above-listed facilities with at least 90% of the electricity carried by the line originating at the facilities and terminating at an existing line, also qualifies.

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. Montana's energy policy, as stated in 90-4-1001, MCA, promotes energy conservation, energy efficiency, and demand side management. 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 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 17-6-309(1)(d), MCA, 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. **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)

8. **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 or energy price 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)

9. **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)

10. **"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)

11. **Alternative energy revolving loan program:** Provides loans to individuals, small businesses, units of local government, units of the university system, and nonprofit organizations to install alternative energy systems that generate energy for their own use or for capital investments for energy conservation purposes when done in conjunction with alternative energy systems. Loans up to a maximum of $40,000 must be repaid within 10 years. The rate for 2007 is 5%. (75-25-101, MCA)

12. **Energy performance contracts:** Allows local government such as county, city, school districts, and community colleges to enter into energy performance contracts that conserve

energy for buildings and vehicles that those local government units operate.

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 or visit the Energize Montana Web site at http://www.deq.mt.gov/Energy/.

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 Utilities Co., the PSC sets the rates for electricity supply. If you are a small customer served by NorthWestern Energy who did not choose an alternative electricity supplier prior to the enactment of the "Electric Utility Industry Generation Reintegration Act" in 2007, then you are part of the electricity supply load that is regulated by the PSC. Because NorthWestern Energy is a public utility that does not currently own sufficient generation assets to cover the electricity 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 Utilities Co. 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 and Reintegration Laws

What is electric industry restructuring?

Montana's electricity laws and policies have received significant public attention and scrutiny since1997 when Montana decided to deregulate electricity supply and opted to allow some Montana consumers to choose, given a competitive market, their own electricity supplier. At the time, it was 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, however, did not develop for small residential and commercial customers in the state, and in 2007, the Montana Legislature undid portions of the Electric Utility Industry Restructuring and Customer Choice Act that was approved 10 years before. The "re-regulation" bill, as it was often called, allows NorthWestern Energy to own electric power plants again and to dedicate the power it produces to Montana customers. It significantly tailored customer choice, limiting the ability of retail customers with a monthly demand of less than 5,000 kilowatts to migrate to other electricity suppliers if those customers were receiving electricity from a public utility prior to October 2007.

Prior to the 2007 law, a NorthWestern customer could choose an electricity supplier. If you are a member of a cooperative that did not open up to competition or a Montana-Dakota Utilities Co. customer, the price of retail electricity supply remains 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, and with the approval of the "Electric Utility

Industry Generation Reintegration Act" by the 2007 Legislature, the transition to customer choice ultimately ended for NorthWestern customers.

Why did Montana decide to restructure its electric industries?

The fundamental premise of Montana's restructuring law was that competition would 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 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.

- ⇨ The 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.[2] Some "key" dates in the PSC's implementation of electric restructuring are as follows:

May 2, 1997 Senate Bill No. 390, the Electric Utility Industry Restructuring and Customer Choice Act, is signed into law by Governor Marc Racicot.

July 1, 1997 Montana Power Company (MPC) files electric restructuring transition plan. PSC designates the restructuring plan Docket No. D97.7.90. PSC issues protective order for market-sensitive information.

Nov. 19, 1997 Interveners submit written testimony on MPC's July 1 transition plan.

Dec. 9, 1997 MPC announces it will sell its generation facilities.

Jan. 7, 1998 PSC issues revised procedural schedule with hearings in two tiers. Tier I will address issues related to implementing large customer choice, pilot programs, customer education, functional unbundling, rate design, and utility standards of conduct, with a hearing on April 24, 1998, and a PSC order on June 24, 1998.

April 28, 1998 Tier I hearing begins.

June 23, 1998 PSC issues Order 5986d, Order on Tier I Issues.

---

[2] For text of testimony in support and in opposition, see the committee minutes of Senate Bill No. 390 during the 1997 legislative session.

Oct. 7, 1998 PSC conducts a public hearing on issues related to MPC's universal system benefits charges and programs.

Dec. 23, 1998 PSC issues Order 5986f authorizing MPC to implement universal system benefits charges beginning January 1, 1999, to fund universal system benefits programs.

Feb. 4, 1999 PSC issues Order 5986g, Order Allocating Universal System Benefits Funds for various qualifying public purpose programs.

March 31, 1999 MPC and PPL Montana file request for a determination under Section 32(c) of the Public Utility Holding Company Act that designation by the Federal Energy Regulatory Commission of generation facilities being sold by MPC and purchased by PPL Montana may be "eligible facilities." Such a determination is a prerequisite to PPL Montana becoming an Exempt Wholesale Generator. PSC opens Docket D99.4.82 to process the filing.

May 5, 1999 Senate Bill No. 406 is enacted authorizing the formation of buying cooperatives to act as default suppliers and authorizing PSC to designate one or more default suppliers.

May 25, 1999 PSC issues Notice of Commission Action Consenting to EWG Status in D99.4.82.

July 1, 1999 MPC submits Tier II filing.

Nov. 5, 1999 Legislative Transition Advisory Committee recommends that the PSC delay designation of default supplier but proceed to develop rules on licensing.

Dec. 1, 1999 As required by Senate Bill No. 406, the PSC adopts licensing rules for default suppliers. The PSC does not adopt other published rules pertaining to designation of default suppliers or criteria for selecting a default supplier.

Dec. 17, 1999 MPC closes on the sale of its generation assets to PPL Montana.

Jan. 6, 2000 MPC files a request to reduce rates on an interim basis by $16.7 million to reflect the above book proceeds from the sale of its generation assets.

Feb. 4, 2000 PSC issues Order 5986o approving MPC's request to reduce rates on an interim basis by $16.7 million to reflect above book proceeds from the sale of generation assets.

March 28, 2000 MPC announces it intends to sell its natural gas and electric utility properties (and all other nontelecommunications related business.)

April 4, 2000 Attorney General asks the Governor to include issues related to MPC’s sale of utility facilities in the call for a special session. MPC’s vice chairman and CFO states PSC has no jurisdiction over MPC’s sale of utility facilities other than determining whether the buyer is capable of providing safe reliable service.

April 12, 2000 At a noticed work session the PSC votes to support the Legislature clarifying the PSC's authority over MPC's sale of its utility facilities.

April 13, 2000 MPC asserts proceeds from the sale of its natural gas and electric utility businesses belong to shareholders.

April 18, 2000 Governor calls for a special legislative session and excludes clarification of the PSC's authority over utility sales.

June 6, 2000 MPC submits amended Tier II generation sale and transition plan filing.

Oct. 2, 2000 MPC announces that it has decided to sell its natural gas and electric utility operations to NorthWestern Corporation.

Oct. 27, 2000 PSC initiates Docket No. D2000.10.177 and issues a Notice requesting comments on a proposal to extend the transition period pursuant to its authority in 69-8-201, MCA.

Dec. 21, 2000 PSC issues Order 6314, Docket D2000.10.177, extending the end of the transition period from July 1, 2002, to July 1, 2004, and directing MPC to submit a compliance filing by January 19, 2001, outlining how the Company intends to fulfill its electricity supply obligations.

Jan. 12, 2001 MPC and NorthWestern Corporation submit Joint Application requesting PSC determination that MPC's utility operations will continue to be a

fit, willing, and able provider of adequate service at just and reasonable rates as a division or subsidiary of NorthWestern.

March 15, 2001 PSC issues Notice of Commission Action and Opportunity to Comment on assertion of continued authority over MPC as an integrated public utility, including generation assets sold to PPL Montana.

June 27, 2001 PSC issues Order 5986t on PSC Authority and Montana Power Company Obligations Pursuant to the Electric Utility Industry Restructuring and Customer Choice Act. PSC issues Order 6353 Denying Joint Application of MPC and NorthWestern as filed and providing direction and opportunity to refile.

July 10, 2001 PPL Montana files Complaint in U.S. District Court in Helena, Montana challenging PSC Order 5986t.

July 17, 2001 MPC files Motion for Reconsideration of PSC Order 5986t.

Aug. 2, 2001 PSC denies MPC's July 17 Motion for Reconsideration of Order 5986t.

Aug. 28, 2001 MPC and NorthWestern submit supplemental filing in response to PSC Order 6353.

Sept. 6, 2001 MPC files Complaint in Montana First Judicial District Court challenging PSC Order 5986t.

Oct. 30, 2001 MPC files with PSC a Motion for Expedited Procedural Schedule in Docket D2001.1.5 regarding the sale of NorthWestern Corp. and its electric and natural gas utility facilities and operations. PSC directed its staff to meet with parties to see if agreement on a schedule could be reached. (Parties to the case disagreed about whether there was a connection between the sale case and the Tier II electric restructuring case. MPC contended there was no connection, others asserted there was a connection.)

Nov. 9, 2001 PSC issues Procedural Order covering three Dockets: D97.7.90, D2001.10.144, and D2001.1.5 (MPC sale of utilities to NorthWestern). The PSC merged the schedule in these three dockets in order to explore any connection between the cases and to expedite consideration of MPC’s proposed sale to Northwestern. Compared to a normal schedule in a major Commission proceeding, the schedule was extremely expedited.

Dec. 28, 2001 MPC, NorthWestern Corp., Montana Consumer Counsel, Large Customer Group, and Commercial Energy file with the PSC a Stipulation settling certain issues in Docket Nos. D97.7.90 and D2001.1.5.

Jan. 16-24, 2002 PSC conducts public hearings throughout the State of Montana at which parties and the public provided the Commission evidence and/or arguments regarding the proposed stipulation.

Jan. 31, 2002 PSC issues Final Order in Docket Nos. D97.7.90 (Order 5986w) and D2001.1.5 (Order 6353c) adopting the Stipulation filed by MPC, MCC, LCG, and Commercial Energy and approving the sale and transfer to NorthWestern Corporation MPC's electric and natural gas utility operations. The Stipulation and Order established the amount of electric restructuring-related transition costs and provided for a $30 million rate credit for electric distribution customers.

June 18, 2002 PSC approves, on an interim basis, choice guidelines and electric rate designs that resulted from informal discussions among the parties in Docket Nos. D97.7.90 and D2001.10.144. The informal discussions were facilitated by Commission staff pursuant to Notice of Commission Action dated March 28, 2002.

June 21, 2002 PSC issues Final Order 6382d, Docket No. D2001.10.144 (the portfolio case). The Commission determined that NorthWestern Corporation procured a portfolio of electricity supply from PPL- Montana and Duke Energy using industry-accepted procurement practices. The Commission determined that several proposed long-term contracts were not procurements of power supplies. The Commission neither approved nor rejected these contracts but provided comments on the process NorthWestern Corporation used to select these long-term resources.

July 2002 PSC establishes informal forum on electricity restructuring issues designed to collaboratively work on issues such as the role of the default supplier, default supply procurement, rate design, metering, billing, customer choice, regional transmission issues, and more.

Nov. 27, 2002 PSC publishes proposed electric default supply resource procurement and portfolio planning rules in Administrative Register. Public hearings on the proposed rules are scheduled beginning January 7, 2003. See Docket L02.11.5-RUL. PSC, Montana Office of the Governor, Montana Office of the Northwest Power Planning Council, Montana Consumer Counsel, Western

Montana Generating and Transmission Cooperative, and Central Montana Electric Power Cooperative file joint comments responding to the Federal Energy Regulatory Commission's Notice of Proposed Rulemaking on remedying undue discrimination and standard market design.

March 31, 2003 PSC adopts ARM 38.5.820 through 38.5.8227 implementing guidelines pertaining to electric default supply resource procurement and portfolio planning.

April 2003 Montana Legislature enacts House Bill No. 509 extending the transition period to 2027, authorizing the PSC to assess rates and fees on leaving or returning choice customers to protect default supply customers from higher or more unstable rates, requiring the PSC to adopt default supply resource planning and procurement guidelines and an electricity supply cost recovery mechanism, extending universal system benefits programs, and eliminating the Transition Advisory Committee. Legislature also approves Senate Bill No. 247, establishing a default electricity supply procurement process.

Aug. 8, 2003 PSC issues Notice of Opportunity to Comment on issues, questions, and conceptual alternatives related to the advanced approval provisions in Senate Bill No. 247. In particular, the Notice explored potential minimum filing requirements for advanced approval applications and informal processes that could help streamline the advanced approval process.

Oct. 6, 2003 PSC issues notice of proposed rules establishing minimum filing requirements for default supply advanced approval applications.

Dec. 15, 2003 PSC adopts rules establishing minimum filing requirements for default supply advanced approval applications.

To view the complete "Timeline of Events: PSC Implementation of Electric Restructuring" prepared by PSC Attorney Will Rosquist, visit the ETIC Website at http://leg.mt.gov/css/committees/interim/2007_2008/energy_telecom/default.asp and look under "publications".

What is the status of electric restructuring today?

For the most part, competitive markets developed to serve large industrial electricity customers, and most of those customers selected alternative

electricity suppliers. Market volatility and the lack of significant small-customer retail competition, however, forced the 2007 Montana Legislature to effectively put an end to full customer choice.

In January 2007, the Energy and Telecommunications Interim Committee requested a bill be brought forward (House Bill No. 25) to move toward reregulation of Montana's retail electricity supply. The bill was amended several times and was the subject of much debate. The reasons stated in the testimony before the Montana Legislature to pass House Bill No. 25 were:

- Competitive markets had not developed for small customers in Montana and electricity consumers were being exposed to higher market prices.

- NorthWestern Energy, with no generation assets of its own, lacked power at the bargaining table when securing the supply it needed to meet customer demand.

- Continuing to have small customer choice in law, while a competitive market didn't actually exist, created electric load uncertainty that impeded NorthWestern Energy's ability to plan for and procure electricity supply at optimal terms and prices.

- NorthWestern Energy needed the ability to build new plants and dedicate that power to Montana customers at regulated, stable rates.[3]

If you are a small customer of NorthWestern who did not chose an alternative electricity supplier prior to October 2007, you are now part of the electricity supply load that is regulated by the PSC. Small NorthWestern Energy customers still have the opportunity to purchase a separately marketed product composed of electricity from renewable resources. With changes made by the 2007 Legislature, NorthWestern Energy also is pursuing its own generation assets, and a new set of guidelines is in place for the PSC to

[3] For text of testimony in support and in opposition, see the committee minutes of House Bill No. 25 during the 2007 legislative session.

follow in approving NorthWestern Energy's efforts to procure an electricity supply resource.

In signing House Bill No. 25 in May 2007, Governor Brian Schweitzer noted: "Potential benefits from HB 25 will only accrue down the road."

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.

Federal Energy Regulatory Commission (FERC): 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 (formerly the Federal Power Commission).

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 kV 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.

Public Utility Regulatory Policies Act of 1978 (PURPA): 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
http://leg.mt.gov/css/committees/administration/consumer_counsel/default.asp

Department of Commerce, Board of Investments (406) 444-0001
http://www.investmentmt.com/

Department of Commerce, Energy Infrastructure
Promotion and Development Division (406) 841-2030
http://commerce.mt.gov/energy/index.asp

Department of Environmental Quality (406) 444-6697
http://www.deq.mt.gov

Legislative Services Division (406) 444-3064
http://leg.mt.gov/css/default.asp

Department of Public Health and Human Services
Low-Income Energy Assistance Program (406) 447-4260
http://www.dphhs.mt.gov/programsservices/energyassistance/index.shtml

Northwest Power and Conservation Council (406) 444-3952
http://www.nwcouncil.org/

Public Service Commission (406) 444-6199
http://www.psc.mt.gov

Energy Share of Montana (406) 442-4900
http://www.energysharemt.com/ (800) 777-7589

Human Resource Development Councils (406) 447-4260
http://www.dphhs.mt.gov/programsservices/energyassistance/eligibilityoffices.shtml

Montana-Dakota Utilities Co. (800) 638-3278
http://www.montana-dakota.com/

NorthWestern Energy (888) 467-2669
http://www.northwesternenergy.com/

Montana Electric Cooperatives' Association (406) 761-8333
http://www.mtco-ops.com/

Green Electricity Buying Cooperative (406) 696-2842
http://www.greenelectricitycoop.org/