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Montana's Energy Blueprint

A review of Montana's current energy policy and suggested revisions

Legislative Services Division

A Report to the 62nd Legislature of the State of Montana
September 2010

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Energy and Telecommunications Interim Committee
2009-10 Interim

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This report is a summary of the work of the Energy and Telecommunications Interim Committee, specific to the ETIC's 2009-10 energy policy assignment, as outlined in Senate Bill No. 290 (Ch. 454, L. 2009). Members received volumes of information and public testimony on the subject, and this report is an effort to highlight key information and the processes followed by the ETIC in reaching its conclusions. To review additional information, including written minutes, exhibits, and audio minutes, visit the ETIC website: www.leg.mt.gov/etic

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Introduction

From simple lighting and heating to the powering of complex industrial machines, electricity is taken for granted. A thoughtful and thorough state energy policy can provide similar regulatory stability for energy producers and consumers. This report provides a blueprint to Montana's energy future. The 2009-10 Energy and Telecommunications Interim Committee (ETIC) set out to design an energy policy that reflects Montana's responsibility to provide reliable energy supplies at reasonable rates, to create conditions for the efficient use of energy, and to promote sustainable and responsible energy development. The findings and recommendations included in this report, and the proposed, revised energy policy, provide a legislative framework for the state of Montana to maximize its energy assets and to overcome energy obstacles.

The ETIC ultimately agreed to/not to revise and expand Montana's existing energy policy and to bring x pieces of draft legislation before the 2011 Legislature, including/or not the energy policy. The draft legislation is included in **Appendix A**. The legislation includes:

- Example: LC 6000 "State Energy Policy—Goal and Development Process"
- Example: LC 6001 "Revisions to Renewable Portfolio Standard"

Montana's current energy policy, as stated in 90-4-1001, MCA, simply states it is the policy of Montana "to promote energy efficiency, conservation, production, and consumption of a reliable and efficient mix of energy sources that represent the least social, environmental, and economic costs and the greatest long-term benefits to Montana citizens." Senate Bill No. 290, passed and approved by the 2009 Legislature, revised the process for updating the state's energy policy and required the ETIC to review and potentially revise the existing policy. SB 290, included in **Appendix B**, required the ETIC to address nine specific topics including:

- increasing the supply of low-cost electricity with coal-fired generation;
- rebuilding and extending electric transmission lines;
- maximizing state land use for energy generation;
- increasing energy efficiency standards for new construction;
- promoting conservation;
- promoting energy efficiency incentives;
- promoting alternative energy systems;
- reducing regulations that increase ratepayers' energy costs; and
- integrating wind energy.

Historically, the state's energy policy was updated "as the need arises." The Department of Environmental Quality (DEQ) also was largely charged with leading research efforts and coordinating efforts with the ETIC to update the policy. SB 290 changed that process and put the ETIC wholly in charge of any revisions. SB 290 required the committee to rely on "locally available experts and staff research" and largely eliminated the role of the DEQ as the source of administrative support.

As required by SB 290, the ETIC worked closely with the public and stakeholders to design this blueprint for Montana's energy future and the related draft legislation. Public

comment was sought on all nine aspects of the policy, as outlined in SB 290. Over 440 pages of public comment was collected from about 200 people over the interim. A summary of the public comment is included in **Appendix C**. All public comments are posted on the ETIC website.

The ETIC kicked off its interim study by learning more about the current executive energy policy. "Tapping Montana's Power Potential: The Schweitzer Energy Policy" is included in **Appendix D**. Members discussed the background and premises of the executive energy policy and ultimately felt that a legislative energy policy, such as what is in this report, can provide specific, long-term direction on how to protect Montana's energy interests. The committee next looked at each of the nine issues outlined in SB 290 in detail and hosted panel discussions on each topic. An outline of the tasks and panel discussions is included in **Appendix E**.

The committee also looked at existing energy policy. While the "energy policy" for Montana is currently stated in 90-4-1001, Montana Code Annotated, energy policy statements are throughout the code. Existing energy policy statements include:

- **15-32-101, MCA, Investment in Energy Conservation or Alternative Energy**

  The purpose of this part is to encourage the use of alternative energy sources and the conservation of energy through incentive programs. The incentives are to be made available to the energy user on a basis that requires the energy user to take the initiative in obtaining a particular incentive. This part allows but does not require a public utility to extend credit for energy conservation investments.

- **15-32-401, MCA, Alternative Energy Generation**

  The purpose of this part is to encourage the development of the alternative energy industry in Montana without adversely affecting tax revenue received from existing economic activity in the state. Because of the alternative energy potential within the state, it is desirable to encourage alternative energy generation for the purpose of attracting alternative energy manufacturing industries to the state. It is also desirable for new or expanded industry to secure alternatively generated electricity on a direct contract sales basis without adversely affecting rates charged to other electricity users. Sound fiscal policy requires that encouragement be given to an alternative energy industry without subtracting from existing sources of revenue to the state.

- **15-72-102, MCA, Electrical Generation Tax Reform Act**

  The Legislature finds that the restructuring of the electric utility industry in Montana implemented by Chapter 505, Laws of 1997, including the unbundling of services and the provision that allows Montana customers to choose their supplier of electricity and related services in a competitive market, renders the existing method of property taxation of the electric utility industry an impediment to competition. The legislature further finds that the restructuring of the electric utility industry necessitates changes to the existing system of property taxation that include reducing the tax rate applied to electrical generation facilities and imposing a replacement tax.

- **50-60-801, MCA, Residential Energy Efficiency**

  The Legislature finds that the people of Montana have an interest in energy efficiency in certain residential buildings for the purpose of protecting and improving their economic and environmental well-being and energy security, while recognizing the basic need for safe and affordable shelter. It is the policy of the state of Montana to encourage energy efficiency in residential buildings through strategies that ensure that:

(1) the housing consumer has access to the information required to make informed choices about structures and energy efficiency measures;

(2) energy efficiency measures are safe, reliable, and readily available for use in Montana;

(3) investments in energy efficiency measures are cost-effective;

(4) the cost of energy efficiency measures on the combination of down payments, monthly mortgage payments, and monthly utility bills does not adversely affect the affordability of housing to prospective home buyers and renters; and

(5) energy efficiency measures do not place an undue or inequitable burden on residential building owners or renters, the residential construction industry, financial institutions, real estate salespersons and appraisers, energy providers, or state and local governments.

- **69-3-1202, MCA, Resource Planning**

(1) It is the policy of the state of Montana to supervise, regulate, and control public utilities. To the extent that it is consistent with the policy and in order to benefit society, the state encourages efficient utility operations, efficient use of utility services, and efficient rates. It is further the policy of the state to encourage utilities to acquire resources in a manner that will help ensure a clean, healthful, safe, and economically productive environment.

(2) The legislature finds that the commission may include in rates the costs that are associated with acquiring the resources referred to in subsection (1) and that are consistent with this policy if the resources are actually used and useful for the convenience of the public. To advance this policy, the commission may require periodic long-range plans from utilities that provide electric and natural gas service in a form and manner determined by the commission. The commission may receive comments on the plans.

- **69-3-2002, MCA, Montana Renewable Power Production and Rural Economic Development Act**

The Legislature finds that:

(1) Montana is blessed with an abundance of diverse renewable energy resources;

(2) renewable energy production promotes sustainable rural economic development by creating new jobs and stimulating business and economic activity in local communities across Montana;

(3) increased use of renewable energy will enhance Montana's energy self-sufficiency and independence; and

(4) fuel diversity, economic, and environmental benefits from renewable energy production accrue to the public at large, and therefore all consumers and utilities should support expanded development of these resources to meet the state's electricity demand and stabilize electricity prices.

- **69-8-601, MCA, Net Metering**

The Legislature finds that it is in the public interest to promote net metering because it:

(1) encourages private investment in renewable energy resources;

(2) stimulates Montana's economic growth; and

(3) enhances the continued diversification of the energy resources used in Montana.

- **75-20-102, MCA, Major Facility Siting**

(1) The Legislature, mindful of its constitutional obligations under Article II,

section 3, and Article IX of the Montana Constitution, has enacted the Montana Major Facility Siting Act. It is the Legislature's intent that the requirements of this chapter 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.

(2) It is the constitutionally declared policy of this state to maintain and improve a clean and healthful environment for present and future generations, to protect the environmental life-support system from degradation and prevent unreasonable depletion and degradation of natural resources, and to provide for administration and enforcement to attain these objectives.

(3) It is also constitutionally declared in the state of Montana that the inalienable rights of the citizens of this state include the right to pursue life's basic necessities, to enjoy and defend life and liberty, to acquire, possess, and protect property, and to seek safety, health, and happiness in all lawful ways. The balancing of these constitutional rights is necessary in order to maintain a sustainable quality of life for all Montanans.

(4) The Legislature finds that the construction of additional electric transmission facilities, pipeline facilities, or geothermal facilities may be necessary to meet the increasing need for electricity, energy, and other products. Therefore, it is necessary to ensure that the location, construction, and operation of electric transmission facilities, pipeline facilities, or geothermal facilities are in compliance with state law and that an electric transmission facility, pipeline facility, or geothermal facility may not be constructed or operated within this state without a certificate of compliance acquired pursuant to this chapter.

- **76-15-902, MCA, Coal Bed Methane Protection Act**

The Legislature finds that the need for an economical supply of clean-burning energy is a national and state priority. The Legislature further finds that Montana possesses plentiful reserves of clean-burning natural gas contained in coal beds. The Legislature further finds that the extraction of natural gas from coal beds may result in unanticipated adverse impacts to land and to water . . .

- **90-4-301, MCA, Energy Supply Emergency Powers**

The Legislature finds that energy in various forms is increasingly subject to possible shortages and supply disruptions, to the point that there may be foreseen an emergency situation, and that without the ability to gather information, regularly monitor energy supplies and demand, formulate plans, and institute appropriate emergency measures to reduce or allocate the usage of energy through a program of mandatory usage curtailment or allocation, a severe impact on the health, safety, and general welfare of our state's citizens may occur. The prevention or mitigation of the effects of such energy shortages or disruptions is necessary for preservation of the public health and welfare of the citizens of this state.

- **90-4-1001, MCA, State Energy Policy Goal and Development Process**

It is the policy of the state of Montana to promote energy efficiency, conservation, production, and consumption of a reliable and efficient mix of energy sources that represent the least social, environmental, and economic costs and the greatest long-term benefits to Montana citizens. In pursuing this goal, it is the policy of the state of Montana to:

(a) recognize that the state's energy system operates within the larger context of and is influenced by regional, national, and international energy markets;

(b) review this energy policy statement and any future changes pursuant

to 90-4-1003 so that Montana's energy strategy will provide for a balance between a sustainable environment and a viable economy; and

(c) adopt a state transportation energy policy as provided in 90-4-1010 and an alternative fuels policy and implementing guidelines as provided in 90-4-1011.

- **90-4-1101. Energy Performance contracts**

The Legislature finds that:

(a) conserving energy in local government and state agency buildings and vehicles will have a beneficial effect on the overall supply of energy and can result in cost savings for taxpayers;

(b) conserving water can result in cost savings for taxpayers; and

(c) energy performance contracts are a means by which local government units and state agencies can achieve energy and water conservation without an initial capital outlay.

It is the policy of the state of Montana to promote efficient use of energy and water resources in local government and state agency buildings and energy conservation in vehicles by authorizing local government units and state agencies to enter into energy performance contracts.

The ETIC reviewed a matrix, examining existing energy policy and proposed energy policy, in order to narrow down its policy and to determine if statements duplicated or contradicted existing policy. The matrix is included **Appendix F**. Senator Verdell Jackson, the sponsor of SB 290, also provided energy policy points for the ETIC's consideration. Senator Jackson's thorough overview is included in **Appendix G**.

Taking direction from SB 290 and utilizing tools, such as Senator Jackson's policy points and the public comment received, the ETIC proposed in-depth policy statements that promote a well-maintained and reliable energy infrastructure, address technological developments in energy production and use, maximize the use of indigenous sources of energy, and promote energy efficiency and conservation.

Energy Policy History

Montana's current energy policy, as outlined in Title 90, chapter 4, part 10, MCA is the result of Senate Bill No. 225 (Ch. 242, L. 1993) approved by the 1993 Legislature.

Senate Bill No. 225 was based on two years of study conducted by the Environmental Quality Council (EQC) in the early 90s. The 1991 Montana Legislature responded to the United States' entry in a war in the Middle East and uncertainty about energy security and supply by approving House Joint Resolution No. 31. The resolution required the EQC to develop recommendations for an energy policy and options for its implementation. The EQC was instructed to work with the Consumer Counsel and the Department of Natural Resources and Conservation (DNRC), which at that time was serving as the state's energy office—much like the role that has now been assumed by the DEQ.

Whereas Senate Bill No. 290 had nine specific recommendations for aspects of an energy policy, HJR 31 had four:

- Montana's potential for energy conservation;
- Renewable and nonrenewable sources of energy available to the state;
- Existing energy programs in Montana and other states, the region, and nation; and
- Influence of regional and national energy production, consumption, and conservation patterns on Montana.

The EQC responded to its mandate in the 90s by consulting with government agencies, energy producers and distributors, organizations and citizens with energy expertise and interest, and energy-related task forces and work groups. The result was a set of 12 recommendations

including:

- An energy policy goal statement (90-4-1001, MCA);
- A continuing process for developing energy policy (90-4-1003, MCA);
- An energy policy analysis methodology to be used by legislators and others in evaluating the implications of energy-related legislation (terminated in 1995); and
- A specific policy and implementing strategies for increasing the efficiency of Montana residences. (50-60-102, 50-60-203, and 50-60-802-803, MCA)

To provide context, the report also included a summary of existing energy-related laws and a compilation of energy production and consumption data prepared by the DNRC. The 2009-10 ETIC took similar steps to provide such context. The committee received a compilation of existing laws, related to each of the nine topics examined. That compilation is included in **Appendix H**. The ETIC also examined information from other state energy policy's—primarily from Idaho, Texas, and Iowa. The Idaho Legislature in 2007 directed Idaho's energy interim committee to revise its energy policy, and in late 2008 Iowa released an Energy Independence Plan, which is much like an energy policy. The plans from Idaho and Iowa were selected by staff because they both were recently updated and were updated with legislative leadership, as opposed to being updated by an executive agency. The "2008 Texas State Energy Plan" was produced by the Governor's Competitiveness Council in July 2008. The plan was produced by an executive agency and was reviewed by public and private leaders, appointed by the Governor.

For the most complete picture of Montana's energy resources and policy, the "Understanding Energy in Montana" handbook and this document should be reviewed in conjunction with one another.

The "Understanding Energy in Montana: A Guide to Electricity, Natural Gas, Coal, and Petroleum Produced and Consumed in Montana" handbook was updated by the DEQ and ETIC staff during the 2009-10 interim. The handbook provides the background information policymakers and citizens need to implement energy policy. Much of the policy in this report is a response to the historical and current patterns of energy supply and demand that are the focus of the handbook. For the most complete picture of Montana's energy resources and policy, the handbook and this document should be reviewed in conjunction with one another.

Findings and Recommendations

The findings and recommendations below represent the efforts of the ETIC, stakeholders from around the state, and the public. This report is the result of an open, collaborative process. It should be noted that not all members of the ETIC agreed with all of the provisions of the plan. The findings and recommendations represent a majority opinion that evolved from much discussion and consideration. AT THIS TIME THESE ARE DRAFT STATEMENTS THAT WILL CONTINUE TO BE DISCUSSED BY THE ETIC.

- Montana is committed to supplementing energy needs with renewable energy sources, while recognizing the value of existing coal-fired generation and its place in Montana's energy portfolio. Continued research and pilot projects to convert coal into synthetic petroleum products, hydrogen, methane, and natural gas also may extend Montana's competitive advantage with coal well into the future.
- The state supports an increase in oil and gas exploration and development to reduce the recent decline in Montana's production levels and, most importantly, to wean the nation off foreign oil.
- Montana encourages the development of educational programs that prepare the workforce for creating and obtaining jobs in an emerging renewable energy economy.
- Montana supports:
  - the advancement of new alternative energy technologies to improve vehicle mileage and reduce exhaust emissions;
  - incentives and loan programs to promote the development of biomass plants to generate heat for industrial use or electricity; and
  - promotion of the long-term growth of large utility scale wind and small-scale distributed generation.
- Montana should promote additional hydroelectric power expansions by classifying them as renewable under the "Montana Renewable Power Production and Rural Economic Development Act."
- Montana recognizes the need for new transmission lines in the state, while noting that the need for new transmission lines may be mitigated by focusing on energy efficiency, distributed energy, demand response, and smart grid technologies.
- Montana urges developers and utilities to increase the capacity of existing lines in existing corridors and maximize the potential of existing lines. When new transmission lines are developed in Montana, developers should work closely with affected local governments in the preliminary stages of development.
- If companies build transmission lines that allow for the export of Montana-generated electricity, the costs of those lines should be borne entirely by the

transmission customers who will benefit from the lines not by Montana customers who will not benefit.

- Montana should strengthen its level of participation in regional transmission efforts and organizations, recognizing that endeavors to improve the management of the transmission grid often require a broad, regional approach.
- The State of Montana encourages the testing and application of new and innovative technologies, such as compressed air energy storage, batteries, flywheels, hydrogen production, smart grid, smart garage, and intra-hour balancing services, to address wind integration.
- Geographic diversity and regional planning in the siting of future wind development can mitigate firming needs and ensure that the economic benefits of wind are shared across the state.
- Montana recognizes that there are areas of the state where large-scale, commercial-industrial wind development may not be appropriate. Montana encourages developers and regulators to closely review potential impacts to landscapes, wildlife, and existing land uses, including recreation and agriculture, while advancing development.
- Montana recognizes that contracts between small-scale qualifying facilities and utilities require qualifying facilities to pay the cost of integrating its power, and the state is committed to providing the lowest-cost firming resources available to encourage renewable development.
- In pursuing energy development on state lands, the state must continue to weigh its overall management responsibilities (fiduciary and multiple-use), as mandated by the Montana Constitution and state law.

Rebuilding and Extending Electric Transmission Lines

Findings

Montana recognizes the need for new transmission lines in the state, while noting that the need for new transmission lines may be mitigated by focusing on energy efficiency, distributed energy, demand response, and smart grid technologies.

Montana urges developers and utilities to increase the capacity of existing lines in existing corridors and maximize the potential of existing lines. When new transmission lines are developed in Montana, developers should work closely with affected local governments in the preliminary stages of development.

If companies build transmission lines that allow for the export of Montana-generated electricity, the costs of those lines should be borne entirely by the transmission customers who will benefit from the lines not by Montana customers who will not benefit.

Montana should strengthen its level of participation in regional transmission efforts and organizations, recognizing that endeavors to improve the management of the transmission grid often require a broad, regional approach.

Background

Ramping up energy production in Montana means more energy generation and more transmission to route that power to market—but not necessarily in that order. In the energy arena, in fact, production and transmission typically travel in tandem down the development path.

New energy generation, for example a wind farm or a natural gas plant, doesn't get financed or built without transmission lines to move that power to market. And big, new transmission lines don't go up overhead without new generation to send down those lines. Transmission lines are the arteries that take energy from generation sites to varying points of consumption. Since 1990, the demand for electricity in the United States increased by about 25% and construction of transmission facilities decreased by about 30%.[1] The Western Grid is congested and states are increasingly looking for new energy suppliers. Large population centers see promise in Montana's diverse energy resources, but channeling those resources will require a significant investment in transmission projects.

Historically in Montana investor-owned utilities like the former Montana Power Company and the federal government, such as the Western Area Power Administration (WAPA) and Bonneville Power Administration (BPA), have constructed major transmission lines. Those lines move large amounts of power from generation sources to markets. This information focuses on efforts related to lines that are generally operated at voltages of 100,000 volts (100 kV) to 500 kV. While NorthWestern Energy, WAPA, and BPA continue to build, rebuild, and upgrade

[1] http://sites.energetics.com/gridworks/grid.html.

transmission projects, publicly traded private companies also are entering the mix. Companies are considering constructing new independent, nonutility transmission lines in Montana. When these "merchant lines" are built, the company building the line does not generate its own electricity but sells contracts or rights to transport electricity on the lines. Utilities that own transmission lines also can propose projects in response to requests for new services from power marketers and independent generation developers. A mix of these "merchant lines," federal projects, and utility-driven efforts are underway throughout Montana. **Map 1** shows the projects that have been proposed in Montana. **Table 1** provides a summary of larger projects.

Montana's strongest interconnections with other regions are the two 500 kV lines leading from Colstrip to Idaho and Spokane, BPA's 230 kV lines running west from Hot Springs, PacifiCorp's interconnection from Yellowtail Dam south to Wyoming, WAPA's DC tie to the east at Miles City, WAPA's 230 kV lines out of Fort Peck and Miles City into North Dakota, WAPA's two 115 kV lines from Yellowtail Dam to Wyoming, and NorthWestern Energy's lines running south from Anaconda parallel to the Grace line into Idaho. [2] Most of Montana is integrally tied into the Western Grid or Western Interconnection. However, the easternmost part of the state, with about 8% of total Montana load, is part of the Eastern Interconnection. Because transmission lines cross state boundaries, the federal government, through the Federal Energy Regulatory Commission (FERC), has primary regulatory jurisdiction. That jurisdiction centers around wholesale rate setting and siting issues if state efforts at interstate transmission siting are not complete within a year. Other federal agencies, such as the Bureau of Land Management (BLM) and the U.S. Forest Service, have a role if transmission lines cross those federal lands. The Department of Energy plays a role in coordinating and reviewing projects.

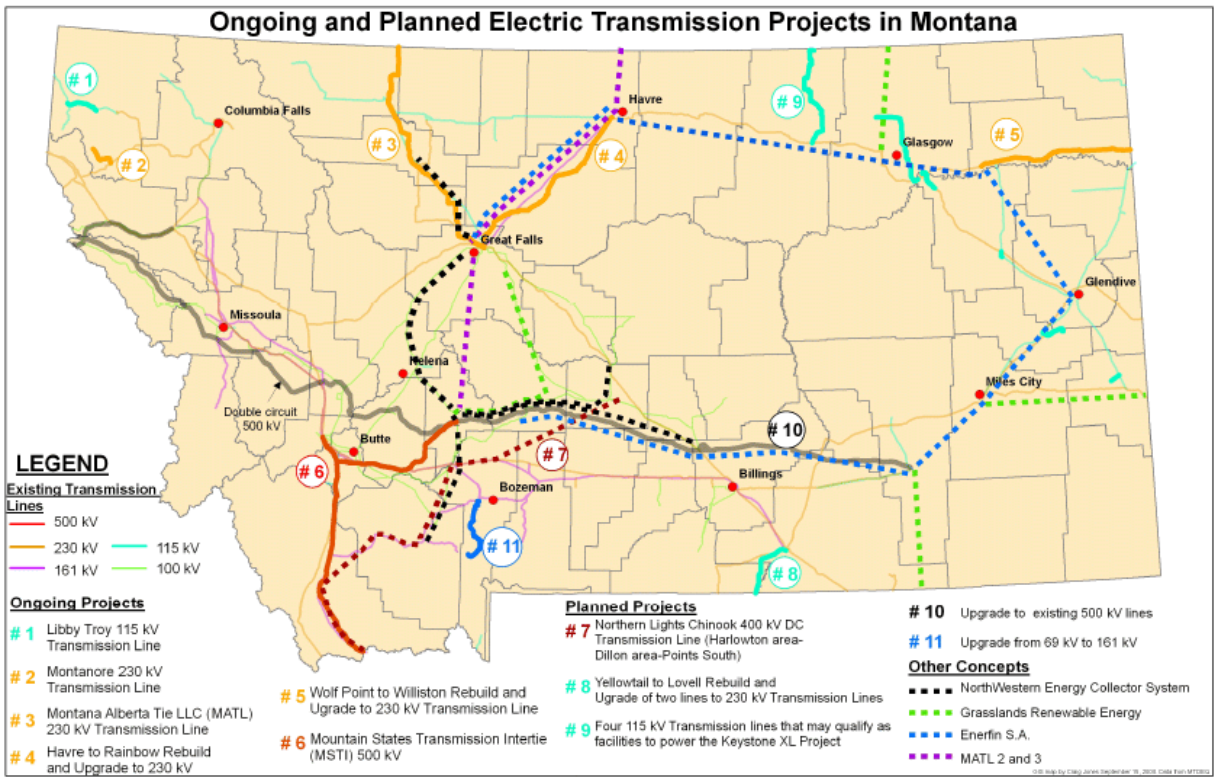
Montana regulates transmission siting through the Montana Major Facility Siting Act (MFSA), and that requires certain proposed transmission projects to go through a review before construction. Typically transmission lines greater than 69 kV are covered under MFSA if they meet certain criteria. With some exceptions, electrical transmission lines of 230 kV or more and 10 miles or more in length or 10% of the existing right-of-way, whichever is greater, are covered under MFSA. "The Montana Legislature has found that the purposes of MFSA are to ensure the protection of the state's environmental resources, ensure the consideration of socioeconomic impacts from regulated facilities, provide citizens with an opportunity to participate in facility siting decisions, and establish a coordinated and efficient method for the processing of all authorizations required for regulated facilities."[3]

NorthWestern Energy and Montana-Dakota Utilities Co. (MDU) distribution costs are regulated by the Montana Public Service Commission (PSC). Distribution costs of electric cooperatives are set by the governing boards of individual cooperatives. In February 2007 the 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. Order 890 is geared at promoting reliability, sending accurate market signals, and encouraging the development of

[2] *Understanding Energy in Montana: A Guide to Electricity, Natural Gas, Coal, and Petroleum Produced in Montana*, DEQ report updated for the Energy and Telecommunications Interim Committee, 2009-2010.

[3] Ibid.

energy infrastructure.[4]



It is noteworthy that power generated on the grid must be consumed instantaneously on the grid. Unlike other sources of energy, electricity can't be stored on the grid. Transmission operators have to constantly balance electricity generation and demand. That balancing act is a complicated process involving significant manpower, technology, computers, equipment, numerous transmission jurisdictions, and federal and state oversight. There are several high-tech and human mechanisms for balancing supplies and demand on the entire Western Grid and within individual operating areas. There are also new technologies being developed to allow the storage of some electricity on the grid, but they are not currently available.

The paths through which generators in Montana send their power west are almost fully congested—few firm rights are available on those paths. Most transmission paths on the Western Grid are fully scheduled only a small portion of the year, with nonfirm space available. However, nonfirm access cannot be scheduled far in advance and its access can't be guaranteed. High voltage transmission lines also are very expensive to build, with a typical single-circuit 500 kV line costing about $1 million per mile. Impediments to transmission construction and expansion also can include: competing land uses, uncertainty about cost recovery and financing, and jurisdiction and government agency overlap for siting and permitting.

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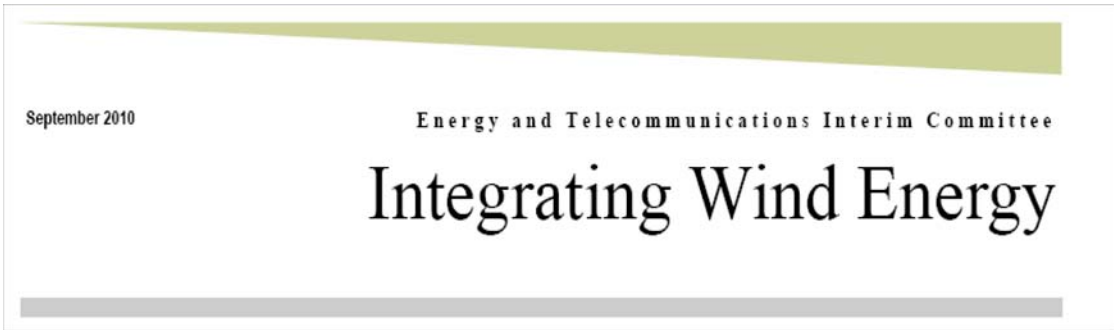
[4]Federal Energy Regulatory Commission, Commissioner Philip Moeller, February 15, 2007.

Table 1

Transmission Projects Proposed in Montana	
Montana Alberta Tie Ltd.	Calgary-based Montana Alberta Tie Ltd. is proposing a 203-mile-long transmission line that ties into the Canadian grid at Lethbridge, Alberta, and the U.S. grid at Great Falls. The 230 kV line will have 300 megawatts of capacity.
Mountain States Transmission Intertie	NorthWestern Energy intends to build and operate a new 350- to 390-mile, 500kV line between southwestern Montana and southeastern Idaho. It would have about 1,500 megawatts of capacity.
Chinook/Zephyr Project	TransCanada intends to build a 1,100-mile, 500 kV transmission line from Townsend to Idaho to Nevada and on to the Southwest. The line could be capable of moving as much as 3,000 megawatts of power.[5]
Increases from Montana to the Northwest	BPA, NorthWestern Energy, Puget Sound Energy, Portland General Electric, PacifCorp, and Avista have conducted engineering studies to confirm a transmission plan to integrate about 1,000 megawatts of new energy to be transferred from Montana to the Northwest. Those high level studies have shown there is potential for 750 megawatts of additional capacity from the Colstrip area to Puget Sound area with no 500-kV line construction.
Wind Spirit Project	Grasslands Renewable Energy, LLC plans to integrate dispersed wind energy projects through a transmission feeder system. The system would gather renewable energy from Montana, North Dakota, and Canada and export about 1,000 megawatts to markets in the northwest and southwest.

[5]http://www.transcanada.com/company/zephyr_chinook.html.



Findings

The State of Montana encourages the testing and application of new and innovative technologies, such as compressed air energy storage, batteries, flywheels, hydrogen production, smart grid, smart garage, and intra-hour balancing services, to address wind integration.

Geographic diversity and regional planning in the siting of future wind development can mitigate firming needs and ensure that the economic benefits of wind are shared across the state.

Montana recognizes that there are areas of the state where large-scale, commercial-industrial wind development may not be appropriate. Montana encourages developers and regulators to closely review potential impacts to landscapes, wildlife, and existing land uses, including recreation and agriculture, while advancing development.

Montana recognizes that contracts between small-scale qualifying facilities and utilities require qualifying facilities to pay the cost of integrating its power, and the state is committed to providing the lowest-cost firming resources available to encourage renewable development.

Background

Montana ranks 19th in existing wind capacity [272 MW] and 5th in potential wind capacity.[6] Montana's wind resource is rated number one in the nation for class 3 wind and above. In August 2009 a Harvard study listed Montana in a tie with Kansas, second only to Texas, as having the greatest wind power potential in the nation.

The last two years have brought major advancements in wind in Montana. In 2008 Montana saw 126 megawatts of new wind generation come online, bumping its total to 271.5 megawatts.[7] In early 2009 Montana State University-Great Falls College of Technology also received a $2 million federal grant to carry out its wind turbine program and develop wind energy programs at other campuses around the state. Great Falls shares the $1.97 million grant from the U.S. Department of Labor with Montana State University-Northern in Havre, Montana State University-Billings College of Technology, and Montana Tech in Butte. Curriculum has been developed for a wind energy technical program at each campus.

In Montana, state law, the renewable portfolio standard, requires public utilities and

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[6] American Wind Energy Association, http://www.awea.org/projects/Projects.aspx?s=Montana.

[7] "2009 may be good year for wind power", *Great Falls Tribune*, Karl Puckett, January 4, 2009.

competitive electricity suppliers to procure a minimum of 5% of the retail sales from renewable resources through 2009, 10% between 2010 and 2014, and 15% starting in 2015. Cooperative utilities are responsible for implementing their own renewable standards.

As many as 50 wind power projects are in various stages in Montana. Projects include a 309-megawatt wind farm called Rim Rock between U.S. Highway 2 and the Canadian border, Enerfin's 79-megawatt Coyote Wind Farm near Big Timber, and a proposed 300-megawatt wind farm northeast of Martinsdale on private and school-trust land. The 58-megawatt first phase of the Martinsdale project will include seven to 15 turbines on state land, plus additional turbines on adjacent private land. Construction on the wind farm is expected to begin in 2010. A 52.5-megawatt expansion to Judith Gap has been discussed, if Invenergy is able to secure contracts to sell the additional power. With the construction of the 230-kilovolt Montana Alberta Tie Line, up to 300 megawatts of wind-generated power could come online. Because a collection of wind developers have secured capacity on the line, the majority of the new power on the new line is expected to be wind. **Table 2** provides a snapshot of wind projects in Montana.

The 2007-08 ETIC reviewed the costs and benefits ratepayers could see if the state invests in further development of wind power. Integration is a term used in describing the economic impact wind has on a utility because of variability and uncertainty. Wind integration can lead to additional utility costs because additional generation capacity that is controllable is added to manage the incremental variability of wind. The uncertainty is attributed to operations planning required to accommodate wind. Utilities purchase regulatory reserves to balance out the variability of wind. The FERC sets generation integration rules that require a utility to balance supply and demand.

Table 2

Montana Wind Projects					
Name	**Location**	**Capacity (MW)**	**Units**	**Owner**	**Power Purchaser**
Glacier Phase I	Ethridge	106.5	71	NaturEner	San Diego Gas and Electric
Glacier Phase II	Ethridge	103.5	71	NaturEner	San Diego Gas and Electric
Diamond Willow Phase I	Baker	19.5	13	MDU	MDU
Diamond Willow Phase II	Baker	10.5	7	MDU	MDU
Horsehoe Bend	Great Falls	9	6	United Materials	NorthWestern Energy
Judith Gap	Judith Gap	135	90	Invenergy	NorthWestern Energy
Refurbished Projects	Martinsdale Two Dot	1.43	22	Dave Healow	NorthWestern Energy (and others)

Source: American Wind Energy Association

Wind's variability can increase the day-to-day operating costs of a utility system. With rising fossil fuel prices, however, wind is becoming a competitive player. Concerns abound that large, utility-grade wind turbines can't be installed on the distribution grid without upgrades, resulting in higher costs being passed on to ratepayers. The cost of wind integration also can

grow as the percentage of wind increases on the interconnected system. Overall, however, the economics of wind energy are largely a function of a project's size, the wind resource, policy incentives, and financing. Cost recovery can be a threshold issue that varies among areas and utilities.

The Utility Wind Integration Group coordinated with trade associations, investor-owned utilities, public utilities, and cooperatives in creating a recent report about wind integration. The review found that:

- "Wind resource impacts can be managed through proper plant interconnection, integration, transmission planning, and system and market operations.
- System operating cost increases caused from wind variability and uncertainty amount to about 10% or less of wind energy's wholesale value.
- A variety of tools, such as commercially available wind forecasting, can be employed to reduce costs.
- In many cases, customer's electricity costs can be reduced when wind is added to the system because operating-cost increases are offset by savings that arise from displacing fossil fuel generation."[8]

There are a number of factors that contribute to the costs of wind energy on a utility-scale size. Wind integration costs are often driven by the need to "secure additional operating flexibility on several time scales to balance fluctuations and uncertainties in wind output."[9]

The costs associated with wind can be reviewed in two areas. One is wind integration, or the impacts of adding wind into a utility's operations. A second is the cost of wind as it relates to marketing that product or having adequate transmission to get it to market. From many utility operator's point of view, the cost of integration or ancillary costs are critical. From the production perspective, the importance of increasing transmission lines and the ability to get wind power, or any source, to market is key.

Wind brings additional costs related to integration and transmission. A study by the Department of Energy, Energy Efficiency and Renewable Energy division finds that at least two recent studies show wind integration costs are about $5/MWh, or less, for wind capacity penetrations up to 15% of the peak load where the power is delivered.[10] However, there is debate about whether average or "typical" integration costs can truly be determined. Some states and utilities have completed or are in the process of completing wind integration studies to determine individualized costs.

Energy production from wind continues to help meet NorthWestern Energy's overall electric portfolio requirements. Wind generation in 2008 provided about 8.5% of the electricity NorthWestern Energy needs to serve its customers. The 135-megawatt Judith Gap Wind farm, which came online in 2006, is the primary facility that sells wind generation to NorthWestern Energy. However, in total, NorthWestern Energy has about 148 megawatts of wind contracts and received more than 509,000 megawatt-hours (MWh) in 2008. In 2008 the amount

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[8] American Wind Energy Association, "How Utilities Integrate Wind Energy", Jeff Anthony, June 2009, http://www.renewableenergyworld.com/rea/news/article/2009/06/how-utilities-integrate-wind-energy.

[9] *The Northwest Wind Integration Action Plan*, March 2007, page 27.

[10] *Annual Report on U.S. Wind Power Installation, Cost, and Performance Trends: 2006,* U.S. Department of Energy, Energy Efficiency and Renewable Energy, May 2007, page 20.

NorthWestern Energy paid for regulation resources specifically to integrate wind generation into its electric supply portfolio was $2.6 million. This is at about $5.19 of regulation cost per MWh of wind generation. [11] In 2008 NorthWestern Energy, along with several other partners, completed a wind integration study with the assistance of Phoenix Engineering, a wind engineering firm with offices in Alberta, Canada, and Texas. The $110,000 wind integration study provided a high level understanding of the amount of additional regulation resources necessary to integrate large quantities of new wind generation sited at different locations throughout Montana.

In February 2010, the Montana Energy Promotion and Development Office of the Department of Commerce released a wind energy report prepared by Energy Strategies. The report includes an analysis of wind potential in Montana. It also examines wind integration issues, transmission barriers, and the competitive position of wind in Montana compared to its western neighbors.

[11] Information provided by NorthWestern Energy, August 2009.

Maximizing State Land Use for Energy Generation

Findings

In pursuing energy development on state lands, the state must continue to weigh its overall management responsibilities (fiduciary and multiple-use), as mandated by the Montana Constitution and state law.

Background

Trust land resources in Montana must be managed to produce revenue for the trust beneficiaries and take into account environmental factors while protecting the future income-generating capacity of the land. Historically, state lands have provided hydroelectric power, wind power, coal production, and oil and gas production. State lands are now being looked at in a much broader context in terms of geothermal energy, biomass energy, and even carbon sequestration.

The DNRC Minerals Management Bureau oversees the leasing, permitting and managing of about 4,802 oil and gas, coal, sand and gravel, and metalliferous and non-metalliferous agreements covering about 2 million acres of the 6.2 million acres of available school trust lands and 2,400 acres of additional state land. Multiple-use of trust lands is also mandated by law, meaning a grazing lease might also be used as a wind farm or even for carbon sequestration.[12]

Oil and gas exploration and development on state and private lands is regulated and bonded by the Montana Board of Oil and Gas Conservation Commission. Of the 6,653 oil and gas leases the department is now leasing and monitoring, about 606 are currently productive. Oil and gas leases that are managed are up about 7%, however, the number of producing leases increased by just 3.9%, compared to fiscal year 2007. Each year, there are four oral auctions of new oil and gas leases.

Each oil and gas leases pays a rental rate of no less than $1.50 for each acre of land leased, with some conditions, and no less than $100 per year. Lessees also pay a royalty on oil and gas that is produced from the lease. The royalty rate may not be less than 12.5%. In 2005 it was increased to 16.67%, unless otherwise noted in a lease sale.

School trust grants received more than $31.2 million attributed to oil and gas leasing in the 2008 fiscal year. And production showed nearly 2 million barrels of oil, 7.8 million MCF (thousand cubic feet) of natural gas, and 1.5 million gallons of condensate produced in that time period. It was the most successful royalty revenue year in the bureau's history—largely due to record high oil prices.[13]

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[12] 77-1-203, MCA.

[13] http://dnrc.mt.gov/trust/MMB/Default.asp.

A portion of Montana's vast coal resources are also located on state land. The operating, rental, and royalty provisions are established by a lease, but that lease does not authorize a coal mine. Before mining occurs, the lessee must comply with the Montana Environmental Policy Act and secure the proper permits.

Lease counts for coal have remained constant since 2006, with about 29 leases on 13,841 acres.[14] Coal production on state trust lands increased 63.7% in fiscal year 2008 to 4,720,487 tons mined compared to 2,883,432 tons mined the previous year. The production totals were the highest recorded on state trust lands over the past decade.[15] Lessees pay no less than $2 for each acre of land leased for coal resources. The royalty on all coal produced from the leased premises is no less than 10% of the value of the coal (currently 12.5% is collected). Royalties constitute the overwhelming majority of gross revenue generated from a producing coal lease. In fiscal year 2008, coal royalty revenues totaled $5,865,071, an increase of 57.3% over the previous year.

During the last year, Montana's coal resources, particularly the Otter Creek Project area, have received much attention. The state's ownership totals over 9,500 acres, or roughly half of the Otter Creek area. The state's ownership is in a "checkerboard" pattern, and Great Northern Properties owns most of the other half of the coal estate. Surface ownership is a combination of state, federal, and fee. State recoverable coal totals 616 million tons at Otter Creek, or about one-half of the total 1.3 billion ton reserve.

A lease appraisal that covers the state's ownership of the area was completed, and the Land Board collected public opinion. The Land Board offered the state tracts for lease at $0.25 per ton and initially did not receive any bids. In February 2010, the Land Board lowered the minimum bid to $0.15 per ton and readvertised the lease package. Ark Land Company of St. Louis, Missouri, a subsidiary of Arch Coal, offered a bonus bid of $85,845,110. In March 2010 the Land Board voted 3-2 to accept the bid. The coal lease will give Arch the right to mine about 8,300 acres of state-owned minerals. Arch now controls 1.5 billion tons of coal in Montana's Otter Creek area, including a coal lease secured in November 2009 through Great Northern Properties Limited.

Montana's first wind farm became fully operational in 2006. The Judith Gap Wind Farm is located on a combination of state school trust land private land. Of the 90 wind turbines, 13 are located on trust land and since fiscal year 2004, Judith Gap has generated about $212,116 in revenue. In early 2010, the Land Board agreed to lease 640 acres of trust land near Big Timber for 79-megawatt Coyote Wind Farm.

A wind developer interested in state land can secure a land use license and place an anemometer on state land. It does not constitute a lease and is issued at an administrative cost of $25 plus a minimum annual fee of $150 per year. If a site with strong wind potential is identified, the DNRC can then release a public request for proposals seeking developers to offer proposals for development. Montana, New Mexico, and Wyoming use a competitive process after the initial, unsolicited proposal.[16]

Martinsdale Wind Farm LLC, a subsidiary of Horizon Wind Energy, is working in

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[14] http://dnrc.mt.gov/About_Us/publications/2008/MMB.pdf.

[15] State of Montana DNRC Trust Land Management Division *Fiscal Year 2008 Annual Report*, page 11.

[16] "Wind, Wave/Tidal, And In-River Flow Energy: A Review of the Decision Framework of State Land Management Agencies", Western States Land Commissioners Association.

cooperation with the DNRC to develop the Martinsdale Wind Power Project. It would produce up to 300 megawatts and be located about 20 miles west of Harlowton. The project could include 36 turbines, possibly expanding to 100 wind turbines.[17]

Efforts to turn the Norris Hill area of Madison County into a wind farm also could include state lands. Madison Valley Renewable Energy LLC, could use state school trust lands in a portion of its project, which is expected to cover 14,000 acres of state and private land and generate about 150 megawatts of electricity.[18]

Wind related activities on state lands have generated a total of $306,115 since 2004.

There is one hydroelectric power facility on state-owned water projects. The Broadwater Power Project near Toston has been generating power since June 1989. Revenue supplements funds for state water project rehabilitation costs. The DNRC owns and operates the 10-megawatt facility, and contracts with NorthWestern Energy to sell the power. In a year with average runoff, the facility can generate about $3.5 million in revenue from energy capacity sales. If debt payments and operating expenses are deducted, about $1.3 million is left. Drought has reduced the power generated and revenue at the facility. [19]

State lands also have the potential to be used for biomass and geothermal energy. The DNRC and other state agencies are taking a closer look at lands where these types of developments might be considered in the future. The state is authorized to lease state land for geothermal development in accordance with Title 77, chapter 4, part 1, MCA. The annual rental rate is no less than $1 per acre, and the royalty rate is no less than 10% of the amount or value of the steam or energy. The 2009 Legislature approved House Bill No. 333, which allows the Montana Bureau of Mines and Geology to characterize the geothermal resource base in Montana. The ETIC will receive reports on their findings and any funding used for such resource.

With beetle-infestations in areas of Montana's forested lands, biomass also holds potential for the future. The state of Montana has about 4% of the live tree woody biomass of live tree woody biomass on Montana timberland, and there is an average of 5.61 tons per acre of standing dead tree woody biomass on state lands. [20]

The DNRC as well as the Montana Legislature have engaged in discussions about the role of state trust lands in a carbon trading system. Bill drafts were discussed but not advanced during the 2009 legislative session, and the DNRC continues to look at its existing authority to provide such leases.

Examples of state land use for energy generation in other states:

The Western States Land Commissioners Association recently developed a report "Wind, Wave/Tidal, and In-river Flow Energy: A Review of the Decision Framework of State Land Management Agencies" that summarizes the decision-making framework surrounding

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[17] http://dnrc.mt.gov/trust/wind/martinsdale.asp.

[18] "Companies vie to harness Norris Hill Wind Potential", Bozeman Daily Chronicle, JEDI Hausen, January 10, 2008.

[19] http://www.dnrc.mt.gov/wrd/water_proj/hydro/hydropower.asp.

[20] http://dnrc.mt.gov/forestry/Assistance/Biomass/Documents/MT_WoodyBiomassAssessment.pdf.

alternative energy projects on state lands. The report finds that very few states have laws dealing directly with how land agency managers should approach alternative energy projects. It finds:

- ☐ Colorado and Louisiana have laws allowing the state to consider alternative energy projects, where that authority did not previously exist.
- ☐ South Dakota has laws providing for a severance of wind energy as a property interest through an easement.
- ☐ Idaho recently approved a resolution encouraging the Idaho Land Board to explore opportunities to develop alternative energy facilities on state endowment land.
- ☐ Oregon has administrative rules governing the exploration and development of wave energy. The state is in the process of designing rules governing the use of wind turbines, solar energy installations, and biomass facilities.

While there are only limited state policies on the books, most state land managers recognize that interest in state lands is increasing with increases in conventional energy prices and a growing interest in renewable resources. The report includes a list of issues that most states must examine in advancing alternative energy policies on state lands. Fractured land ownership patterns and land management priorities and objectives are noted as barriers. The report finds that some states have structured phases into their authorizations to prevent speculation and to protect the state against non-performing lessees tying up state land for long periods of time. The role of the federal government, such as the FERC and the BLM are also considerations. Lack of infrastructure, need for environmental baseline information, staff knowledge base, and a need for an understanding of the impacts of an emerging industry are also noteworthy.

Increasing the Supply of Low-Cost Electricity with Coal-Fired Generation

Findings

Montana is committed to supplementing energy needs with renewable energy sources, while recognizing the value of existing coal-fired generation and its place in Montana's energy portfolio. Continued research and pilot projects to convert coal into synthetic petroleum products, hydrogen, methane, and natural gas also may extend Montana's competitive advantage with coal well into the future.

Background

Montana's electricity market is dominated by coal-fired power plants, accounting for about two-thirds of the state's electricity generation. Even though new generating stations built around the country in recent years have relied on natural gas or wind, coal continues to provide nearly half of the nation's electricity. A September 2009 Energy Information Administration (EIA) report showed that "year-to-date, coal-fired plants contributed 45% of the nation's electric power."[21]

Montana currently has five coal-fired power plants. Montana's plants provide about 911 thousand MWh in net electricity generation—this compares to 1,174 thousand MWh from hydroelectric power.[22] In Montana, three of the top 10 largest plants by generation capacity in 2007 were coal-fired plants including: Colstrip, JE Corette, and the Hardin facility. (MDU operates the other two facilities, Lewis and Clark Station and Glendive Station.) The Colstrip Steam Electric Station generates about 2,100 megawatts of electricity.

NorthWestern Energy, which serves 320,000 electric and natural gas customers in Montana, gets a substantial amount of its power from coal-fired power plants, about 60%. In January 2009, NorthWestern Energy's ownership interest in Colstrip Unit 4, a 740-megawatt demonstrated-capacity coal-fired power plant, was put into rate base. NorthWestern Energy's energy supply sources include 111 megawatts from Colstrip Unit 4, with the remaining requirements being met with market purchases from third parties.

In the last four years, as many as six additional coal-fired power plants have been proposed in Montana. Those proposals have been met with controversy due to concerns about climate change, air quality, zoning, and regulatory uncertainty. Earlier this year a group of Montana electric cooperatives dropped plans to build a new coal-fired power plant, the Highwood Generating Station, near Great Falls. Instead of a coal plant, the cooperatives have

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[21] "Electric Power Monthly September 2009: With data for June 2009", Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels, page 1.

[22] http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=MT.

said they will power the plant with natural gas. Across the country, regulatory uncertainty over the direction of federal carbon regulations has reduced some efforts to build new coal-fired generation. Coal-fired power plants emit carbon dioxide, a greenhouse gas. Carbon dioxide emissions are at the center of climate change discussions.

Since 1976, coal has been the least expensive fossil fuel used to generate electricity, according to the EIA. The delivered price of coal at electric utilities has increased for the last eight consecutive years. In 2007 it increased to $36.11 per short ton ($1.78 per million Btu), an increase of 5.7%. Those increases have continued. The average price paid for coal in June 2009 was $2.23 per million Btu (MMBtu), down 0.9% from the price paid in May. It was 6.7% higher when compared with the June 2008 price of $2.09 per MMBtu. A report released in 2009 shows that coal, however, remains the least expensive. In 2008, for example, coal averaged $2.05 per MMBtu, compared to $15.72 for liquid fuel, and $9.11 for natural gas.[23]

Over 90% of the coal consumed in Montana in recent years has been used to generate electricity. Minor amounts of residential and commercial heating and some industrial use account for the remainder. Montana coal consumption has been more or less stable since the late 1980's, after the Colstrip 4 generating unit came online. In recent years, about three-quarters of production has been shipped by rail to out-of-state utilities. Most of the remaining quarter is burned in-state to produce electricity, primarily at Colstrip. Prior to deregulation, about 40% of the electricity generated in Montana with coal went to Montana customers, and 60% was shipped by wire to out-of-state utilities. No public data are available now, but it's likely that the majority of coal burned in Montana still produces electricity for export.

Montana is in tune with federal efforts to deal with climate change and the potential impacts to Montana's energy supply and the cost and use of coal-fired generation. In 2009, the U.S. House approved the American Clean Energy and Security Act of 2009, which is now before the Senate. An extremely over-simplified explanation of the legislation is that it would limit or "cap" the amount of greenhouse gases. Credits or allowances would then be distributed to industries that remit those gases. Industries would have to respond by reducing emissions or buying credits from other holders.

The Supreme Court in April 2007 concluded that greenhouse gases meet the Clean Air Act definition of an air pollutant. (*Massachusetts v. Environmental Protection Agency, EPA*). The court determined that the Clean Air Act authorizes the EPA to regulate tailpipe greenhouse gas emissions and instructed the EPA to determine whether those emissions contribute to air pollution that "may reasonably be anticipated to endanger public health or welfare" or if current science was too uncertain to make such a judgement.

In April 2009, the EPA concluded that greenhouse gas emissions endanger public health and welfare. The EPA issued a proposed endangerment finding under section 202 of the Clean Air Act. The EPA also concluded that greenhouse gas emissions contribute to climate change. If both findings are finalized, the EPA can move forward with regulatory rulemaking. The status of the rulemaking and its potential impact in Montana are unclear at this time.

Historically, Montana has produced about twice as much electricity as was consumed in the state. As an example, in 2000, Montana exported 41% of the electricity that it produced, according to a state inventory. That same year, emissions associated with electricity consumption were 9.5 million metric tons of CO_2 equivalent—significantly lower than emissions

[23] "Electric Power Monthly September 2009: With data for June 2009", Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels, page 70, Table 4.2.

associated with electricity production, which were 17.1 million metric tons of CO_2 equivalent.[24] These numbers also may require additional scrutiny because much of the energy exported in Montana is generated by hydroelectric facilities. An EIA report released in 2008 shows 35.1 million metric tons of CO_2 being emitted in Montana, 19.1 million metric tons resulting from electric power.[25] Between 1990 and 2006, CO_2 emissions from the electric power sector have grown by about 29%, according to the report.[26]

Federal tracking of carbon dioxide emissions is based on a voluntary national registry. However, a new tracking system for some facilities is being developed by the EPA. Power plants subject to the 1990 Clean Air Act acid rain program now report certain emissions, including CO_2, to the EPA. In Montana, those operations include five coal-fired power plants. Based on the EPA Clean Air Markets reporting shown in **Table 3,** those plants emitted about 18.3 million tons of CO_2 in 2009, a drop from 21.7 million tons in 2008 and 22.4 million tons of CO_2 in 2007.[27] (Glendive is a combustion turbine that only runs at peak load.)

Table 3

EPA Clean Air Markets: CO_2 Tons				
Facility	**2009**	**2008**	**2007**	**2006**
Colstrip	15,471,751	19,213,973	19,382,297	18,240,485
Glendive	1,183	2,511	62,645	30,824
Hardin	1,080,342	817,202	950,823	3,293
Corette	1,305,246	1,236,844	1,522,727	1,528,248
Lewis and Clark	433,354	499,856	501,257	503,041

Source: EPA: Clean Air Data and Markets.

In August, NorthWestern Energy released a newsletter that included information that proposed cap-and-trade legislation would increase household customers' bills by $225 a year. NorthWestern Energy has said under draft federal legislation it would not receive enough allowances, forcing it to buy allowances and increase its costs. Those costs would be passed on to ratepayers. Montana's electric cooperatives, which also rely largely on coal-fired power, also have expressed concern. East of the Continental Divide, cooperatives rely on coal for as

[24] *Montana GHG Inventory and Reference Case Projections 1990-2020*, Center for Climate Strategies, principal authors: Alison Bailie, Stephen Roe, Holly Lindquist, and Alison Jamison, September 2007, page 5.

[25] http://www.eia.doe.gov/environment.html.

[26] http://www.eia.doe.gov/oiaf/1605/ggrpt/carbon.html.

[27] Clean Air Markets, Environmental Protection Agency, 2008 data.

much as 80% of their supply. One cooperative estimated a 45% increase in customers' bills.[28] Other organizations have argued that the utility analysis is incorrect. The EPA, for example, has estimated an increase of $80 to $111 a year per household.[29]

Because of Montana's vast coal reserves the state has been recognized nationally for its interest in carbon sequestration and clean coal technologies—particularly efforts to convert coal into synthetic petroleum products or natural gas. In August 2008, the state announced an agreement between the Crow Nation and Australian-American Energy Company LLC (AAEC) for development of a coal-to-liquids project in southeastern Montana. (Terra Nova Minerals Inc. has announced plans to purchase Australian Energy Co., the major lease holder in AAEC.) The Many Stars Project would convert 38,000 tons of coal per day into 50,000 barrels per day of diesel, jet fuel, and naphtha. While the Many Stars Project remains on the table, the U.S. Air Force dropped plans for a coal-to-liquid fuel plant at Malmstrom Air Force Base at Great Falls. The project was part of a plan to provide a non-petroleum-based fuel source for the Air Force.

Over the last 20 years, the Montana Legislature also has looked closely at the issue of clean coal technology. In 1991, the Clean Coal Technology program was approved. House Bill No. 701 created a clean coal demonstration account in the coal tax trust fund. It put $5 million a year for 6 years into the fund, and when a company applied for a loan, the next Legislature made a decision whether or not to award the loan. The DNRC designated legitimate projects. Projects had to show "efficiency in electricity generation and reduced pollutant emissions compared to current coal burning methods". Loans were made to projects that showed matching funds on a 4:1 ratio. Loans could not be made for early stage planning or preliminary research.

The bill was directed toward a clean coal demonstration project proposed at the Corette Plant in Billings. The project was aimed at reducing emissions and integrating a coal cleaning process. The $400 million project was to be paid primarily with a federal grant from the Department of Energy. During a 1993 special session, the Legislature repealed the program. Elimination of the program was part of the DNRC's 10% budget reduction, which was mandated by the regular 1993 session. The project in Billings also did not receive federal funding, and the DNRC reported a lack of interest in the program.

The "Jobs and Energy Development Incentives Act" approved during the 2007 May Special Session of the Legislature, provides tax incentives for development of clean and renewable energy. (Title 15, chapter 24, part 31, MCA). During the 2007-2008 interim, the ETIC spent a great deal of time reviewing the issue of carbon sequestration. The ETIC didn't ultimately bring legislation to the 2009 Legislature. However, the committee issued several findings including:

- The Big Sky Carbon Sequestration Partnership, based in Bozeman, is examining the feasibility of both geological and terrestrial sequestration in Montana.
- The costs of carbon capture and sequestration are uncertain and may be determined in part by successful commercial demonstrations of carbon capture and storage, by carbon market prices, and by state and federal decisions regulating carbon emissions.

The 2009 Legislature approved carbon sequestration legislation in the form of Senate

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[28] "Co-ops worry about costs of cap-and-trade approach," Billings Gazette, Tom Lutey, June 1, 2009.

[29] EPA Analysis of the American Clean Energy and Security Act of 2009, June 23, 2009, page 13, http://www.epa.gov/climatechange/economics/economicanalyses.html.

Bill No. 498. The legislation requires the state to seek primacy over a carbon sequestration program, when the federal government finalizes its carbon sequestration rules under the Underground Injection Control Program—which it is expected to do by 2011.

Montana is the fifth largest producer of coal in the United States, with over 43 million tons mined in 2007. Almost all the mining occurs in the Powder River Basin south and east of Billings. There are currently six major coal mines in Montana, operating in Big Horn, Musselshell, Richland, and Rosebud counties. With the exception of the small lignite mine at Savage, Montana production is entirely low-sulfur subbituminous coal, with 17-18 MMBtu per ton. Like most Western coal, Montana coal is cleaner but lower in heat content than coal mined in the East.

During the last year, Montana's coal resources, particularly the Otter Creek Project area, have received much attention. This issue is addressed in-depth in the "Maximizing state land use for energy generation" portion of this report.

The price of Montana coal averaged $11.79 per ton at the mine in 2007, including taxes and royalties. Since 2002 the price has gradually increased largely because the price of electricity has increased, as well as increased demand because of the California energy crisis, higher natural gas prices, and a drop in hydroelectric power because of prolonged drought in the Pacific Northwest.

Nearly all coal exported from Montana leaves on Burlington Northern Santa Fe lines. Some is later shipped by barge. Transportation costs can double to more than triple the delivered cost of Montana coal bought by out-of-state generating plants. The cost of Montana coal may be further affected by the rail transportation network being better developed in the southern end of the Powder River Basin than in the northern end.

Promoting Alternative Energy Systems

Findings

Montana encourages the development of educational programs that prepare the workforce for creating and obtaining jobs in an emerging renewable energy economy.

Montana supports:

the advancement of new alternative energy technologies to improve vehicle mileage and reduce exhaust emissions;

incentives and loan programs to promote the development of biomass plants to generate heat for industrial use or electricity; and

promotion of the long-term growth of large utility scale wind and small-scale distributed generation.

Montana should promote additional hydroelectric power expansions by classifying them as renewable under the "Montana Renewable Power Production and Rural Economic Development Act."

Background

Alternative energy systems are defined in 15-32-102, MCA as "the generation system or equipment used to convert energy sources into usable sources." Those sources include "geothermal systems, low emission wood or biomass, wind, photovoltaic and small hydroelectric power plants (under 1 megawatt), fuel cells that do not require hydrocarbon fuel, and other recognized nonfossil forms of energy generation". Montana code also defines an "alternative renewable energy source" in 15-6-225, MCA in much the same manner. For the purposes of implementing Montana's Renewable Portfolio Standard (RPS), the "Renewable Power Production and Rural Economic Development Act" enacted by the 2005 Legislature, the term "eligible renewable resource" is used in 69-3-2003, MCA. The definition is similar to the others, with the exception of hydroelectric projects. To be used toward Montana's RPS, only water power that does not require a new appropriation, diversion, or impoundment of water and that has a nameplate rating of 10 megawatts or less or is installed at an existing reservoir or on an existing irrigation system that does not have hydroelectric generation as of April 16, 2009, and has a nameplate capacity of 15 megawatts or less qualifies toward the requirements of the act.

Based on those definitions, Montana has a wealth of alternative energy sources. The number of alternative energy systems that put those sources to work also continues to increase in Montana.

Montana has increased wind energy generation from 1 megawatt in 2004 to just over 270 megawatts in 2009. The portion of this report on "Wind integration" discusses in more detail Montana's wind resources, so this portion of the report focuses on other alternative energy sources and systems.

The Montana Geothermal Program was established by Sage Resources of Missoula, the U.S. Department of Energy, and the State of Montana in 2005. The program works to identify

and update geothermal information for Montana. A program website provides access to regional, site-specific, and general geothermal energy information to assist in development.[30] The program notes that Montana has the potential to develop significant new sources of geothermal energy, with more than 50 geothermal areas and at least 15 high-temperature sites. High-temperature areas in western Montana are located near Helena, Bozeman, Ennis, Butte, Boulder, and White Sulphur Springs. There are seven locations with surface temperatures above 149 degrees Fahrenheit, plus 20 locations with temperatures above 110 degrees Fahrenheit. The estimated deep-reservoir temperatures for some Montana sites are over 350 degrees Fahrenheit.[31] In Montana geothermal is being used for district heating systems, greenhouses, and aquaculture. Ponds near Boulder, for example, use geothermal water to grow fish. A commercial greenhouse near Butte uses geothermal resources to produce tomatoes and roses.

Municipalities also are investigating the use of municipal solid waste as a source for electricity. "Of the 2,300 or so currently operating or recently closed municipal solid waste landfills in the United States, more than 450 have landfill gas utilization projects. We estimate that approximately 520 additional landfills could turn their gas into energy, producing enough electricity to power nearly 700,000 homes," according to the EPA.[32] In Montana, Flathead Electric Cooperative is capturing methane at the Flathead County landfill to fuel a 1.6-megawatt power plant. It is the first landfill gas-to-energy project in Montana.

Montana also has abundant solar resources that can be used in residential and commercial buildings, and in farming and ranching. Eastern Montana receives an annual average of 5 hours of full sun; Western Montana receives an annual average of 4.2 hours.[33] The National Center for Appropriate Technology (NCAT) has created brochures for residential homeowners as well as designers and builders interested in learning more about solar options in Montana. Information is included in **Figure 1**. A variety of small solar projects are operating in Montana. In September 2009, for example, 12 solar panels were added to the Great Falls High School campus to power a bank of computers. A federal grant is funding the project.[34]

Figure 1, Source: NCAT

How much elctricity (kWh/Yr) will a PV system produce?

	1-kW	2-kW	3-kW	4-kW	5-kW
Missoula	1428	2857	4285	5713	7142
Great Falls	1651	3302	4953	6603	8254
Billings	1689	3378	5067	6756	8445
Helena	1590	3180	4770	6359	7949
Kalispell	1403	2805	4208	5611	7013

Montana developers are also actively pursing commercial development of biomass as an energy option. Woody biomass users in Montana consume about 2.2 to 2.7 million dry tons of woody biomass a year, largely using mill residue to fuel the supply. Biomass users include 10 bark or wood pellet plants, Fuels for Schools facilities, two board facilities, and one pulp mill. A

[30] http://www.deq.state.mt.us/Energy/geothermal/default.mcpx.

[31] Ibid.

[32] http://www.epa.gov/lmop/benefits.htm.

[33] http://www.montanagreenpower.com/solar/index.php.

[34] "Great Falls High gets greener with solar panels," Great Falls Tribune, Kristen Cates, September 17, 2009.

single facility, Smurfit-Stone Container Corp., accounted for more than one-half of the total annual biomass consumption in Montana.[35] Smurfit-Stone closed its Frenchtown facility in early 2010. The Montana Fuels for Schools and Beyond Program promotes the use of forest biomass waste for energy in public buildings—public schools in particular. It is a collaboration between the DNRC, the U.S. Forest Service, and Montana Resource Conservation and Development Areas.

The 2009 Legislature approved a $475,000 appropriation in House Bill No. 645, the Montana Reinvestment Act, to the Department of Commerce to conduct a "biomass energy study". The funding could be used to fund feasibility studies, installation of biomass energy boilers, or biomass program staff within the DNRC in order to increase biomass utilization. In late June, Governor Brian Schweitzer announced that the $475,000 would be made available in the form of grants for biomass energy feasibility studies through the Department of Commerce. The 2009-2010 EQC dedicated a significant amount of its time to a study of biomass, based on House Joint Resolution No. 1, approved by the 2009 Legislature. The EQC has tracked the feasibility study grants as well as other relevant issues.

Montana's RPS requires public utilities operating in Montana to obtain 15% of their retail electricity sales from eligible renewable resources by 2015. The current renewable percentage of NorthWestern Energy's electric supply in Montana is a little bit more than 8%, primarily from wind generation. In 2009 the renewable percentage of MDU's electric supply in Montana is 9.5%.

There are additional programs in place to encourage the use of alternative energy systems. Customers of regulated utilities generating their own electricity using (but not limited to) wind, solar, geothermal, hydroelectric power, biomass, or fuel cells can participate in net metering. Net metering is available on the NorthWestern Energy and the MDU systems. Some rural electric cooperatives also allow net metering. Regulated utilities are required to offer customers the option of purchasing electricity generated by certified, environmentally-preferred resources that include, but are not limited to, wind, solar, geothermal, and biomass. The Energy Promotion and Development Division in the Department of Commerce also was created in 2007 to help implement Governor Schweitzer's commitment to "clean and green" energy development in Montana. The division has worked in the areas of geothermal and wind.

Federal law requires all state-regulated utilities to purchase qualifying facility power at either a freely-negotiated rate, or at a rate set by the state PSC. In Montana, we have about 25 qualifying facilities with the collective capacity to produce up to 120 megawatts of electricity annually. Qualifying facilities include facilities that produce electricity using biomass, waste, water, wind, or other renewable resource, or any combination of those sources.

There are a number of tax incentives for alternative energy as well. Montana, for example, 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). In FY 2007, 24,866 taxpayers took about $8 million in credits. Montana 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

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[35]"An Assessment of Forest-based Woody Biomass, Supply and Use in Montana," Todd Morgan, Bureau of Business and Economic Research, University of Montana, April 2009, page 18.

taxes on taxable net income produced by certain specified activities related to alternative energy (15-32-402, MCA). A memo prepared by legislative services researcher Jeff Martin discusses some inconsistencies in the energy credit. It is included in **Appendix I**.

Montana also 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 program is funded by air quality penalties collected by the DEQ, and the DEQ administers the program. If loans are made by the DEQ using stimulus money received through the American Recovery and Reinvestment Act of 2009 (ARRA), loans of up to $100,000, with a 15 year payback also are available.

In Fiscal Year 2008 the alternative energy loan program received 31 applications and 26 projects were financed for a total of $719,674. Two applications were withdrawn by the applicants, two were declined for financial reasons, and the remaining application was processed in Fiscal Year 2009. The 2008 loans also represented the broadest range of technologies included in the portfolio to date—including biomass or pellet stoves. The loans have largely been used for solar electric systems, 47%. Biomass has been represented in about 5% of the projects.

The 2009 Legislature also appropriated $1 million in ARRA money for grants for renewable energy development in Montana. The grants are being directed toward projects that have completed research and are in production, but are still new or developing technologies in Montana. The grant amount may be up to $500,000 for a single application. As part of the renewable energy grant and loan program, the DEQ also shares information with consumers and businesses about the tax benefits of installing renewable systems. Technical assistance is also provided to small-scale (less than 100 kW) systems using solar, wind, fuel cells, micro-turbines, and geothermal resources for self-generation, net metering, or water and space heating.

Reducing Regulations that Increase Ratepayers' Energy Costs

Findings

None

Background

Customers of a Montana public utility, such as NorthWestern Energy or MDU, look to the 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 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 at 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.

Customers of a Montana electric cooperative are considered a part owner of that cooperative. Electric cooperatives are not-for-profit entities that are democratically controlled 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. There are 25 not-for-profit distribution electric cooperatives in Montana with about 216,846 meters served.

Table 4

Average Retail Price of Electricity to Ultimate Customers by End-Use Sector, by State June 2009 (Cents per kilowatt hour)		
State	**Residential**	**All Sectors**
California	15.01	14.38
Nevada	12.02	10.11
Arizona	11.27	10.09
New Mexico	10.37	8.37
Colorado	9.97	8.25
Montana	**9.36**	**7.32**
Wyoming	9.16	6.06
Utah	9.12	7.56
Oregon	9.04	7.54
Idaho	8.31	6.93
Washington	7.94	6.79
Pacific Average	12.78	12.06
Mountain Average	**10.61**	**8.72**

Source: EIA

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. The city of Troy is Montana's only municipal electric utility.

Table 5

Average retail price of electricity to ultimate customers: Total by End-use Sector, 1995-June 2009 (Cents per Kilowatt hour)		
Period	**Residential**	**All Sectors**
1995	8.4	6.89
1996	8.36	6.86
1997	8.43	6.85
1998	8.26	6.74
1999	8.16	6.64
2000	8.24	6.81
2001	8.58	7.29
2002	8.44	7.2
2003	8.72	7.44
2004	8.95	7.61
2005	9.45	8.14
2006	10.4	8.9
2007	10.65	9.13
2008	11.36	9.82
Through June 2009	11.47	9.86

Source: EIA, Total Electric Industry

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. 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 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. 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 Energy customer could choose an electricity supplier. For members of a cooperative that did not open up to competition or MDU customers, 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 Energy 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 Energy.

The 2009 Legislature continued to take steps to allow for utility integration. In approving House Bill No. 294, the Legislature allowed a natural gas utility that had restructured to acquire

natural gas production and gathering resources and include them in rate base. The revisions to the law also establish procedures for a utility to apply to the PSC for approval to rate-base prior to the acquisition.

In 2008 and 2009, NorthWestern Energy's 320,000 customers saw a 2% increase, but the company offset that amount through future actions based on a negotiated agreement. In 2008 MDU, which last increased rates in 1987 and serves about 24,000 customers, also increased residential customer rates. The PSC allowed a 7.1% increase experienced by residential electricity customers to become permanent and allowed an additional 1.4% increase for January 2009.

Tables 4 and 5 provide a snapshot of energy prices. In July 2008 NorthWestern Energy customers were paying 10.2 cents per kilowatt-hour for electricity. (An average household uses about 750 kWh a month). The NorthWestern Energy rate was 20% higher than the second-highest major utility electric rate in the region, according to an analysis by the Billings Gazette State Bureau.[36] NorthWestern Energy must buy electricity on the open market, making it vulnerable to market prices for electricity.

When compared to other Mountain states, however, Montana's rates are quite comparable and even low in some areas. In June 2009, the average retail price of electricity for residential customers in Montana was 9.36 cents per kilowatt hour[37]. The numbers in 2009 show changes in the economy, and a reduction in electric costs. In July 2009, NorthWestern Energy residential customers were paying an average of $70.46 a month or 8.78 cents per kilowatt-hour for electricity. In July 2009, MDU's Montana residential customers were paying an average of $68.25 a month or 9.1 cents per kilowatt-hour.

In 2008 the PSC allowed NorthWestern Energy to purchase the Colstrip 4 power plant and include it in rate base. The Montana Consumer Counsel argued the plant was too expensive, and NorthWestern Energy's parent corporation was charging the utility subsidiary too much for the Colstrip 4 power plant. The monthly bill impact on an average customer (750 kWhs per month) is estimated to be less than $3 for the next 10 years, when customers are projected to begin to see bill savings because Colstrip 4 costs are lower than the market, according to NorthWestern Energy. The PSC found that the rates that would result from adding Colstrip to the supply portfolio would be just and reasonable. The Consumer Counsel disputed NWE's estimated monthly bill impact and predicted increases of at least $7 per month for all non-choice customers. "The PSC is fully aware that approving NWE's rate-basing proposal means customers' rates will be somewhat higher for several years, but the PSC finds the initial cost is justified by the benefit to customers from the relative rate stability that rate-basing contributes to the supply portfolio, as well as the benefit to customers from lower rates in the long term."[38]

Total U.S. electricity consumption fell by 4.4% during the first half of 2009 compared with the same period in 2008, primarily because of the economic downturn reducing industrial electricity sales. The expected year-over-year decline in total consumption during the second

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[36] "NWE's electric rates highest among region's big utilities", Billings Gazette, Mike Dennision, July 13, 2008.

[37] Energy Information Administration, "Average Retail Price of Electricity to Ultimate Customers by End-use Sector, by State, June 2009 and 2008, Table 6.6.A.

[38] Montana Public Service Commission, Final Order, Docket NO. D2008.6.69 ORDER NO. 6925f, November 13, 2008.

half of 2009 is a 2.3% decline, as residential sales begin to recover, according to the EIA.[39] The EIA expects electricity retail prices to show year-over-year declines next year for the first time since early 2003 because of lower fossil fuel costs for generation. The projected annual average 2010 residential electricity price of 11.4 cents per kilowatt hour is about 2% lower than the 2009 average.[40]

[39] http://www.eia.doe.gov/cneaf/electricity/epm/epm_sum.html.

[40] Ibid.

Promoting Conservation and Promoting Energy Efficiency Incentives

Findings

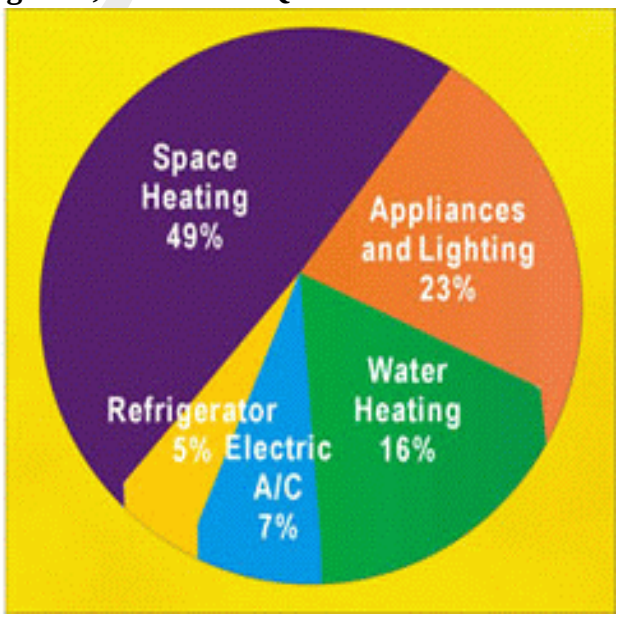
Pending May 13 ETIC meeting discussion.

Background

Energy conservation refers to activities that reduce the amount of electricity used by a consumer—like turning a light off when you leave the room. Energy efficiency results from technologies that are more efficient or use less energy—like a compact florescent light bulb. Demand response is when customers temporarily alter their behavior in response to signals from a utility. An example is domestic hot water heaters that are cycled off by utility personnel during times of high electricity demand. The three (efficiency, conservation, and demand response) are often linked and simply referred to as "demand-side management" or DSM. Montana's current energy policy promotes energy conservation, energy efficiency, and DSM. In this report, the topics of efficiency and conservation have been combined with demand response.

Conservation is a 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 fuel and electric market prices, and it reduces the need to purchase or construct new generation and transmission facilities.

Figure 2, Source: DEQ



In a home, energy use is divided into heating and baseload energy. Heating is typically the greatest utility expense, with baseload consumption covering energy uses like refrigeration, lighting, and entertainment. **Figure 2** shows typical energy usage. Understanding how homes use energy is one of the first steps to moving efficiency or conservation measures forward.

Montana ranked 31st overall among states on a 2009 State Energy Efficiency Scorecard produced by the American Council for an Energy-Efficient Economy (ACEEE) in terms of energy efficiency efforts. The 2009 report was authored by ACEEE, Humboldt State University, and the Natural Resources Defense Council. The rankings were based on six issues including: utility spending on energy-efficiency programs, state transportation policies, state

building codes, combined heat and power, state government initiatives, and appliance efficiency standards. Both the ACEEE report and the EIA found that Montana utilities spent about $6.7 million on energy efficiency in 2007, saving 43,329 MWh.[41] These are savings that continue well beyond the year they are reported.

The Northwest Power and Conservation Council produces estimates of the amount of conservation that can be acquired cost effectively in the four state Pacific Northwest region. The most recent report released in February 2010 envisions that cost-effective energy efficiency could save 1,200 megawatts by 2015. Over the entire 20-year horizon of the power plan, energy-efficiency could meet 85% of the Northwest's new demand for power[42]. In 2007 the Northwest set a record for gains in electric power efficiency. The Northwest Power and Conservation Council reported an annual energy conservation achievement reducing electricity use of 200 average megawatts, or 1,750 million kilowatt-hours. "This is the equivalent of enough electricity for approximately 146,000 Northwest homes."[43] BPA is part of a Northwest Energy Efficiency Task Force that is focusing on efficient electricity use in the region.

In Montana, the DEQ provides information and resources on energy conservation to businesses and homeowners through its Energy and Pollution Prevention Bureau. Information is provided on energy conservation incentives, and other energy conservation opportunities in the residential, commercial, and public sectors. With energy prices increasing, the PSC has increasingly encouraged Montana customers to reduce energy usage with conservation.

The PSC recently considered implementing federal standards related to integrated resource planning, energy efficiency, smart grid investments, and smart grid information. The Energy Independence and Security Act of 2007 added four new federal electric utility standards and two new federal natural gas utility standards. The PSC was required to consider the federal standards and determine whether it was appropriate to implement the standard for each utility subject to its jurisdiction. The PSC considered the federal rate design modifications to promote energy efficiency investments as well as requiring smart grid investments and information. The PSC specifically contemplated whether it should require that an electric utility demonstrate that investments in qualified smart grid systems were contemplated prior to undertaking any investments in nonadvanced grid technologies. Smart grid delivers electricity from suppliers to consumers using digital technology that saves energy. In addition to smart grid standards, smart grid information was reviewed. "Information" means providing consumers with access, either in written form or by electronic machine-readable means, to information about their electricity use, prices paid, and sources of generation.

To promote energy efficiency, the PSC considered whether rates charged by an electric utility should promote efficiency and how to potentially align utility incentives to conserve (or sell less electricity). The PSC examined similar energy efficiency opportunities for natural gas utilities. Both NorthWestern Energy and MDU filed written comments in response to the PSC on the topics of efficiency and smart grid, and both utilities discouraged the PSC from adopting the federal standards. In terms of energy efficiency, both utilities noted that current law, in terms of Universal System Benefits (USB) activities, resource planning and procurement, and specific utility rate filings, allow the PSC to consider the costs and benefits of conservation and

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[41] http://www.aceee.org/energy/state/montana/mt_utility.htm.

[42]"Northwest 6th Power Plan", February 2010, Northwest Power and Conservation Council. http://www.nwcouncil.org/library/releases/2010/0210.htm.

[43]Bonneville Power Administration, 2008 Annual Report, page 24.

efficiency. (These issues are discussed later in this report.)

MDU said, in general terms, it supports smart grid. However, "Montana-Dakota believes that it is premature to adopt a standard for smart grid investments and smart grid information when the technology for such a grid is not yet fully developed, and the costs are unknown." NorthWestern Energy is part of a regional program that will conduct its own smart grid demonstration project in the Helena-area to learn more about potential costs and benefits. Using stimulus money, the regional, pilot, demonstration project may provide data on the usefulness of smart grid specific to Montana utility and cooperative customers.

The Consumer Counsel also raised concerns about the costs of providing real time information to customers about their energy consumption and its market value. Large customers would be more likely to use the information, according to the Counsel, because the benefits of changing consumption would be greater. "It is questionable whether any significant numbers of residential customers have the time, interest, or potential savings to warrant investment in providing smart grid information."

The PSC decided not to pursue implementation of the federal standards. The PSC, however, received ARRA grant money to add staff and help the agency consider issues related to efficiency, renewable resources, energy storage, smart grid, decoupling, and transmission issues. One specific project identified in the project grant is assessing the current effectiveness of energy efficiency, conservation, renewables, and smart grid efforts of Montana's major regulated electric utilities. The PSC is expected to use its existing authority and potentially revisit the issues of conservation and smart grid, as its new staff begins research and analysis of the topics. The PSC, in public comments submitted to the ETIC notes, "Existing Montana law generally provides the PSC with the direction, flexibility, and authority to implement and oversee the energy efficiency and DSM activities of regulated utilities in the public interest."

Each year, electric cooperatives, MDU and NorthWestern Energy submit USB reports to the Department of Revenue and to the ETIC. Large customers typically oversee their self-directed USB expenditures. The USB program, Title 69, chapter 8, part 4, MCA, requires Montana utilities (cooperatives, municipalities, and investor-owned utilities) to spend money on activities related to low-income energy assistance, energy conservation, and renewable energy. For electricity, the funding for this comes from a fixed rate set in state law of 2.4% of the utility's annual retail sales in Montana for calendar year 1995. For natural gas, a charge is established by the PSC, and a minimum of 0.42% of a utility's annual revenue from the previous year must be dedicated to low-income activities.

As noted, the utility can use the USB money or direct it to the DEQ to administer for energy conservation. Each utility or cooperative also can run the low-income programs itself or turn the funds over to the Montana Department of Public Health and Human Services to administer. The Department of Revenue reviews the reports to ensure self-directed money is being spent on qualifying programs.

In March 2009, NorthWestern Energy provided its USB report showing about $1.86 million focused on energy conservation programs. NorthWestern Energy, for example, provides an energy audit program for residential customers. In 2008 more than 2,750 on-site audits were funded with electric USB funds. MDU reported $905,482 in USB funds collected, with $11,922 directed to energy conservation programs.

An increased number of people are taking part in NorthWestern Energy's E+ Audit program, according to the company. A decision by the PSC in 2008 increased natural gas USB funding, which freed up electric USB money allowing NorthWestern Energy to increase its audit budget. With the increase and increased interest in the audits, NorthWestern Energy expected to perform more than 4,000 audits in 2009. NorthWestern Energy also reports growing interest in the E+ Natural Gas program. The E+ Electric Savings program is targeted to a narrow

audience because of the low saturation of electric space heaters and electric water heat in NorthWestern Energy's customer base.

Electric cooperatives can pool their USB expenditures, so each of Montana's cooperatives do not have to meet the minimum funding level. Some of the cooperatives expense for conservation is attributed to their purchase of power produced through conservation activities completed by the BPA. The minimum spending amount pooled for 2008 was about $3.7 million. Cooperatives' USB spending above the pooled amount was $7.1 million. For example, Flathead Electric Cooperative reported spending about $5.5 million on energy conservation and Yellowstone Valley reported spending $772,758. Many western Montana cooperatives are served by BPA. That means they are included in Northwest Power and Conservation Council and Northwest Energy Efficiency Alliance activities.

Low-income electricity programs also are funded with federal money allocated to the state or through USB. The Low Income Energy Assistance Program (LIEAP) is a federal program administered by the state 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 administers LIEAP throughout Montana. LIEAP is operated by 10 private, nonprofit Human Resource Development Councils and one Area Agency on Aging. Eligibility for LIEAP funds is limited to those at or below 175% 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 2009 is $37,100. Energy Share of Montana is a nonprofit organization funded by USB dollars and private and corporate donations. Energy Share helps Montanans faced with energy emergencies meet their needs by providing bill assistance, furnace safety, weatherization, and refrigerator replacements. 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. 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.

The amount of USB funding dedicated by Montana's two regulated utilities to conservation has decreased, as conservation programs are moved from the USB program into default supply portfolio planning. NorthWestern Energy completes an Electric Supply Resource Procurement Plan every two years, the plan evaluates "the full range of cost-effective electricity supply and demand-side management options." In the plan, an annual DSM goal of 5 megawatts per year is in place. NorthWestern Energy also has entered into a contract with the NCAT to assist with demand-side management programs. NorthWestern Energy also works with Kema, an energy consultant. MDU's Integrated Resource Plan shows that in 2007, the company spent $349,274 on its DSM program and $386,910 in 2008. Montana law also allows the PSC to add 2% to the authorized rate of return for DSM investments. At this time, Montana utilities have not utilized this option.

In addition to resource planning requirements and USB, additional focus has been put on energy conservation and efficiency in Montana. In late 2007, Governor Brian Schweitzer announced an initiative to reduce energy use at each executive agency by 20% by 2010. Capital projects, including energy conservation projects in state-owned facilities, such as those under the "State Building Energy Conservation" program are being used to help meet the goal. By the end of 2010, the state should have information about conservation in state buildings and whether the goal has been achieved.

More recently energy conservation and efficiency also have gained support from the Western Governors' Association (WGA). In July 2007, the WGA brought together stakeholders from building and energy industries, government, public interest groups and utilities to discuss

opportunities for improving energy efficiency. Recommendations included:

- The federal government, states, local jurisdictions, and utilities should increase the number of incentive options available to consumers and builders who make energy-efficient choices.
- Decoupling and public benefits charges should be considered as mechanisms to fund large-scale energy efficiency programs in all Western states.[44]

Profits for investor-owned utilities are tied to electricity sales, so decoupling can encourage or reward utilities to promote reduced sales and increase conservation. In some states public utility commissions encourage utilities to invest in efficiency and conservation by "decoupling" electricity sales and revenues. Utilities can then compensate for lost sales through rate adjustments. NorthWestern Energy is currently working with stakeholders to look at decoupling. NorthWestern Energy's decoupling program could, for example, tie revenue to the number of utility customers, as opposed to kilowatt hours sold.

In NorthWestern Energy's proposed rate case, which is now before the PSC, an inclining block rate is proposed in the design of residential retail rates. The proposed block rate would allow NorthWestern Energy to charge customers one rate for the first block of kilowatt hours used. That rate would then increase for hours used beyond the block. The proposed rate structure is intended to promote conservation by sending a price signal to customers that is consistent with the incremental costs the utility incurs to supply electricity for the last kilowatt hours the customer uses.

Energy efficiency resources standards, similar to renewable resource standards for utilities, are also being used in some states. Texas was the first state to establish an energy efficiency resource standard, requiring utilities to offset 10% of load growth through efficiency. In 2007, the Texas Legislature increased the goal to 15% by 2009 and 20% by 2010. Montana does not have a standard.

Montana has tax incentives in place to encourage energy efficiency retrofits. The tax credit available to residential property owners who invest in energy conservation is increasingly being used by Montanans. Tax returns in 2006 show that 19,041 taxpayers claimed the credit for a total of $8.1 million. In 2007, that increased to 19,115 taxpayers claiming about $8.3 million. The Department of Revenue also provided estimates of the tax deductions claimed by corporations for investments in energy conservation. The Department of Revenue indicated that it rarely sees the deduction claimed in Montana, and estimated 10 corporate returns a year might include the deduction. (There are about 14,200 total corporate returns in a year). Using the estimate of 10 corporations claiming the deduction, about $18,000 to $36,000 is deducted against taxable income. Using the tax rate for most corporations, the estimated total reduction in tax liability due to the tax deduction is only between $1,215 and $2,430.

[44] "Building an Energy-Efficiency Future", Western Governors' Association, Policy recommendations for energy efficient buildings, January 2008.

Increasing Energy Efficiency Standards for New Construction

Findings

Pending May 13 ETIC meeting discussion.

Background

Montana is upgrading its statewide energy code, requiring newly constructed homes to meet the latest standards for energy efficiency. New houses in Montana will soon be expected to meet the requirements of the 2009 International Energy Conservation Code (2009 IECC) with Montana amendments. The state Department of Labor and Industry, Building Codes Bureau met with stakeholders for two years to discuss an upgrade from the 2003 IECC to the 2009 standards. In June 2009, the Montana Building Codes Council voted to adopt the 2009 standard. The Administrative Rules of Montana require that commercial buildings and residential buildings over three stories comply with the most recently adopted IECC or a comparable standard. The standards in the IECC outline minimum requirements for insulation, lighting, mechanical, and service water heating equipment. The new, 2009 standards became effective in the end of March 2010, however, local certified jurisdictions were provided an additional 90 days to adopt the same code and edition.

Cities, towns, and counties that have building code jurisdictions enforce the state energy code in their jurisdiction. Montana does not have a statewide building energy inspection process, so building permits are not required outside of certified jurisdictions—this means many new houses in Montana are not inspected for energy code compliance. Generally, residences constructed in one of the 44 certified cities or four certified county local government jurisdictions would receive an energy code inspection. The Montana Department of Labor and Industry estimates that about 50% of new Montana residences are located outside building code jurisdictions and do not receive an energy code inspection, according to a 2007 DEQ survey.

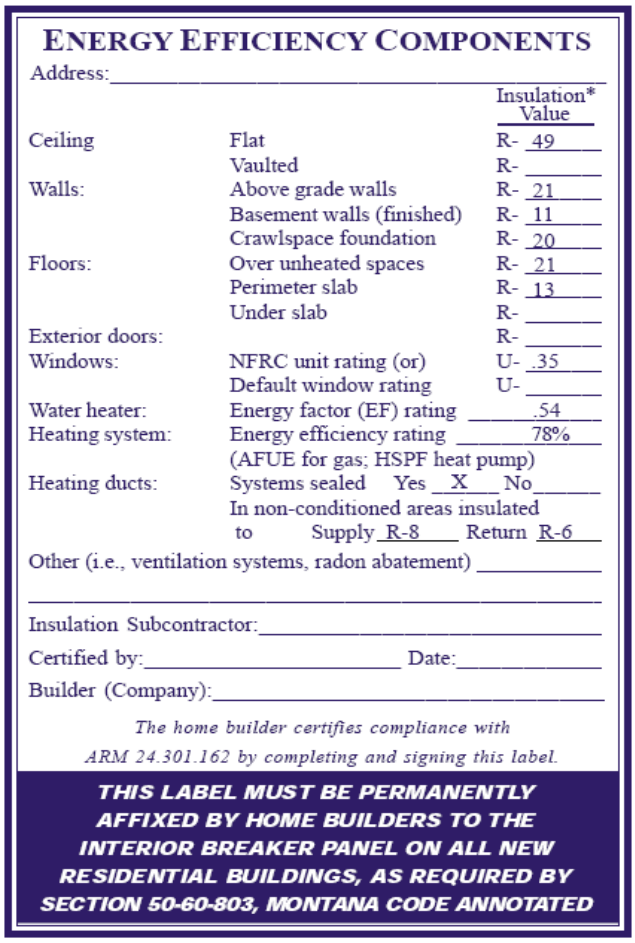
Outside of the building code jurisdictions, builders meet the requirements of the energy code and show compliance through a self-certification process. The certification requires that a builder provide a written statement to a homeowner showing that the house meets state energy code requirements. A homebuilder, or the builder's agent, provides the certification by signing and dating an energy efficient components label (discussed later in this report).

When the EQC designed Montana's energy policy in 1993, it brought legislation allowing for the enforcement of the energy code provisions of the state building code in single-family through five-plex residential buildings. (50-60-102, MCA) The EQC also brought the legislation requiring the labeling sticker. (50-60-803, MCA) The EQC went on to design the self-certification program noted above for home builders to assist with enforcement. (50-60-802, MCA) The Department of Labor, using the self-certification program, is charged with enforcement. The 2009 Legislature took this issue one-step further and allowed local jurisdictions that have a building codes enforcement program to adopt voluntary energy conservation standards for new construction as an incentive to encourage voluntary energy conservation. The incentive-based

standards can exceed any applicable energy conservation standards contained in the state building code.

The current state energy code requires all new homes have an "Energy Efficiency Components Label." An example of the label is included in **Figure 3**. With the label, builders inform buyers of insulation levels, heating system efficiencies, and other energy saving features in a new home. The DEQ estimates about 40% voluntary compliance for energy labeling. Since 2005, state electrical inspectors have been asked to leave a residential energy code summary booklet and a label at each home that is inspected. The DEQ does not believe all inspectors are leaving the packets on a regular basis based on their records of packet requests. When ordered from inspectors, DEQ assembles and sends the packets. In addition several inspectors have stated that the rarely see an energy comment label in the electrical breaker box during the final electrical inspections.

Figure 4, Source: DEQ



ENERGY EFFICIENCY COMPONENTS

Address:_____

		Insulation* Value
Ceiling	Flat	R- 49
	Vaulted	R- _____
Walls:	Above grade walls	R- 21
	Basement walls (finished)	R- 11
	Crawlspace foundation	R- 20
Floors:	Over unheated spaces	R- 21
	Perimeter slab	R- 13
	Under slab	R- _____
Exterior doors:		R- _____
Windows:	NFRC unit rating (or)	U- .35
	Default window rating	U- _____
Water heater:	Energy factor (EF) rating	.54
Heating system:	Energy efficiency rating (AFUE for gas; HSPF heat pump)	78%
Heating ducts:	Systems sealed Yes X No _____ In non-conditioned areas insulated to Supply R-8 Return R-6	

Other (i.e., ventilation systems, radon abatement) _____

_____

Insulation Subcontractor:_____

Certified by:_____ Date:_____

Builder (Company):_____

The home builder certifies compliance with ARM 24.301.162 by completing and signing this label.

THIS LABEL MUST BE PERMANENTLY AFFIXED BY HOME BUILDERS TO THE INTERIOR BREAKER PANEL ON ALL NEW RESIDENTIAL BUILDINGS, AS REQUIRED BY SECTION 50-60-803, MONTANA CODE ANNOTATED

The DEQ also notes that certain areas of the energy code are generally not followed in Montana. Requirements to size heating systems and air sealing requirements are two aspects that are not often implemented in residential construction. In commercial construction, the DEQ notes that lighting controls, lighting limits, and insulation of slabs on a grade are not often used in construction.

In November 2007, Montana's Climate Change Advisory Committee (formed by Governor Schweitzer) recommended several steps be taken to improve the energy-efficiency-related elements of Montana's building codes. They identified key elements as:

- Increasing standards so that the minimum performance of new and substantially renovated buildings, both commercial and residential, is at least 15% higher by 2010 than that required by IECC 2003, and 30% higher by 2020;
- Encouraging and working toward achieving the goal of “carbon-neutral” status for new buildings;
- Encouraging the use of recycled and local building materials;
- Expressing energy-efficiency standards on a per-unit-floor-space basis for commercial buildings and on a per-dwelling-unit basis for residential buildings;
- Periodically and regularly reviewing building codes, including energy-efficiency requirements of building codes, to ensure that they stay up-to-date;
- Offering, and requiring as appropriate, education to equip building code officials, builders, designers, and others to effectively implement building energy code improvements; and

- Exploring new mechanisms, such as working with financial institutions and the use of spot checks, to improve code implementation in rural areas.[45]

Fifteen years ago the EPA and the Department of Energy started the "Energy Star" program to provide a voluntary, market-based program to encourage the construction of buildings that exceed existing building codes. Energy Star homes are at least 15% over the 2004 International Residential Code. In 2008, the EPA announced that about 17% of all single-family homes built nationally in 2008 earned EPA's Energy Star label, up from 12% in 2007. In 2008 American families living in Energy Star qualified homes saved more than $250 million, about 1.5 billion kWh of electricity and 155 million therms of natural gas. [46] In Montana, NCAT is the Energy Star Builder Option Package Provider in Montana, which helps recruit builders to participate in the program and offers technical assistance. NCAT also can assist developers achieve Energy Star and green building certification. In 2007 there were 117 Energy Star homes in Montana, and in 2009 there were 170 Energy Star homes. There are 38 certified Energy Star verifiers in Montana.

The Montana DEQ also provides Montana homeowners with information about Energy Star opportunities. In 2010, the DEQ is using about $928,000 in ARRA money for a state Energy Efficient Appliance Rebate program. Of the 35 utilities and cooperatives in Montana, less than one-third have an appliance rebate program in place. Most of the existing programs offer rebates of $25 or less for various appliances. With the stimulus money, consumers who purchase Energy Star appliances will be rebated between $50 and $100 for various appliances. The DEQ hopes to replace nearly 9,000 appliances in Montana. The DEQ will hire a third-party provider to manage the program for the state.

Some states have taken steps to develop Home Energy-Rating Systems (HERS) to accelerate energy efficient home building. A HERS program involves a third-party professional measuring home energy efficiency performance in various construction features and translating that performance into a numerical score or rating. Those scores range from 100 to zero. The lower the score, the more efficient the home, with each point reduction reflecting a 1% reduction in energy consumption. Energy Star homes, for example, require a minimum HERS certification of 85 in warmer climates and 80 in colder climates. Sixteen states have adopted HERS for new home construction in an effort to advance energy building codes. New Mexico, for example, provides a tax credit for construction with a HERS rating of 60 or lower. The WGA recently released policy recommendations for energy efficient building, including a recommendation to expand the HERS program in the West. NCAT also has provided training to builders interested in using HERS in Montana. Builders can use the HERS program to qualify for a $2,000 tax credit for constructing a new energy efficient home that achieves 50% energy savings for heating and cooling over IECC requirements. The federal credit was authorized under the 2005 Energy Policy Act. In Montana there are16 qualified HERS raters, and three additional people are in the final stages of certification.

The WGA report also includes a recommendation that local governments provide more

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[45] "Montana Climate Change Action Plan: Final Report of the Governor's Climate Change Advisory Committee" November 2007.

[46] http://yosemite.epa.gov/opa/admpress.nsf/7ebdf4d0b217978b852573590040443a/45e75621976f6dea852575e700550e14!OpenDocument.

information about energy efficiency opportunities. A survey in September 2007 by the American Institute of Architects found that 91% of U.S. voters said they would pay an additional $5,000 for an energy-efficient home.[47] A September 2009 survey of National Association of Home Builders (NAHB) members, however, found that prospective home buyers were not willing to pay much more for green homes.[48] Builders said that among buyers who are willing to pay more for green features, more than half—57%—were unlikely to pay more than an additional 2%. In addition only 11% of the builders surveyed indicated that customers asked about environmental features.

Demonstration of a tankless water heater during a NorthWestern Energy "Do-it-yourself Home Energy Makeover Expo" held in Helena.

In 2008 the Montana Home Builders Association and the Missoula Building Industry Association unveiled a voluntary residential green building program called the Montana Green Building Program. The program provides a baseline for green building in Montana and provides training resources for local builders. The Montana Green Building Program is the affiliate of the NAHB Green program. The Montana Legislature has discussed other building certification systems, specifically the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) system. The LEED certification is awarded to buildings that meet U.S. Green Building Council standards for issues including energy and water conservation, indoor-air quality, and selection of preferred materials.

The 2007-08 EQC discussed certification systems at length and pursued Senate Bill No. 49, which was approved by the Montana Legislature. S.B. 49 requires the Department of Administration to develop high-performance building standards for state-owned buildings and new state-leased buildings. High-performance means exceeding the most currently adopted IEEC by 20% or to the extent it is cost-effective. The Architecture and Engineering Division of the Department of Administration developed a process that incorporates "sustainable design expectations" determined to be cost effective and appropriate for new projects. High-performance building standards are being developed in collaboration with Montana's universities and state agencies. The standards will be used to articulate expectations to consultants.

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[47] http://www.dexigner.com/design_news/aia-study-top-cause-of-greenhouse-gas-emission.html.

[48] http://www.nahb.org/news_details.aspx?sectionID=0&newsID=9695.

In terms of residential weatherization, there are private and governmental programs in Montana that assist low-income electricity consumers. Many the low-income electricity programs are funded either through federal money allocated to the state or through the USB charge assessed to electricity and gas consumers. The LIEAP is a federal program administered by the State of Montana that 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 Human Resource Development Council's and two tribal governments. Energy Share of Montana is a nonprofit organization funded by USB dollars and private and corporate donations. Energy Share also provides furnace safety, weatherization, and refrigerator replacements. Energy Share has an endowment designed to assist with energy emergency needs of future generations. From time to time, Energy Share also does other pilot projects that benefit low-income families. Public utilities and electric cooperatives also help fund low-income weatherization.

Montana homebuyers are eligible for a state tax credit of up to $500 to $1,000 per couple when an “above energy code” home is built or purchased. The credit also applies to improvements made in the efficiency of an existing home. Energy Star-certified homes or Montana Green Building Program (above Bronze level) homes with an Energy Star heating system also are eligible for the $500 energy conservation tax credit. Homebuyers also are eligible for the alternative energy systems tax credit, which includes a credit of $1,500 for geothermal and $500 for wind, solar, and eligible wood and pellet stoves. For 2009 and 2010, federal tax credits are available for improvements to existing principle residences with a $1,500 maximum credit per taxpayer.

The State Buildings Energy Conservation program is designed to finance energy improvement projects in state-owned buildings. Montana encourages agencies to participate in the program to achieve available energy savings. During the 2009 session, ARRA money was used to significantly expand the State Building Energy Conservation program. Montana is investing close to $22 million in ARRA money in cost-effective energy improvements in 50 state-owned buildings. Energy audits were completed to identify improvements that will save the most energy. The audits were presented to the 2009 Legislature and reviewed before the projects were approved. The $22 million stimulus supplement is substantial—the 2007 and 2009 Legislatures appropriated $3 million in general funds for the program. Even with the increase in funding, state agencies will still have to repay the cost of the projects using energy savings.

Governor Schweitzer has initiated a 20x10 Initiative, requiring all state agencies to reduce facility energy use by 20% by the end of 2010. The DEQ identified cost-effective energy improvements in state and university buildings through the State Building Energy Conservation program. The construction projects alone, however, will not achieve the 20% energy savings goal. Energy performance contracting is expected to achieve additional savings under 20x10. In 2009, the DEQ issued a request for qualifications and now has 11 qualified energy service companies to do work for Montana state government. The DEQ is identifying projects and will have the first few under contract in 2010.

About $300,000 in ARRA money is being used by the DEQ to develop and expand an information campaign directed at homeowners about the benefits of federal and state tax credits for energy conservation and renewable energy investments in 2009 and 2010. Montana offers a 25% credit for energy conservation investments and a $500-$1,000 credit for renewable investments. "The existing Montana tax credits and expanded 30% federal tax credits create a unique opportunity for Montanans to make energy conservation and renewable energy investments now that will lower their utility bills for many years in the future," according to the

DEQ.

An Energy Efficiency and Conservation Block Grant program also was authorized by ARRA. The grants were designed to support investments in energy efficiency and conservation, mostly at the city and county level. About $4.4 million for energy efficiency block grants were passed directly from the federal government to Montana's 10 larger cities and counties. A second avenue of funding at $5.7 million was administered by DEQ and distributed to Montana's remaining cities and counties. Grants of up to $200,000 were made available on a competitive basis. The grants could be used for energy audits and retrofits for buildings and facilities, energy conservation in transportation, building codes and inspection services, and energy distribution and renewable energy applications. DEQ is providing technical assistance and training for local governments who do not receive direct funding.

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AN ACT REQUIRING THE ENERGY AND TELECOMMUNICATIONS INTERIM COMMITTEE TO REVIEW THE STATE ENERGY POLICY EACH INTERIM AND RECOMMEND CHANGES TO THE LEGISLATURE; AMENDING SECTIONS 90-4-1001 AND 90-4-1003, MCA; REPEALING SECTION 90-4-1002, MCA; AND PROVIDING AN IMMEDIATE EFFECTIVE DATE.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

Section 1. Section 90-4-1001, MCA, is amended to read:

"90-4-1001. State energy policy goal statement. (1) It is the policy of the state of Montana to promote energy efficiency, conservation, production, and consumption of a reliable and efficient mix of energy sources that represent the least social, environmental, and economic costs and the greatest long-term benefits to Montana citizens.

(2) In pursuing this goal, it is the policy of the state of Montana to:

(a) recognize that the state's energy system operates within the larger context of and is influenced by regional, national, and international energy markets;

(b) ~~maintain a continual process to~~ review this energy policy statement and any future changes pursuant to 90-4-1003 so that Montana's energy strategy will provide for a balance between a sustainable environment and a viable economy; and

(c) adopt a state transportation energy policy as provided in 90-4-1010 and an alternative fuels policy and implementing guidelines as provided in 90-4-1011."

Section 2. Section 90-4-1003, MCA, is amended to read:

"90-4-1003. Energy policy development process. (1) (a) ~~The~~ Except as provided for in subsection (1)(b), each interim, the energy and telecommunications interim committee established in 5-5-230 ~~department and the committee, in cooperation with the consumer counsel and the public service commission,~~ shall ~~maintain a continual process to develop the components of a comprehensive~~ review the state energy policy~~.~~ and

recommend potential changes to the state energy policy,

~~(2) Because of limited state resources and the need to focus intensive effort on specific issues of importance, the development of a comprehensive state energy policy must occur on an incremental basis. As the need arises, the department, in cooperation with the appropriate state agencies and with extensive public involvement, shall identify and recommend to the committee specific components of a state energy policy for development under the consensus process described in~~ pursuant to subsection ~~(3)~~ (2).

(b) During the 2009-2010 interim, the committee shall consult with a broad representation of stakeholders, including appropriate state agencies and the public, and focus on the following issues to be included in a revised state energy policy:

(i) increasing the supply of low-cost electricity with coal-fired generation;

(ii) rebuilding and extending electric transmission lines;

(iii) maximizing state land use for energy generation;

(iv) increasing energy efficiency standards for new construction;

(v) promoting conservation;

(vi) promoting energy efficiency incentives;

(vii) promoting alternative energy systems;

(viii) reducing regulations that increase ratepayers' energy costs; and

(ix) integrating wind energy.

~~(3)~~(2) ~~(a) Upon selection of a specific energy policy component, the~~ Except as provided in subsection (1)(b), the committee shall ~~assign to a working group composed of representatives of the parties with a stake in that specific component the task of developing consensus recommendations for that component of state energy policy.~~

~~(b) The working group must include the broadest possible~~ consult with a broad representation of stakeholders, including appropriate state agencies and the public, in developing the issues to be included within the ~~specific component of~~ proposed, revised state energy policy each interim.

~~(c) Whenever possible, the working group shall use a consensus process to develop recommendations for a specific energy policy component to be submitted to the committee. Recommendations that are not based upon consensus must be so noted by the working group. Upon consideration of the working group's recommendations, the~~

(3) Each biennium, the committee shall forward its recommendations to the legislature and to the appropriate state agencies for adoption.

~~(d) The department shall:~~

~~(i) provide staff support to the working group, including policy analysis, data gathering, research, technical analysis, and administrative support;~~

~~(ii) provide administrative coordination among the appropriate state agencies in the energy policy development process;~~

~~(iii) prepare reports for and make recommendations to the committee; and~~

~~(iv) consult regularly with the committee to coordinate each agency's activities.~~

(4) In carrying out ~~their~~ its responsibilities under this section, ~~the department and~~ the committee ~~may contract with experts, consultants, and facilitators and may seek funding from a variety of private and public sources for technical and other assistance necessary~~ shall use its interim budget, as allocated by the legislative council, and rely on the input of locally available experts and staff research to accomplish ~~their~~ its responsibilities."

Section 3. Repealer. Section 90-4-1002, MCA, is repealed.

Section 4. Effective date. [This act] is effective on passage and approval.

- END -

Using public comments collected during the months of August, October, and December and additional comments provided during the Energy and Telecommunications Interim Committee's September, November, and January meetings, staff attempted to summarize the suggested policy statements and policy changes in state law that were provided by the public, stakeholders, and the appropriate state agencies. Members reviewed the information and made additional suggestions for policy statements (ETIC findings) and actual policies (ETIC recommendations). Throughout the interim, the ETIC reviewed the information and decided which issues deserved further consideration.

Rebuilding and extending transmission lines

Policy Statements:

- Developers should make use of existing rights-of-way when building or rebuilding transmission facilities.
- Transmission facilities should be built on public lands regardless of cost and in order to protect private land holdings.
- Montana encourages the developers of new transmission lines (that are of a significant size) to build double circuited lines when practicable. The use of high voltage direct current (HVDC) lines is more efficient and provides greater capacity in a narrower right-of-way.
- Agencies including the Department of Commerce Energy Promotion Division, Department of Environmental Quality, Fish Wildlife and Parks, and Department of Natural Resources and Conservation should be provided with adequate resources and coordinate their efforts in the advancement of energy development.
- The need for new transmission lines can be mitigated by focusing on energy efficiency, renewable resources that are located close to load (distributed energy), demand response and smart grid technology, and additional distributed generation. By focusing on these issues, Montana can maximize the potential of existing systems and reduce the need for new lines.
- Transmission lines should continue to be permitted through the Montana Major Facility Siting Act. A responsible siting program, such as MFSA, should consider impacts to wildlife, landscapes, agriculture, and property values.
- While the development of transmission lines is important, the interests of property owners come first and must be protected.
- Montana urges developers and utilities to increase the capacity of existing lines in existing corridors and maximize the potential of existing lines.
- New transmission lines should only be built to promote renewable energy development.
- Recognizing that transmission rates and terms are primarily subject to federal jurisdiction, the Montana Public Service Commission should continue to intervene in federal dockets when necessary to safeguard the interests of Montana ratepayers.
- The permitting and siting of transmission lines should remain at the state level, Montana vigorously supports efforts to retain state jurisdiction in this arena.
- Utilities should not build transmission lines that allow for the out-of-state export of Montana-generated electricity, if it means that electricity must be replaced with more expensive generation sources, resulting in increased rates for Montana customers.

- If utilities build transmission lines that allow for the export of Montana-generated electricity, the costs of that line should be borne entirely by the transmission customers who will benefit from the line not by Montana customers who will not benefit.
- Transmission must be developed in a way that fairly apportions the costs of development to those who cause the need for the development.
- Montana should continue to participate in regional transmission organizations at the present level.
- Interconnection agreements must be implemented in a manner that complies with state and federal laws and does not make small-scale projects financially unfeasible.
- Developers should work closely with affected local governments in the preliminary stages of development.
- Transmission lines have relatively few adverse impacts and do not devalue property.
- It is not cost effective to bury high voltage transmission lines.
- Montana encourages the creation and funding of an independent transmission operator for the Northwest that can better ensure availability and reliability.
- Montana should work to advance smart grid technologies.

Policies (Potential bill drafts):

- Require the owners of facilities constructed or reconstructed more than 40 years ago with a voltage equal to or greater than 69 kV to replace or allow the replacement of facilities upon the request of another developer, if the developer is integrating and transmitting a renewable resource. A cost sharing agreement would be developed. (Takings issues and FERC issues. Could be a policy statement, rather than law.)
- Require regulated utilities to investigate and advance Smart Grid technologies.
- Create a Montana transmission authority.
- Form a state-level working group to explore how to improve transmission development and streamline regulation.
- Revise the customer fiscal impact analysis required by 69-2-217, MCA so that public utilities' proposed transmission projects are subject to such an analysis.
- Engage in two state-level planning processes. First identify areas in Montana where there is significant renewable energy potential. Second, complete a high-level analysis identifying acceptable corridors for new transmission lines.
- Require developers to take additional steps in terms of disclosure and/or compensation when private lands are impacted.
- Develop state programs to assist with the financing of transmission facilities.
- Develop a tax deferral program for transmission developers during the first three years of operation.
- Revisit the Montana Major Facility Siting Act and clarify the evaluation and use of public lands as discussed in 75-20-301, MCA.
- Tighten the appeals process for transmission lines under the Montana Major Facility Siting Act.
- Incentivize "socialization" or fair treatment of compensation through alterations in the tax structure.
- Examine noxious weed regulations and responsibilities in relation to transmission line

construction.

Wind integration

Policy Statements:

- The State of Montana encourages the testing and application of new and innovative technologies, such as compressed air energy storage, batteries, flywheels, hydrogen production, smart grid, smart garage, and intra-hour balancing services, to address wind integration. Montana's universities are a valuable resource that should be fully utilized in furthering the development of these new technologies.
- Geographic diversity in the siting of future wind development can mitigate firming needs and ensure that the economic benefits from wind are shared across the state.
- As additional wind generation comes online, wind forecasting and scheduling improves, and new technologies advance, the variability of wind on the system will decline.
- Wind is an increasingly important generation source, and Montana recognizes there are costs and challenges unique to integrating wind resources.
- The Public Service commission should continue to reasonably, fairly, and throughly address wind integration issues using existing law.
- Montana recognizes that there are areas of the state where large-scale commercial-industrial wind development is inappropriate. Landscapes, wildlife and "undeveloped" value of land (in terms of tourism, recreation, and agriculture) must be considered before advancing development.
- The market reflects consumer values and should determine the development of specific electric energy generation.
- Montana recognizes that contracts between small-scale qualifying facilities and utilities require the qualifying facility to pay the cost of integrating its power. Montana is committed to providing the lowest-cost firming resources available to encourage renewable development.
- Montana does not support actions, such as those being discussed by the California Legislature, that would reduce the viability of Montana wind.
- The need for geographically dispersed wind farms has been well established. Montana should remain committed to regional planning.

Policies (Potential bill drafts):

- Revise tax laws so facilities constructed exclusively for the purpose of producing regulating reserves and related ancillary services to integrate wind generation are taxed at 3%.
- Require Montana Electric Cooperatives to adopt net metering regulations.
- Develop a surface weather information system with wind forecasting models for potential wind development.
- Redefine a "small wind" system in Montana. (It is currently 10 kW or less). Consider increasing small wind to 50kW or even 100kW.
- Provide for a systematic and ongoing study of integration costs in Montana.

Maximizing state land use for energy generation

Policy Statements:

- Energy development should not be given priority over other beneficial uses of state land.
- As energy projects on state land are reviewed, projects that promote the use of renewable energy resources should be prioritized. State land should only be used for these projects if it can be demonstrated that there is no significant adverse impact to the land or that effects can be mitigated.
- Before state land is used for energy generation, the state must evaluate environmental, cultural, and social impacts related to energy development and prioritize options.
- Resources should be devoted to better understanding where energy generation should occur on state land in Montana.
- Energy development should have priority over other beneficial uses of state land.
- State land should only be used for oil and gas development if it can be demonstrated that there is no significant adverse impact to land or that impacts can be mitigated.
- The state is doing all it can to properly develop state lands at this time, and changes to existing laws are not needed.
- The state must promote infrastructure development in order to maximize energy generation on state lands.
- In pursuing energy development on state lands, the state must continue to weigh its overall management responsibilities (fiduciary and multiple-use), as mandated by the Montana Constitution and state law.

Policies (Potential bill drafts):

- Categorically exclude wind generation projects proposed on state land that comply with specific standards (with air, water, road construction, weed control) from MEPA rules.
- Require DNRC to develop a set of Best Management Practices (BMPs) for wind projects on state lands.
- Require the Land Board to develop mitigation and reclamation standards for wind projects on state lands.
- If a wind developer offers the same terms and compensation to the state as it has offered to the surrounding landowner and the compensation exceeds a specified minimum lease amount established by the state, those parcels, if only accessible through private lands, should be excluded from the process.
- Approve disincentives to prevent private landowners with property surrounding isolated parcels from charging an access fee to developers trying to incorporate the parcels into larger wind projects.
- Identify large contiguous blocks of state land that could be the core for a wind development and proactively seek bids.

Increasing the supply of low-cost electricity with coal-fired generation

Policy Statements:

- Montana is committed to supplementing energy needs with renewable energy sources and reducing its reliance on coal-fired generation. Clean coal technology must be proven and well-established before additional coal-fired generation is pursued in Montana.

- Coal-fired energy generation provides low-cost electricity, and Montana is committed to the continued and increased use of such generation. Recognizing that Montana has the largest coal reserves in the nation, it is an important part of Montana's economy.
- Carbon sequestration holds promise but at this time has not been demonstrated to be cost-effective or environmentally safe on a commercial scale.
- Montana does not support energy generation that causes global warming, harms public health, undermines private property rights, pollutes the environment, or harms wildlife and its habitat.
- While coal-fired generation has historically supplied low-cost electricity, the true cost of coal is paid for in ways other than electric rates. The true costs of coal should include impacts to the environment and to people's health.
- Montana is committed to the advancement of clean-coal technologies and supports responsible development of the state's coal resources.
- Montana is committed to the "decarbonization" of its energy supply and does not support additional development of coal resources.
- Coal-to-liquid fuels program come with potential risks and unanswered environmental and technical questions and should only be pursed when connected to carbon sequestration programs.
- Montana recognizes that coal-fired power generation is a major source of carbon dioxide and contributes to global warming.
- Recognizing there are limited dollars available for energy research, money should be focused on the advancement of clean-coal technologies.
- Montana recognizes that potential federal regulations for carbon dioxide, coal waste, and other emissions will increase the cost of coal-fired generation.
- Montana should pursue additional coal-by-rail opportunities and strive to build energy conversion facilities at Montana coal mines.
- Montana has established a statutory framework for carbon sequestration, and the Board of Oil and Gas should continue to oversee that program.
- Recognizing the current construction costs, uncertainty surrounding federal carbon regulation, and potential federal regulation of coal combustion waste, it is not possible, at this time, to increase the supply of electricity generated by coal at a low cost.
- Natural gas prices are highly variable and volatile, Powder River Basin coal has a consistent and reliable price pattern. Delivered coal prices are more predictable and manageable.
- Coal should remain an active part of the portfolio for Montana's energy supply.
- Montana recognizes federal efforts to regulate global warming pollutants are moving forward, the state is committed to advancing its own policies that are in line with federal regulations but allow for local oversight and control.
- Montana needs to diversify its energy resource portfolio and reduce its reliance on coal-based power.

Policies (Potential bill drafts):

- Place a moratorium on development of new coal-fired energy generation in Montana until carbon sequestration is technologically and economically viable.

- Require coal-fired power plants to sequester emissions or face penalties.
- Develop incentives for existing coal-fired power plants to pursue retrofits that reduce and capture emissions.
- Develop a regulatory program for the permitting of underground coal gasification projects in Montana.
- Reduce taxes on new Montana coal mines and energy conversion facilities to levels equivalent to Wyoming and North Dakota.
- Make more funding available for coal research and development by increasing funding for Montana's Research and Commercialization Technologies program and/or increasing the percentage dedicated to coal technologies.
- Provide matching funds and bonding authority to support development of Montana coal.
- Establish a program ensuring that the local impacts of coal development are addressed using coal severance tax revenues.
- Provide the Energy Promotion and Development Division within the Department of Commerce with a larger budget and additional tools, including bonding authority, to facilitate transmission line development.
- Establish a goal to reduce carbon consumption in Montana and develop a system for rating the carbon consumption blueprint of energy products.
- Add a carbon cost to annual air emission fees.
- Require large sources and suppliers of greenhouse gases to begin reporting emissions in Montana.

Promoting Alternative Energy Systems
Policy Statements:

- Compressed air energy storage and other new technologies are critical to advancing the application of alternative energy systems.
- Alternative energy systems increase ratepayers' rates and should not be given preference over other forms of energy generation, including coal, natural gas, and hydroelectric.
- Montana embraces the vision of 25x25 and will strive to promote 25 percent renewable energy by 2025.
- The promotion of both large-scale and small-scale alternative energy systems is imperative in Montana, recognizing that renewable resources provide economic benefits and are environmentally friendly.
- Rather than dedicating resources to clean-coal technologies, money should be focused on the development of renewable energy resources.
- Alternative energy offers the promise of large sums of sustainable energy.
- The cost of alternative energy is decreasing, making it a viable alternative to nonrenewable energy production.
- Alternative energy does not suffer from the same price volatility as nonrenewable energy resources, such as natural gas.
- Combined heat and power and distributed energy generation systems are clean, safe, reliable and efficient, and such systems should be promoted across the state.
- Recognizing that the Montana Board of Regents coordinates and manages Montana's university system, the Legislature encourages the board to increase its focus on

educational programs that prepare the workforce for creating and obtaining jobs in an emerging renewable energy economy.
- Montana encourages the federal government to work through the current backlog of interconnection feasibility studies in order to allow for the timely development of alternative energy projects.

Policies (Potential bill drafts):
- Establish a feed-in tariff.
- Increase existing tax incentives and loan programs that promote alternative energy.
- Require cooperatives to meet Montana's renewable portfolio standard.
- Increase Montana's renewable portfolio standard from 15% to 20% by 2015 and to 25% by 2025.
- Fund a survey of Montana's alternative energy sources and cost-effectiveness similar to California's Black and Veatch Project.
- Increase the current net-metering limit.
- Require the Public Service Commission to develop standardized interconnection agreements for qualifying facilities in Montana.
- Encourage wind farm siting that minimizes impacts to wildlife.
- Establish apprenticeship and licensing programs for alternative energy installers.
- Allow for the creation of "energy improvement districts".

Reducing regulations that increase ratepayers' energy costs
Policy Statements:
- Montana recognizes that public health and environmental regulations protect Montana's residents and environment. Those regulations should not be weakened in an effort to promote energy development.
- Strong regulations lead to sound energy projects and positive economic and environmental outcomes.
- Montana recognizes that its decision to decrease utility regulation, or deregulate in 1997, was a failed experiment. The state has taken steps to restore the regulatory framework that previously existed and will continue to extract Montana customers from the misfortune of deregulation.
- Some regulations, such as the Universal System Benefits program, ultimately decrease energy consumption and in the long-term energy bills.
- Montana recognizes that historically the developers of energy project have faced greater regulatory (permitting) risks in Montana than in neighboring states. Montana is committed to reducing that risk and issuing permits in a timely fashion.
- The Montana Environmental Policy Act (MEPA) has been inappropriately used to challenge energy development permits.
- Without adequate regulation of energy production, the public bears the cost and burden of such projects in the form of diminished property values, reduced agricultural productivity, and increased health care costs.
- Montana electric cooperatives are focused on local control and flexibility. The imposition of renewable portfolio standards, net metering requirements, or energy efficiency

mandates strike at the heart of Montana cooperatives' ability to control customers' rates.
- Proper regulations that protect public health and the environment do not increase costs but instead reallocate costs that are already borne.

Policies (Potential bill drafts):
- Pursue legislation similar to House Bill No. 483 (as originally introduced in 2009) to eliminate abuses in the permitting appeals process.
- Clarify that MEPA is procedural and not substantive and that MEPA appeals cannot be used to overturn or stay energy development permits.
- Specify that requirements more stringent than federal standards can only be implemented by an act of the Legislature.
- Prohibit Montana from implementing any substantive portions of the Western Climate Initiative without legislative authorization.
- Strengthen enforcement of regulations that require the inspection of energy generation facilities.
-

Promoting conservation and energy efficiency incentives
Policy Statements:
- Energy conservation and efficiency should serve as the cornerstone of Montana's energy policy. It should be considered Montana's "first fuel".
- Energy-efficient technologies have the potential to save the state 25 percent to 30 percent in the next 20 years. Conservation is dependent upon behavioral changes, and the state should promote programs to educate state employees and others on how to reduce energy consumption.
- Energy efficiency and conservation can and should meet the majority of Montana's growing energy needs in the future.
- Montana utilities and cooperatives should be recognized for the work they are doing to promote efficiency and conservation.
- Utilities in Montana should give priority to conservation, energy efficiency, and demand response.
- Land-use planning and zoning opportunities in Montana should be reviewed and improved upon to address energy conservation and efficiency.
- Montana strives to promote energy efficiency and conservation, but does not support mandates or efforts that increase customers' rates.
- Utilities should make energy efficiency the highest priority in their’ planning processes. and demonstrate that they have pursued all available energy efficiency and demand reduction resources that are cost effective before building additional generation capacity.
- Tax incentives, such as those in place in Montana, are important in encouraging widespread efforts to increase efficiency.
- Existing law provides the Public Service Commission with the direction, flexibility, and authority to implement and oversee the energy efficiency and demand-side management activities of regulated utilities. The PSC is encouraged to use its existing authority to better promote energy efficiency and conservation.
- The PSC should continue to require regulated utilities to aggressively acquire cost-

effective energy efficiency and conservation.

- The PSC is encouraged to use its general authority to address implementation of new energy efficiency-related initiatives, including smart grid deployment, demand response, decoupling, and energy efficiency resource standards.
- All utilities should be required to achieve annual energy savings. However, rural electric cooperatives should be given reasonable time to develop individualized programs.
- All utilities and cooperatives in Montana should be encouraged, but not mandated, to provide effective efficiency and conservation programs for their customers. Decisions about energy use should remain in the hands of utilities and cooperatives.
- Montana supports market-oriented measures to achieve greater energy efficiency, as opposed to government regulation.
- Energy efficient technologies can demonstrate huge energy savings and minimize peak demand.
- Montana supports efforts to establish a smart grid pilot program in Montana, and encourages all utilities to undertake similar efforts.
- Energy prices and the market encourage energy efficiency. Government regulation and tax incentives are not needed to promote conservation.
- Montana electric cooperatives are focused on local control and flexibility. The imposition of energy efficiency mandates strike at the heart of Montana cooperatives' ability to control customers' rates.
- Montana should encourage energy efficiency by promoting incentives, not mandating standards.
- Montana recognizes that electricity providers are not the only utilities that provide energy in Montana homes and businesses. Energy efficiency measures should remain utility decisions, and electricity providers should not be mandated to meet specific standards.
- Energy audits provide an invaluable resource to homeowners and Montana all Montana utilities are encouraged to provide audits to their customers. Entities, like building supply stores, are encouraged to advertise opportunities to maximize energy audits and the purchase of low-cost CFL bulbs.
- Montana must develop a unified, effective energy efficiency program. That program should be based in the Department of Environmental Quality, and it should be provided with adequate resources.
- Montana supports greater coordination between utilities and state agencies that work on energy efficiency and conservation to maximize efforts.
- The Montana Climate Action Plan, prepared in 2007, outlines opportunities for energy efficiency and conservation in Montana. The plan, and its recommendations, are worthy of review. Montana should implement the recommendations to save energy.

Policies (Potential bill drafts):

- Develop energy efficiency standards for regulated utilities.
- Develop energy efficiency standards for all Montana utilities.
- Increase to the state energy efficiency tax credit.
- Pursue decoupling legislation to encourage or reward utilities to promote reduced sales and increased conservation.

- Direct the PSC to take more steps to encourage efficiency and conservation.
- Require all utilities to offer energy audits to customers. Require houses more than 5 year old to have an audit.
- Create an energy-efficiency utility similar to Vermont's "Efficiency Vermont" program to provide technical assistance and financial incentives to households and businesses.
- Revisit Montana energy conservation and alternative energy tax credits to clarify legislative intent and maximize use in all residences, as opposed to primary residences.
- Revisit USB laws to provide funding for homes heated with fuel oil and propane.
- Generally revise USB laws to require conservation and efficiency efforts for all utilities.
- Authorize local governments to establish energy improvement districts.
- Revisit bills proposed in the previous session to enhance energy efficiency tax incentives.
- Revist 15-32-109, MCA to include whole-home monitoring.

Promoting energy efficiency standards for new construction
Policy Statements:

- Montana supports efforts to upgrade its statewide energy code, requiring newly constructed homes to meet the latest standards for energy efficiency, such as the efforts recently undertaken by the Department of Labor and Industry. Developers and home builders are encouraged to take additional energy-conservation measures.
- Montana's current, and limited energy code requirements, such as labeling, should be more strictly enforced. A statewide building energy inspection process should be developed in Montana.
- The state should provide both technical and financial assistance to help local jurisdictions implement and enforce the building codes.
- Energy conservation provisions in Montana's building codes should be strengthened.
- Montana recognizes that energy efficiency efforts can increase costs, however, advancements in technology continue to make the implementation of energy conservation more cost effective.
- Montana supports the ongoing efforts by industry and others to promote green building.
- Montana should not mandate energy efficiency standards but should allow the market to provide incentives and guidance in new construction.
- Builders and developers should be more diligent about providing homeowners and tenants with information about the energy efficiency of structures.
- Investments in the efficiency of new and existing homes, offices, and other buildings save property owners money on energy bills. Energy efficiency in schools and government buildings save taxpayers money.
- Montana must strengthen its current system of enforcement of energy conservation requirements in state building codes.
- Montana recognizes that its current energy code is not being adequately enforced and encourages the state to provide the proper agencies with adequate resources to properly enforce energy efficiency building codes.
- Collaboration between the private sector and government agencies can provide improvements to energy efficiency building and better education about opportunities in building.

Policies (Potential bill drafts):

- Develop specific energy efficiency requirements or targets for new homes built in Montana.
- Modernize Montana's building code laws.
- Provide increased funding for the enforcement of Montana's current energy code requirements.
- A work group, or task force, should be created to develop recommendations for improving building codes. The task force should also discuss the role of the state, and the importance protecting local government jurisdiction.
- Develop more incentives for assisting new homeowners with the costs of efficiency equipment or increase existing incentives.
- Develop tax credits that reflect a percentage of the cost of an energy efficiency improvement for five years.
- Require smart thermostats and smart switches in all new homes.
- Develop a low-voltage installers licensing system.
- Require blower-door testing on all new construction to determine thermal bypass issues.
- Require subsurface rain sensing irrigation or more native/xeriscape landscaping in new developments.
- Provide incentives for Green Building certification.
- Develop new licensing requirements for HVAC installers and additional certification requirements.
- Revise and modernize the professional representation on Montana's Building Codes Council by establishing qualifications for some members based on energy management and expertise. 50-60-115, MCA
- Require adoption of a 15% improvement to the existing energy code in Montana by 2010 and 30% by 2020.
- Develop a rural building code enforcement program. Investigate use of stimulus money to fund the program.
- Work with federal and regional coalitions to enhance federal standards for enhancement of appliance efficiency standards.
- Apply stronger penalties to builders failing to adhere to the existing energy code.
- Allow building owners to sue for damages equal to the cost of additional energy purchased because of poor construction.
- Require inspections of certain percentage of buildings built by a contractor and keep a list of how contractors do on inspections.
- Require energy efficiency inspections in counties that meet a certain density level.
- Require updates to the energy code every three years.

TAPPING MONTANA'S POWER POTENTIAL

The Schweitzer Energy Policy

Background and Premises

In October 2005, Governor Schweitzer called the Montana Energy Symposium in Bozeman to highlight serious concerns about energy policy and to hear ideas from energy experts and Montana citizens. The symposium brought together over 700 people from across the state and country to discuss Montana and the nation's energy future. Attendees offered a broad range of concerns and opinions. Governor Schweitzer, Lt. Governor Bohlinger and representatives of their administration have continued to listen to Montana's citizens and business people following the Energy Symposium. The ideas that emerged from those opinions and meetings provide the context for the Schweitzer Energy Policy.

The Schweitzer energy policy is built upon these important premises:

- Montana has more potential for energy development from existing and untapped diversified sources than any state in the nation.
- Because of our existing energy development and our energy development potential, Montana can play a major role in reducing our nation's addiction to foreign oil.
- When done properly, energy development, including value adding, can create the high-quality, good-paying jobs essential for a strong economy.
- The locations of much of the energy development will stimulate economic growth in areas of Montana that have long suffered economic hardship.
- Montana citizens want energy development that primarily focuses on renewable energy sources and clean energy technologies that are compatible with our quality of life.
- New market demands for clean energy and newly developed technologies make possible energy development compatible with our quality of life and consistent with our Constitutional right to a "clean and healthful environment."
- While energy development must include development for export to external markets, Montana citizens want it done in a manner that provides for sustainable, affordable energy for Montana's businesses, industries and families.
- Through state and local tax revenues, proper energy development can help provide for education and other important governmental services, in addition to jobs and growth.
- While state government and its elected officials cannot dictate private market investment in Montana, they can play a central catalytic role in attracting needed energy development capital.

Energy Policy Themes

A number of broad themes emerged from the discussions at the Symposium about specific technologies and specific development projects. Taken together, these themes constitute the framework of an energy policy that contributes to the nation's needs while helping all Montanans by promoting:

- Diversified Energy Development
- Renewable Energy Development
- Cleaner Energy Development
- Development with Clean Coal Technologies
- Value-adding Energy Development
- Energy Efficiency and Conservation
- Energy Availability and Affordability
- Adherence to Environmental Laws and Community Acceptance
- Supportive Infrastructure Development

Energy Policy Specifics

Diversified Energy Development Montana is blessed with abundant energy resources. In addition to our great rivers and streams, we have the nation's largest reserves of coal and some of its best wind resources. Our farms, ranches and forests can support a strong bio-fuels industry. We have abundant oil, natural gas and coal bed methane opportunities. Montana needs to enhance existing and create new diversified energy development from these resources, compatible with our existing quality of life.

Renewable Energy Development In addition to being renewable, wind generation, hydro, ethanol, and bio-diesel reduce or eliminate carbon dioxide and other pollutants common to conventional energy projects. Developing these resources will play a vital role in helping the nation meet the target of 25% renewable energy by the year 2025. Our agricultural and other resource strengths mandate that the State of Montana aggressively promote the development of wind generation, ethanol, biodiesel, biomass and other renewable forms of energy.

Cleaner Energy Development The move toward clean energy is both market-driven and socially responsible. California, as one of the largest energy markets, has already set standards requiring that electricity delivered to its borders minimizes greenhouse gas emissions and includes a green power mix. Concern over climate change continues to grow and Montanans demand the high quality of life we now enjoy, including a "clean and healthful environment". Therefore, state government will focus substantial efforts and resources on promoting energy development projects that meet the rising national demand for cleaner energy.

Development with Clean Coal Technologies Coal-to-liquid fuels and integrated gasification combined cycle (IGCC) electrical generating plants allow more of the pollutants and greenhouse gases associated with conventional coal technologies to be captured and disposed. In particular, the

Montana has more potential for energy development from existing and potential new diversified sources than any state in the nation.

carbon dioxide capturing that is inherent in these processes allows sequestration of the CO_2, including methods that give the double benefit of enhanced oil recovery. The state will focus energy development of coal, including state-owned coal, on coal-to-liquids plants, IGCC electrical power plants, and other clean coal technologies.

Value-adding Energy Development Historically Montana has been a commodity exporting state. In agriculture, forest products and mining, the economic benefits of value-adding, and many quality jobs, have gone mostly out-of-state as a low-level commodity. The state of Montana will commit itself to adopting policies and practices that emphasize more value-adding in the energy field, whether the initial source is bio-based or carbon-based.

Energy Efficiency and Conservation Energy efficiency and conservation are the best homegrown defense against high-energy prices and produce the quickest results. Energy efficient houses keep us warmer while saving money, especially for those who are forced to choose between food and medicine or heat. Energy efficient cars make citizens less subject to the supply disruptions associated with hurricanes and international politics, and an energy efficient state has less need for costly environmental cleanups. State government will focus resources on energy efficiency and conservation, through both direct assistance to Montana's lower income families and support of industries, businesses, and practices that promote energy efficiency.

Energy Availability and Affordability Montana has suffered from the effects of electricity deregulation in the past decade. If that market can't be policed adequately and provide affordable energy for Montanans, we will consider creative ways to re-integrate Montana's electrical energy generation, transmission and distribution and the possible re-regulating of prices. We need to seek ways to insure that adequate amounts of the electric energy produced at the lowest cost in this state are reserved for Montana's businesses, industries and families.

Adherence to Environmental Laws and Community Acceptance Energy development in Montana will be expected to follow our environmental laws and respect our communities. We support the expansion of existing activities that already meet environmental standards. Looking ahead, the use of public resources to promote new energy projects will follow a high standard, concentrating on the cleanest projects proposed by industry and those that find community acceptance.

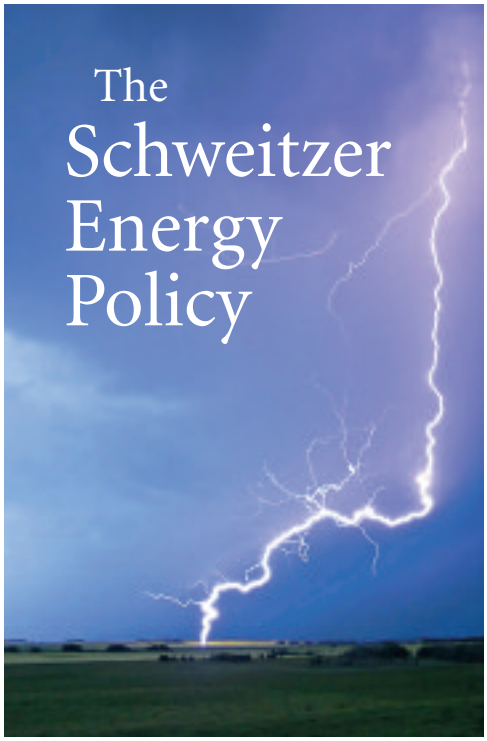
Supportive Infrastructure Development The transmission lines, pipelines, railroads and highways needed to move various energy products to market are vital if Montana is to compete in regional and global markets. We will commit state efforts to strengthening our energy delivery links internally and to the rest of the world.

Conclusion

The primary energy concern of the Schweitzer-Bohlinger administration, is to secure a long-term, sustainable, reliable and affordable energy future for our citizens and businesses, and to secure economic growth from energy development in targeted areas of the state. In addition, we understand our obligation to the nation to help secure energy independence.

With our significant inventory of energy sources, Montana can play a leadership role in reducing the nation's reliance on foreign oil that often comes from unfriendly political regimes around the world. Proper development of Montana's existing and new diversified energy resources can also provide the electric power, gas, and liquid fuels needed to drive economic growth in our state and nation.

The state of Montana should strive to attain greater efficiencies and conservation as a means of reducing energy costs. Montana can and should focus its efforts on new clean energy technologies and renewable forms of energy by playing a catalytic role in bringing private and public resources together to create energy development projects.



We do not intend to "build a fence around Montana", nor will we accept the mentality of "rip and run" rapid developments of the past. We know, as do most Montanans, that we can have good quality jobs, a clean and healthful Montana, and fulfill our national obligations. Proper energy development following the principles outlined in this Schweitzer Energy Policy can provide solid economic development, quality job creation, and energy security and affordability for our state, and be done in a manner that protects the Montana quality way of life. ■

Governor's Office of Economic Development
PO Box 200801 ▪ Helena, Montana 59620-0801
1-866-442-4968 ▪ www.business.mt.gov

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Energy Policy Development: SB 290 Task List

Utilities including Montana-Dakota Utilities, NorthWestern Energy, and the Montana Electric Cooperatives were invited to comment after each segment. In addition, the public was invited to share their comments after every topic.

x 1. "Maximizing state land use for energy generation".
Who: Coal, oil, and gas by Monte Mason -- DNRC
Biomass by Angela Farr -- DNRC
Wind by Mike Sullivan -- DNRC
Time line: September 2009 meeting

x 2. "Rebuilding and extending transmission lines".
Who: Permitting by Tom Ring -- DEQ
Development by Tom Kaiserski -- Energy Development Division
MATL by John Van't Hof -- Tonbridge Power
MSTI concerns by Marie Garrison and Linda Rogers -- Move MSTI
Time line: September 2009 meeting

x 3. "Integrating wind energy".
Who: Integrating wind by Bill Alexander -- Naturener
Harvest the Wind by Ted Williams -- Gaelectric
Small Wind Issues by Bill Pascoe -- Small Wind Industry
Time line: September 2009 meeting

x 4. "Reducing regulations that increase ratepayers' energy costs".
Who: PSC Role by Chairman Greg Jergeson -- PSC
Consumer Counsel Role by Robert Nelson -- Consumer Counsel
Time line: November 2009 meeting

x 5. "Increasing the supply of low-cost electricity with coal-fired generation".
Who: PPL Perspective by Gordon Criswell -- PPL Montana
Utility Board Room by Tom Power -- Economist
Time line: November 2009 meeting

x 6. "Promoting alternative energy systems".
Who: Distributed Energy by Ben Brouwer -- Aero
Small Hydro and Other by Lee Tavenner -- Solar Plexus
Gas to Energy Project by Ross Holter -- Flathead Electric
Time line: November 2009 meeting

x 7. "Promoting Conservation and Energy Efficiency Incentives".
Who: Draft 6th Plan by Charlie Grist -- NW Power & Conservation Council
Economic Development by Jim Baerg -- Energy+Design

Engage Citizens by Bryan VonLossberg -- Commons Link
Smart Technologies by Eric Edelen -- Bluestone Technologies
Time line: January 2010 meeting

x 8. "Increasing Energy Efficiency Standards for New Construction".
Who: Energy Codes by David Cook -- DLI Building Codes Bureau Chief
State Energy Program by Brian Green -- DEQ
Industry Efforts by Dustin Stewart -- MBIA
Needs for the Future by Steve Loken -- Loken Builders
Time line: January 2010 meeting

x 9. ETIC discussion and study direction.
Who: ETIC members
Time line: January and May 2010 meeting

_ 10. Presentation of preliminary report and development of recommendations and proposed legislation.
Who: ETIC members, staff
Time line: May 2010 meeting

_ 11. Review public comment on draft report and any proposed legislation.
Who: ETIC members, staff
Time line: July 2010 meeting

_ 12. Approval of final report and any findings, recommendations, or legislation.
Who: ETIC members
Time line: September 2010 meeting

Appendix F

APPENDIX F IS INCLUDED SEPARATELY IN YOUR MAILING
IT IS THE "DECISION MATRIX"

Appendix G

ELECTRICITY PRODUCTION

PRESENT STATUS

Montana has 44 electricity generation facilities located across the state with generating capacity of 5,500 megawatts. Coal fired generation makes up 64%, hydro facilities 34%, petroleum 1%, natural gas and wind the other 1%. Montana's coal reserves are estimated at 119 billion tons, roughly 25% of the total United States reserves. The total United States production of coal is 1.1 billion tons per year. Electricity produced in Montana is not dependent on imported oil.

Montana currently has five coal-fired power plants. The power plant in Colstrip, Montana is one of the cleanest plants in the United States. It is way below all of the EPA minimums on pollution. Also technologies are being developed to reduce pollution even further by treating the coal before it is burned. Coal has been the logical choice for Montana because the cost of coal in 2008 averaged $2.05 per MMBtu, compared to $15.72 for liquid fuel, and $9.11 for natural gas. The national demand for electricity is expected to increase by 50% in the next 25 years.

Northwestern Energy, which serves 320,000 electric and natural gas customers in Montana, secures 111 megawatts from Colstrip Unit 4, with the remaining 40% coming from market purchases from third parties.

There are ongoing efforts to increase the amount of Montana coal mined and to increase its use as a source of electricity and even a liquid fuel source. However, increasing the use of coal-fired generation for electricity is closely linked to potential federal climate change activities and restraints on CO2 emissions. The impact of potential climate change activities on the future price of coal-fired generation is uncertain at this time. Six additional coal-fired power plants have been recently proposed in Montana. Due to this uncertainty, five of these have been cancelled and the remaining one near Great Falls will now be powered with natural gas. .

Montana is now considering clean coal technologies such as coal gasification (chemical conversion of coal into hydrogen or methane gas) and converting coal into synthetic petroleum products or natural gas. A number of projects are in the preliminary stages. If carbon regulations move forward at the Federal level, these efforts will be of critical importance in Montana profiting from its vast coal resources. The Montana Legislature, in approving Senate Bill No. 498 during the 2009 session, has made clear its intent to have jurisdiction over a sequestration program if mandated by the Federal government.

FUTURE STATUS

The future of Montana is tied to energy. The standard of living in Montana is based on the widespread availability of abundant energy from coal, oil and gas. The current emphasis on climate change world wide means that Montanans may pay much more for the energy required to power their homes and cars.

Use of natural gas for power plants and home heating is seen as a good option by many states including Montana, but that fact means that the price could increase dramatically and about the same amount of carbon is emitted. Low cost electricity in the long run is dependent on a cost effective diversified portfolio. Nuclear, coal, hydro, biomass and IGCC provide the best options for cheap base power. Abandoning these conventional energy sources bears significant risks and may be counter productive by raising electricity rates too high, too fast and diminish public support and money to achieve the real promising technological breakthroughs that lie ahead. Alternative energy does not have the capacity, nor is the price competitive with conventional energy sources. Additional supply of low cost electricity does not look likely unless Montana can buck the current trend.

POLICY STATEMENTS

Continued wise utilization of the vast coal resources to export to other states and supply existing coal power plants in Montana can help maintain Montana's economy and the standard of living of its citizens.

Continued research and pilot projects to convert coal into synthetic petroleum products, hydrogen, methane and natural gas will extend Montana's competitive advantage with coal well into the future.

Increased oil and gas exploration and development will stop Montana's declining production, provide natural gas for generating electricity and most importantly help get our nation off Mid-East oil.

Consider a nuclear plant.

Consider co-generation biomass plants to generate electricity and manage our forests.

ALTERNATIVE ENERGY PRODUCTION

PRESENT STATUS

Alternative energy systems are defined in 15-32-102, MCA as "the generation system or equipment used to convert energy sources into usable sources." Those sources include "geothermal systems, low emission wood or biomass, wind, photovoltaic and small hydropower plants (under 1 megawatt), fuel cells that do not require hydrocarbon fuel, and other recognized nonfossil forms of energy generation".

Montana has an abundance of alternative energy sources. "The Montana Renewable Power Production and Rural Economic Development Act" requires that public utilities and competitive electricity suppliers procure a minimum of 15 percent of their electricity from renewables starting January 1, 2015. Cooperative utilities with 5,000 or more customers are responsible for implementing their own renewable standards.

.FUTURE STATUS

Alternative energy is in most cases more expensive than conventional fossil-fuel sources. Renewable energy, however, increases energy diversity, energy independence and security, and has fewer environmental impacts in terms of pollution. Small-scale distributed generation can produce electricity near the load and reduce transmission and distribution costs.

Montana has tax incentives in place to promote both large-scale renewable energy and distributed energy opportunities. Alternative energy systems also can provide economic development in rural Montana. The manufacturing of renewable energy equipment in Montana also can lead to new industries. Montana has increased wind energy generation from 1 megawatt in 2004 to just over 270 megawatts in 2009.

Montana has a wealth of alternative energy sources. The number of alternative energy systems continues to increase.

POLICY STATEMENTS

Evaluate existing tax incentives and loan programs that promote alternative energy to see if the projects are cost effective. Discontinue those that are not.

Montana State tax laws provide a tax credit for many types of renewable energy systems for the home. Evaluate these systems for cost effectiveness. Provide individual tax credits only on projects which have a reasonable pay back time (cost effective) and provide greater credit for short pay back time. Location is very important for wind and solar.

Search for new alternative energy projects to promote such as a hydrogen generator to improve vehicle mileage and reduce exhaust emissions.

Provide incentives and loan programs to promote the development of biomass plants to generate heat for industrial use or electricity.

Continue research to produce more cost effective and clean alternative fuels.

Continue to promote long-term growth of large utility scale wind and small-scale distributed generation that are cost effective.

Encourage utilities to offer voluntary "green pricing" programs that allow customers to Support renewable energy resources.

Suspend net metering until the utility has the means of using the additional electricity.

Establish uniform policies for interconnection and net metering
that promote investment in customer-owned renewable energy facilities.

Promote additional hydropower expansions by classifying them as renewable under the "The Montana Renewable Power Production and Rural Economic Development Act."

ENERGY REGULATIONS

PRESENT STATUS

The Montana Public Service Commission (PSC) ensures that public utilities in Montana provide adequate service at reasonable rates. The PSC strives to balance the interests of ratepayers with a utilities' need to earn a fair rate of return on their investment. The Montana Consumer Counsel represents Montana consumers in utility proceedings before the PSC and in appropriate proceedings before the Federal Energy Regulatory Commission, and appropriate state and federal court proceedings.

FUTURE STATUS

Electricity rates can be detrimentally impacted by regulations and taxes to fund projects, loans and grants that may not be consistent with delivering reliable service at a reasonable rate to the rate payers.

POLICY STATEMENTS

Examine expenditures of funds on such items as grants, loans and projects collected from rate payers to determine if they relate directly to the role of the public utility.

Review the use of the Universal System Benefits program (USB) to determine if the funds are being used appropriately.

Access the impact on rates requirements such as renewable portfolio standards, uniform net metering requirements and energy efficiency mandates.

Requirements more stringent than federal standards can only be implemented by an act of the Legislature.

REBUILDING AND EXTENDING TRANSMISSION LINES

PRESENT STATUS

NorthWestern Energy and Montana-Dakota Utility distribution costs are regulated by the Montana Public Service Commission. Distribution costs of electric cooperatives are set by the governing boards of individual co-ops. In February 2007 the Federal Energy Regulatory Commission issued Order 890, which reforms 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. Order 890 is geared at promoting reliability, sending accurate market signals, and encouraging the development of energy infrastructure. Since 1990, the demand for electricity in the United States increased by about 25% and construction of transmission facilities decreased by about 30%.

Montana regulates transmission siting through the Montana Major Facility Siting Act (MFSA), and that requires certain proposed transmission projects to go through a review before construction. Typically transmission lines greater than 69 kV are covered under MFSA if they meet certain criteria. With some exceptions, electrical transmission lines of 230 kV or more and 10 miles or more in length or 10% of the existing right-of-way, whichever is greater, are covered under MFSA.

FUTURE STATUS

The western grid is congested and states are increasingly looking for new energy suppliers. Large population centers see promise in Montana's diverse energy resources, but channeling those resources will require a significant investment in transmission projects.

In order to maximize Montana's energy potential, new and upgraded transmission lines will be needed to export to population centers with a high demand for energy. At the same time, Montana utilities must build and upgrade electric transmission to provide low-cost and reliable service to Montana customers. Private landowners also have a valuable role to play and a stake in efforts to expand and rebuild transmission lines.

Improving transmission infrastructure in Montana will require a significant financial investment. Innovative management of the electrical grid will need to increase efficiency. Coordination between private companies, government entities and the public is critical to develop new transmission lines and meet the needs of customers.

POLICY STATEMENTS

Form a state-level working group to explore how to improve transmission development and streamline regulation. Engage in two state-level planning processes. First identify areas in Montana where there is significant need. Second, complete a high-level analysis identifying acceptable corridors for new transmission lines.

Develop programs to assist with the financing of transmission facilities.

Develop a tax deferral program for transmission developers during the first three years of operation.

Increase the capacity of existing lines in existing corridors and maximize the potential of existing lines.

Make use of existing rights-of-way when building or rebuilding transmission facilities when feasible.

Coordinate the following agencies in their efforts in the building and extending of transmission lines: Department of Commerce Energy Promotion Division, Department of Environmental Quality, Fish Wildlife and Parks, and Department of Natural Resources and Conservation.

Address Interests of property owners and property rights up front to provide time to consider options as the easements are secured.

Plan construction of transmission in a way that fairly apportions the costs of development to those who cause the need for the development.

Continue to participate in regional transmission organizations at the present level.

Implement Interconnection agreements in a manner that complies with state and federal laws and does not make small-scale projects financially unfeasible.

Work closely with affected local governments in the preliminary stages of development.

Continue to advance smart grid technologies.

Examine noxious weed regulations and responsibilities in relation to transmission line construction.

WIND INTEGRATION

PRESENT STATUS

Montana ranks 19th in existing wind capacity [272 MW] and 5th in potential wind capacity. Montana's wind resource is rated number one in the nation for class 3 wind and above.

In Montana, state law, the renewable portfolio standard, requires public utilities and competitive electricity suppliers to procure a minimum of 5% of the retail sales from renewable resources through 2009, 10% between 2010 and 2014, and 15% starting in 2015. Cooperative utilities are responsible for implementing their own renewable standards.

FUTURE STATUS

With the construction of the 230-kilovolt Montana Alberta Tie Line, up to 300 megawatts of power could come online. Because a collection of wind developers have secured capacity on the line, the majority of the new power on the new line is expected to be wind.

The costs associated with wind can be reviewed in two areas. One is wind integration, or the impacts of adding wind into a utility's operations. A second is the cost of wind as it relates to marketing that product or having adequate transmission to get it to market. From many utility operator's point of view the cost of integration or ancillary costs are critical. From the production perspective, the importance of increasing transmission lines and the ability to get wind power, or any source, to market is key.

NorthWestern has about 148 MW of wind contracts and received more than 509,000 MWh in 2008. In 2008 the amount NorthWestern supply paid for regulation resources specifically to integrate wind generation into its electric supply portfolio was $2.6 million. This is at about $5.19 of regulation cost per MWh of wind generation. [9] In 2008 NorthWestern Energy, along with several other partners, completed a wind integration study with the assistance of Phoenix Engineering, a wind engineering firm with offices in Alberta, Canada and Texas. The $110,000 wind integration study provided a high level understanding of the amount of additional regulation resources necessary to integrate large quantities of new wind generation sited at different locations throughout Montana.

POLICY STATEMENTS

Determine the capability in the rest of the electric system to provide reliable service when the wind power output drops. In addition, the variability of wind resources can cause overall system dispatch costs to increase. These "system integration" issues generally limit projections of wind power expansion.

Continue testing and application of new and innovative technologies to address wind integration.

Continue to improve wind forecasting and scheduling.

Avoid areas of the state where large-scale wind development is inappropriate.

Require the qualifying facility to pay the cost of integrating its power in contracts between small scale qualifying facilities and utilities.

Provide for a systematic and ongoing study of integration costs in Montana.

Develop a set of Best Management Practices (BMPs) for wind projects on state lands.

Identify large contiguous blocks of state land that could be the core for a wind development and proactively seek bids.

Wind power is a mature technology that can produce electricity at a generally low cost relative to other renewable resources. However, wind power is an intermittent power source that introduces complexities and costs.

Establish uniform policies for interconnection and net metering that promote investment in customer-owned renewable energy facilities.

MAXIMIZING STATE LAND USE FOR ENERGY GENERATION

PRESENT STATUS

There are more than 5 million surface acres and 6.2 million mineral acres of state trust land scattered across the state. The law requires the Board of Land Commissioners manage the land to "secure the largest measure of legitimate and reasonable advantage to the state" and "provide for the long-term financial support of education." Trust land revenues play a significant role in the funding of public schools, receiving the majority of the revenue generated by state trust land in the state.

State lands have historically been the source of varied energy riches in Montana, and the potential for even greater energy development is receiving increased attention. While a limited number of tracts of state land are used for energy generation, those that are used for such proposes, produce significant revenue for lessees and the state. Technological advancements also are increasing exploration and development opportunities. Royalty rates, as well as production taxes, are a key component to ensuring Montana's state trust lands are used appropriately for energy generation.

FUTURE STATUS

Historically, state lands have provided hydropower, wind power, coal production, and oil and gas production. State lands are now being looked at in a much broader context in terms of geothermal energy, biomass energy, and even carbon sequestration.

The Department of Natural Resources Minerals Management Bureau oversees the leasing, permitting and managing of about 4,802 oil and gas, coal, sand and gravel, and metalliferous and non-metalliferous agreements covering about 2 million acres of the 6.2 million acres of available school trust lands and 2,400 acres of additional state land.

With beetle-infestations in areas of Montana's forested lands, biomass also holds potential for the future. The state of Montana has about 4% of the live tree woody biomass of live tree woody biomass on Montana timberland, and there is an average of 5.61 tons per acre of standing dead tree woody biomass on state lands.

Oil and gas exploration and development on state and private lands is regulated and bonded by the Montana Board of Oil and Gas Conservation Commission. Of the 6,653 oil and gas leases the department is now leasing and monitoring, about 606 are currently productive.

School trust grants received more than $31.2 million attributed to oil and gas leasing in the 2008 fiscal year. And production showed nearly 2 million barrels of oil, 7.8 million MCF (thousand cubic feet) of natural gas, and 1.5 million gallons of condensate produced in that time period. It was the most successful royalty revenue year in the bureau's history -- largely due to record high oil prices.

A portion of Montana's vast coal resources are also located on state land. The operating, rental, and royalty provisions are established by a lease, but that lease does not authorize a coal mine. Before mining occurs, the lessee must comply with the Montana Environmental Policy Act and secure the proper permits.

During the last year, Montana's coal resources, particularly the Otter Creek Project area, has received much attention. the State's ownership totals over 9,500 acres, or roughly half of the Otter Creek area. The state's ownership is in a "checkerboard" pattern, and Great Northern Properties own most of the other half of the coal estate. Surface ownership is a combination of state, federal, and fee. State recoverable coal totals 616 million tons at Otter Creek, or about one-half of the total 1.3 billion ton reserve.

Currently, an Environmental Impact Statement is being completed for the proposed Springdale/Coyote Wind Farm. Coyote Wind, LLC, plans to erect six to ten wind turbines on school trust land in Sweet Grass County, between Big Timber and Livingston. The project would also include some adjoining private land.

Martinsdale Wind Farm LLC, a subsidiary of Horizon Wind Energy, is working in cooperation with the DNRC to develop the Martinsdale Wind Power Project. It would produce up to 300 megawatts and be located about 20 miles west of Harlowton. The project could include 36 turbines, possibly expanding to 100 wind turbines.

Efforts to turn the Norris Hill area of Madison County into a wind farm also could include state lands. Madison Valley Renewable Energy LLC, was selected to use state school trust lands in a portion of its project, which is expected to cover 14,000 acres of state and private land and generate about 150 megawatts of electricity. The agreement with the state provides the energy company with 4,000 acres in exchange for 3.1% of the wind farm's electrical generation revenues.

Wind related activities on state lands have generated a total of $306,115 since 2004.
There is one hydropower facility on state-owned water projects. The Broadwater Power Project near Toston has been generating power since June 1989. Revenue supplements funds for state water project rehabilitation costs. The DNRC owns and operates the 10-megawatt facility and contracts with NorthWestern Energy to sell the power. In a year with average runoff, the facility can generate about $3.5 million in revenue from energy capacity sales. If debt payments and operating expenses are deducted; about $1.3 million is left. Drought has reduced the power generated and revenue at the facility.

State lands also have the potential to be used for biomass and geothermal energy. The DNRC and other state agencies are taking a closer look at lands where these types of developments might be considered in the future.

POLICY STATEMENTS

In pursuing energy development on state lands, the state must continue to weigh its overall management responsibilities (fiduciary and multiple-use), as mandated by the Montana Constitution and state law.

Promote and facilitate infrastructure development in order to maximize energy generation on state lands.

Categorically exclude wind generation projects proposed on state land that comply with specific standards (with air, water, road construction, weed control) from MEPA rules.

Develop a set of Best Management Practices (BMPs) for energy projects on state lands.

ENERGY EFFICIENCY STANDARDS FOR NEW CONSTRUCTION

PRESENT STATUS

The Administrative Rules of Montana require that commercial buildings and residential buildings over three stories comply with the most recently adopted IECC or a comparable standard. The standards in the IECC outline minimum requirements for insulation, lighting, mechanical, and service water heating equipment. The new, 2009 standards are expected to be in place by April 2010.

Cities, towns, and counties that have building code jurisdictions enforce the state energy code in their jurisdiction. Montana does not have a statewide building energy inspection process, so building permits are not required outside of certified jurisdictions -- this means many new houses in Montana are not inspected for energy code compliance. Generally, residences constructed in one of the 44 certified cities or four certified county local government jurisdictions would receive an energy code inspection. The Montana Department of Labor and Industry estimates that about 50 percent of new Montana residences are located outside building code jurisdictions and did not receive an energy code inspection, according to a 2007 Department of Environmental Quality survey.

Outside of the building code jurisdictions, builders meet the requirements of the energy code and show compliance through a self-certification process. The certification requires that a builder provide a written statement to a homeowner showing that the house meets state energy code requirements. A homebuilder, or the builder's agent, provides the certification by signing and dating an energy efficient components label.

The DEQ estimates about 40 percent voluntary compliance for energy labeling. Since 2005, state electrical inspectors have been asked to leave a residential energy code summary booklet and a label at each home that is inspected. The 2007-08 EQC discussed certification systems at length and pursued Senate Bill No. 49, which was approved by the Montana Legislature. SB 49 requires the Department of Administration to develop high-performance building standards for state-owned buildings and new state-leased buildings. High-performance means exceeding the most currently adopted International Energy Efficiency Code by 20 percent or to the extent it is cost-effective. The Architecture and Engineering Division of the Department of Administration developed a process that incorporates "sustainable design expectations" determined to be cost effective and appropriate for new projects. High-performance building standards will be developed in collaboration with Montana's universities and state agencies. The standards will be used to articulate expectations to consultants.

In terms of residential weatherization, there are private and governmental programs in Montana that assist low-income electricity consumers. Many of the low-income electricity programs are funded either through federal money allocated to the state or through a universal system benefits program (USB) charge assessed to electricity and gas consumers. The Low Income Energy Assistance Program (LIEAP) is a federal program administered by the State of Montana that provides funding for low-income household weatherization. Weatherization includes heating system tune-ups, air infiltration reduction, and attic, wall, and floor insulation. The weatherization program is operated statewide by 10 private, nonprofit HRDCs and two tribal governments. Energy Share of Montana is a nonprofit organization funded by USB dollars and private and corporate donations. Energy Share also provides furnace safety, weatherization, and refrigerator replacements. Energy Share has an endowment designed to assist with energy emergency needs of future generations. From time to time, Energy Share also does other pilot projects that benefit low-income families. Public utilities and electric cooperatives also help fund low-income weatherization.

FUTURE

Montana is working to upgrade its statewide energy code, requiring newly constructed homes to meet the latest standards for energy efficiency. New houses in Montana will soon be expected to meet the requirements of the 2009 International Energy Conservation Code (2009 IECC) with Montana amendments.

Montana has taken steps to upgrade its statewide energy code, requiring newly constructed homes to meet new and tougher standards for energy efficiency. Incentives are in place to encourage energy efficiency in home building, for example, residents can claim a tax credit for energy conservation investments made to a home or other building. The state also has dedicated a sizeable amount of stimulus money toward the promotion of energy efficiency and conservation in public buildings, including schools, local government facilities, and state offices.

Montana homebuyers are eligible for a state tax credit of up to $500 to $1,000 per couple when an "above energy code" home is built or purchased. The credit also applies to improvements made in the efficiency of an existing home. Energy Star-certified homes or Montana Green Building Program (above Bronze level) homes with an Energy Star heating system also are eligible for the $500 energy conservation tax credit. Homebuyers also are eligible for the alternative energy systems tax credit, which includes a credit of $1,500 for geothermal and $500 for wind, solar, and eligible wood and pellet stoves. For 2009 and 2010, federal tax credits are available for improvements to existing principle residences with a $1,500 maximum credit per taxpayer.

POLICY STATEMENTS

Promote heating homes and businesses with electricity because electrical devises are cheap, clean, safe, reliable, pollution free, and easy to install and control. Electricity is cost effective, particularly in an energy efficient building.

Develop and emphasize a building performance standard of efficiency as an alternative to the prescriptive standards because the performance standard provides more freedom and will result in more energy savings, enjoyment and comfort by the public.

CONSERVATION AND ENERGY EFFICIENCY

PRESENT STATUS

Montana's current energy policy stresses energy conservation, efficiency, and demand response. Montana utilities and cooperatives also dedicate money to demand-side management programs ranging from residential energy audits to discounts on energy efficient lighting. Since implementing the Universal System Benefits (USB) program in 1999, the state has required utilities and cooperatives to sustain conservation and efficiency programs. Montana's two largest utilities also address demand-side management in their portfolio planning, which is reviewed by the Public Service Commission (PSC). tax incentives are in place to encourage weatherization. The PSC, Department of Revenue, and the Department of Environmental Quality (DEQ) have dedicated time and resources to educating Montanans about these programs.

FUTURE STATUS

Montana has tax incentives in place to encourage energy efficiency retrofits. The tax credit available to residential property owners who invest in energy conservation is increasingly being used by Montanans. Tax returns in 2006 show that 19,041 taxpayers claimed the credit for a total of $8.1 million. In 2007, that increased to 19,115 taxpayers claiming about $8.3 million. The Department of Revenue also provided estimates of the amounts claimed by corporations for investments in energy conservation. The Department of Revenue indicated that it rarely sees the deduction claimed in Montana, and estimated 10 corporate returns a year might include the deduction. (There are about 14,200 total corporate returns in a year). Using the estimate of 10 corporations claiming the deduction, about $18,000 to $36,000 is deducted against taxable income. Using the tax rate for most corporations, the estimated total reduction in tax liability due to the tax deduction is only between $1,215 and $2,430

POLICY STATEMENTS

Monitor tax credits, grants and loans to determine if money is being spent on activities and products that have a reasonable payback time.

Reconsider the use of florescent lights over incandescent. Florescent lights contain mercury and the light spectrum is not good for reading purposes and they do work well in cold weather.

Transmission Taxation and Incentives

Title 15, chapter 72, part 1, WET Tax

The "Wholesale Energy Transaction Tax", effective Jan. 1, 2000, was established to avoid placing a supplier engaged in the business of generating, supplying, or selling electricity at a competitive advantage or disadvantage. It is a tax imposed on the amount of electricity transmitted by a transmission services provider in the state.

In 1999, the Legislature reduced the tax rate on electrical generation property from 12% to 6%. To partly replace the reduction in the generation tax, a wholesale energy transaction tax was developed. The tax is imposed at a rate of 0.015 cents per kilowatt-hour on electricity that is transmitted by a transmission service provider in the state. It is deposited, 100%, into the state general fund.

Title 15, chapter 24, part 31, "Clean and Green"

The "Jobs and Energy Development Incentives Act" approved during the 2007 May Special Session, provides tax incentives for development and transmission of clean and renewable energy. It reduces the permanent property tax rate from 12% to 3% of market value for new investments in transmission lines that are constructed after June 2007 and that move "clean" power, such as wind, new hydro, biomass, natural gas combined cycle, and integrated gas combined cycle power with carbon sequestration.

New DC converter stations that direct power to two different regional power grids are taxed at 2.25% of market value, as opposed to 6%.

Energy Promotion Division

During the May 2007 Special Session, legislators provided funding to establish an Energy Infrastructure Promotion and Development program. The money is allocated to the Department of Commerce, Community Development Division. The division, now known as the Energy and Promotion Division, works "with private industry, local and regional economic development organizations, as well as with state, federal, and tribal governments to facilitate, promote and develop clean and green energy projects throughout Montana."

69-2-216, MCA Fiscal Impact Analysis Exemption

The Consumer Counsel must complete an analysis outlining the fiscal impacts of a project, such as a transmission line sited under the Major Facility Siting Act, on electricity customers in Montana. The analysis must include an estimation of how customers' rates may be impacted. Public utilities and affiliates are exempt, as long as necessary tariffs, rate schedules, and other information is filed with the Federal Energy Regulatory Commission.

75-20-104, MCA and SB 360, 2009 Legislature, Major Facility Siting Act Exemption

The Major Facility Siting Act was revised by the 2009 Legislature altering the definition of "facility" to exclude certain upgrades to transmission lines in existing right-of-ways and easements.

Wind Energy Taxation and Incentives

15-6-157, MCA taxation

Wind generation facilities with a nameplate capacity greater than 1 megawatt are generally class fourteen property taxed at 3% of market value.

15-24-3004, MCA impact fees.

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.

15-32-2-1, MCA 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.

15-6-224, MCA 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.

15-32-402, MCA 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.

15-6-225, MCA 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.

Title 15, chapter 24, part 14, 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.

75-25-101, MCA 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.

Title 69, chapter 8, 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. Cooperatives also offer net metering.

Title 69, chapter 3, part 20, RPS

"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 90, chapter 4, part 12, 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 15, chapter 24, part 31, "Clean and Green"

The "Jobs and Energy Development Incentives Act" approved during the 2007 May Special Session, provides tax incentives for development of clean and renewable energy.

Energy Promotion Division

During the May 2007 Special Session, legislators provided funding to establish an Energy Infrastructure Promotion and Development program. The money is allocated to the Department of Commerce, Community Development Division. The division, now known as the Energy and Promotion Division, works "with private industry, local and regional economic development organizations, as well as with state, federal, and tribal governments to facilitate,

promote and develop clean and green energy projects throughout Montana."

HB 645, 2009 Legislature, Energy Development and Demonstration grant program

Entities including, units of the Montana university system, agricultural research centers, private entities or research centers can apply through the DEQ for grants up to $500,000 to advance the development and utilization of energy storage systems, to develop systems specifically designed to store energy generated from eligible renewable resources, to promote the efficiency, environmental performance, and cost-competitiveness of energy storage systems, and to advance the development of alternative energy systems.

HB 529, 2009 Legislature, permitting

The scope of environmental review under the Montana Environmental Policy Act for certain energy projects on state lands is limited. If more than 33% of the total land occupied by an energy development project is state land then the environmental review includes the total land area, including federal and private land.

State Land Use for Energy Generation

(Production taxes and general incentives are not included)

Article X, Section 4, Montana Constitution, Land board

The governor, superintendent of public instruction, auditor, secretary of state, and attorney general constitute the board of land commissioners. It has the authority to direct, control, lease, exchange, and sell school lands and lands which have been or may be granted for the support and benefit of the various state educational institutions, under such regulations and restrictions as may be provided by law.

Article X, Section 11, Montana Constitution, State Land

All lands of the state are public lands of the state, held in trust for the people, to be disposed of, for the respective purposes for which they have been or may be granted, donated or devised. Land may not be disposed of except in compliance with laws providing for such disposition, or until the full market value of the estate or interest is ascertained, paid and secured. Public land is classified by the board of land commissioners in accordance with the law. Public land may be exchanged for other land, public or private, which is equal in value and, as closely as possible, equal in area.

Title 77, chapter 1, part 2, Land board

Outlines the Board of Land Commissioners power and duties. Management of state lands under the multiple-use management concept are also outlined. Requirements for the disposition of revenue and profits derived from state lands are included.

Title 77, chapter 1, parts 3 and 4, DNRC

Outlines the role of the Department of Natural Resources and Conservation for appraising, leasing, and managing state lands. The classification of state lands are provided for.

Title 77, chapter 3, minerals

Authorizes mineral leases and outlines the disposition of royalties and other fees. Lease and royalty provisions, as well as restrictions are outlined. Coal leases are covered specifically in part 3. Oil and gas is outlined in part 4, and the underground storage of natural gas is outlined in part 5.

77-4-102, geothermal

Provides for the leasing of state-owned lands, including the beds of navigable streams and the beds of navigable bodies of water for prospecting, exploration, well construction, and the production of geothermal resources.

77-4-201, MCA, hydropower

Prohibits the state from selling or advertising for sale state lands constituting power sites

or part of power sites capable of developing hydroelectric energy in commercial quantities. However, land commissioners may issue a lease or license for the development of power sites and the distribution, use, and disposition of the electrical energy generated on the sites.

Title 77, chapter 5, part 2

Outlines timber sales on state lands. If the department is addressing forest health concerns, the department may exceed the annual sustained harvest level by up to 10% (a change by the 2009 Legislature) using contract harvesting, provided that the contract harvest volume in excess of the annual sustained harvest level contains no more than 25% merchantable sawlog volume

HB 529, 2009 Legislature, permitting

The scope of environmental review under the Montana Environmental Policy Act for certain energy projects on state lands is limited. If more than 33% of the total land occupied by an energy development project is state land then the environmental review includes the total land area, including federal and private land.

HB 674, 2009 Legislature, state land use

Authorizes the creation of state debt through the issuance of general obligation bonds for purchase and management of real property and appurtenances for sustainable forest management, recreational use, and income-generating potential.

Coal Regulation, Taxation, and Incentives

Article IX, section 5, of the Montana Constitution, coal severance

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 percent) of the severance tax has been dedicated to the coal severance tax trust fund since December 31, 1979.

Article IX, section 1, of the Montana Constitution, clean and healthful

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.

Title 50, chapter 73, part 1, MCA, coal mining code

Imposes certain duties regarding safety requirements to be administered by the Department of Labor and Industry.

Title 75, chapter 1, parts 1 through 3, MCA, "Montana Environmental Policy Act"

Is not a regulatory act but requires the State of Montana to conduct an environmental review of the impacts of permitting a coal mine and most often a coal-fired generation plan. An environmental review document is required before an agency may issue a permit.

Title 75, chapter 2, parts 1 through 4, MCA, "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 applies to coal-fired energy generation and may apply to coal mining operations.

Title 75, chapter 5, MCA, "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 82, chapter 4, part 1, MCA,"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 2, MCA,"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 90, chapter 6, part 2, MCA, coal impact abatement funding

Establishes a 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 15, chapter 35, MCA, 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. The 2009 Legislature revised when the Department of Revenue can impute the value of coal and provided that the cost of washing and cleaning coal mined from an underground mine is not included in the contract sales price. The 2009 changes sunset in 2017.

Title 15, chapter 38, MCA,"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)

Title 15, chapter 23, part 7, MCA, 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 percent of reported value.

15-6-208, MCA, 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.

Title 90, chapter 2, part 11, MCA, reclamation and development grants

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)

15-35, 103, MCA, severance tax reduction

The severance tax rate on coal recovered from a strip mine using auger mining is reduced, based on legislation approved by the 2009 Legislature. The reduced rate applies to coal recovered from mining operations that would otherwise be uneconomical to recover by strip-mining methods.

15-23-715, MCA, local tax abatement

Allows county commissioners to provide a 50 percent local abatement of coal gross proceeds taxes from a new or expanding underground coal mine. The abatement may last from

5-to-10-years. Allocation of the reduced collection is also outlined.

Title 82, chapter 11, part 1, MCA, geologic carbon sequestration

Provides a potential regulatory framework for the permitting of geologic carbon sequestration projects. The Board of Oil and Gas Conservation has regulatory oversight and is required to seek primacy over carbon dioxide injection wells regulated pursuant to the Underground Injection Control Program. The surface owner also is established as the owner of geologic storage reservoirs, unless documentation, such as deeds, shows otherwise.

Title 69, chapter 13, parts 1 through 3, MCA, common carrier pipelines

Grants common carrier status to pipelines that move carbon dioxide produced in the combustion or gasification of fossil fuels. The right of eminent domain, established in Title 70, chapter 30, may be exercised for public uses, including common carrier pipelines.

69-8-421, MCA, "Electric Utility Generation Reintegration Act"

Requires that until the state or federal government adopts uniformly applicable standards, the Public Service Commission is prohibited from approving acquisitions or leases of facilities or equipment used to generate electricity that is primarily fueled by coal unless a minimum of 50 percent of the CO_2 produced by the facility is captured and sequestered. The bill applies only to electric generating units for a public utility that removed its generation assets from its rate base pursuant to this chapter prior to October 1, 2007 and constructed after January 1, 2007.

Title 15, chapter 24, part 31, MCA, 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 percent 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 DEQ.

Title 15, chapter 24, part 31, MCA, property tax abatement for facilities

Provides an abatement from property taxation on coal gasification facilities that sequester at least 65 percent of the carbon dioxide produced at the operation of 50 percent 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.

Alternative Energy Taxation and Incentives

15-6-157, MCA taxation

Wind generation facilities with a nameplate capacity greater than 1 megawatt, geothermal facilities, biomass gasification facilities, and biomass generation facilities up to 25 megawatts are generally class fourteen property taxed at 3% of market value.

15-24-3004, MCA impact fees.

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.

15-32-2-1, MCA 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.

15-6-224, MCA 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.

15-32-402, MCA 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.

15-6-225, MCA 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.

Title 15, chapter 24, part 14, 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.

75-25-101, MCA 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.

Title 69, chapter 8, net metering

Public utilities 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. Some cooperatives also offer net metering.

Title 69, chapter 3, part 20, RPS

"The Montana Renewable Power Production and Rural Economic Development Act" requires that public utilities and competitive electricity suppliers procure a minimum of 5 percent of their retail sales from eligible renewable resources through 2009, 10 percent between 2010 and 2014, and 15 percent starting January 1, 2015. Cooperative utilities with 5,000 or more customers are responsible for implementing their own renewable standards.

Title 90, chapter 4, part 12, 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 15, chapter 24, part 31, "Clean and Green"

The "Jobs and Energy Development Incentives Act" approved during the 2007 May Special Session, provides tax incentives for development of clean and renewable energy.

" Public Utility Regulatory Policies Act of 1978", or "PURPA" 16 U.S.C.A 824(a)(3)

Establishes requirements for the purchases and sales of electric power between qualifying small power production facilities and electric utilities under the regulation of the PSC. See also federal rules implementing PURPA (18 CFR 292.101 et seq.) and state laws concerning small power production facilities (mini- "PURPA").(Title 69, chapter 3, part 6, MCA)

Title 75, chapter 20, MCA, "Montana Major Facility Siting Act"

Administered by DEQ, requires that any use of geothermal resources capable of producing power equivalent to 50 megawatts go through a siting certification process.

75-20-1001, MCA, Geothermal exploration

Directs the Board of Environmental Review to regulate geothermal exploration.

15-32-115, MCA, Geothermal 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.

90-3-1301, Geothermal research

Allows for geothermal research through the Montana Bureau of Mines and Geology. Utilities interested in developing geothermal sites must contribute to the research. Each interim the Bureau also updates the ETIC on research and funding efforts.

Title 70, chapter 17, part 3, MCA, 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 or for the purpose of ensuring the unencumbered exposure of solar energy devices across real property in connection with the generation of solar energy.

Statutes Related to Electric Rates

69-2-101, MCA PSC rates

Grants the PSC rulemaking authority for tracking and monitoring the rates charged by public utilities.

Title 69, chapter 3, MCA PSC regulation of utilities

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. Ratemaking procedures are outlined in part 3.

69-3-308, MCA Tracking of taxes and fees, rate adjustment

A public utility may separately disclose in a customer's bill the amount of state and local taxes and fees assessed against the public utility that the customer is paying. The PSC must allow a public utility to file rate schedules containing provisions for the automatic adjustment and tracking of Montana state and local taxes and fees, except state income tax, paid by the public utility.

69-2-216, MCA Customer fiscal impact analysis

After receiving notification of a proposed electrical generation facility or transmission facility or upgrade, the office of consumer counsel must complete an analysis outlining the fiscal impacts of the project on electricity customers in Montana. The analysis must include an estimation of how customers' rates may be impacted. Projects proposed by utilities and affiliates are exempt.

69-5-107, MCA Customer-owned facilities

Customers may construct, own, or operate electric service facilities for the customer's own use, and construction, ownership, or use may not cause the customer to be considered a utility. A customer may not duplicate existing electric service facilities.

69-8-201, MCA Customer choice -- limitations

"Undoes" portions of the 1997 utility deregulation act. It limits customer choice for small customers, but still allows larger customers to choose a new supplier under certain circumstances. The utility also must apply to the PSC for approval of an electricity supply resource.

69-8-215, MCA Ratepayer and shareholder protection

Provides protection for ratepayers and for the shareholders of innocent third-party

purchasers for the errors or omissions of a predecessor utility.

Title 69, chapter 8, MCA Net metering

Public utilities 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. Cooperatives also offer net metering.

Title 69, chapter 3, part 20, RPS

"The Montana Renewable Power Production and Rural Economic Development Act" requires that public utilities and competitive electricity suppliers procure a minimum of 5 percent of their retail sales from eligible renewable resources through 2009, 10 percent between 2010 and 2014, and 15 percent starting January 1, 2015. Contracts to meet the requirements are eligible for advanced approval by the PSC. Upon advanced approval by the commission, the contracts are eligible for cost recovery from ratepayers. There are also three different cost caps established in meeting the standards.

69-3-712, Conservation in ratebase

In order to encourage the purchase of or investment in conservation by a utility, the commission shall include conservation purchases or investments eligible

Title 69, chapter 3, part 6, MCA Qualifying Facilities

Federal law requires all state-regulated utilities to purchase qualifying facility power at either a freely-negotiated rate, or at a rate set by the state PSC.

69-8-426, MCA, Generation assets

Generation assets acquired by a public utility must be used by the public utility to serve and benefit customers within the public utility's Montana service territory and may not be removed from the rate base unless the commission finds that customers of the public utility will not be adversely affected.

Article XIII, section 2, Montana Constitution. and Title 69, chapter 2, part 2, MCA, Montana Consumer Counsel

Represents Montana consumers in electric utility proceedings before the PSC.

69-3-1201 through 69-3-1206 and 69-8-419, and 69-8-420, MCA

NorthWestern and 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.

Conservation and Energy Efficiency Taxation and Incentives

69-8-402, MCA, universal system benefits

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 USB 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.

15-32-1003, MCA, 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.

15-32-109, MCA, 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.

Title 17, chapter 6, part 3 MCA, "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.

Title 69, chapter 3, part 7, MCA, utilities 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.

90-4-201, MCA, low-income weatherization

Appropriates to Department of Public Health and Human Services (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)

Title 90, chapter 4, part 3, MCA, 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 10, MCA, energy policy

Montana's current energy policy promotes energy conservation, energy efficiency, and demand-side management.

Title 90, chapter 4, part 4, MCA, Northwest Power and Conservation 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.

75-25-101, MCA, 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 2009 is 3.5%. If loans are made by the DEQ using stimulus money received through the American Recovery and Reinvestment Act of 2009, loans of up to $100,000, with a 15 year payback may be available.

Title 90, chapter 4, part 11, MCA, energy performance contracts

Allows state agencies and 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.

Energy Efficiency for New Construction Taxation and Incentives

69-8-402, MCA, universal system benefits

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 USB 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.

15-32-1003, MCA, 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.

15-32-109, MCA, 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.

17-7-213, MCA, high performance building standard

Requires the Department of Administration to develop high-performance building standards for state-owned buildings and new state-leased buildings. High-performance means exceeding the most currently adopted International Energy Efficiency Code by 20 percent or to the extent it is cost-effective.

20-9-516, MCA, school facility and technology account

Establishes the school facility and technology account to provide money to schools for improving energy efficiency in facilities.

Title 50, chapter 60, part 1 and 2, MCA, state building codes and conservation

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.

50-60-102, MCA, local government building codes and conservation

Cities, counties, or towns with building enforcement programs may adopt incentive-based energy conservation standards for new construction. The conservation standards may exceed state building code standards.

50-60-802, MCA project certification

A person who begins construction on a residential building in Montana certifies in writing to the building owner at the conclusion of construction that the residential building has been constructed in compliance with the energy-efficient construction standards

50-60-803, MCA, energy labeling sticker

Requires a labeling sticker to be affixed to a new residential building that describes the energy efficiency components of the home, including but not limited to heating appliance efficiencies and R-value or U-value of ceilings, walls, floors, windows, and doors in new residential buildings.

Title 75, chapter 10, part 15, MCA, mercury-added thermostat collection program

The program encourages the purchase of thermostats that are programmable and increase energy efficiency as replacements for mercury-added thermostats.

90-4-201, MCA, low-income weatherization

Appropriates to Department of Public Health and Human Services (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)

Title 90, chapter 4, part 6, MCA, 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.

75-25-101, MCA, 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 2009 is 3.5%. If loans are made by the DEQ using stimulus money received through the American Recovery and Reinvestment Act of 2009, loans of up to $100,000, with a 15 year payback may be available.

Title 90, chapter 4, part 11, MCA, energy performance contracts

Allows state agencies and 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.

Appendix I

APPENDIX I IS INCLUDED SEPARATELY IN YOUR MAILING
IT IS THE "MEMO CONCERNING TAX CREDITS"