An Introduction to the Montana Renewable Portfolio Standard

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In the last decade one of the most significant new policies affecting the energy industry in the United States has involved state initiatives requiring electric utilities and other retail electric providers to supply a specified minimum amount of customer load with electricity from renewable resources. As of September 19, 2012, renewable portfolio standard requirements or renewable portfolio goals had been established in 36 states.[1] The Montana Renewable Power Production and Rural Economic Development Act has been in place since 2005, with the first compliance requirements beginning in 2008.

The 2013 Montana Legislature passed and approved Senate Joint Resolution No. 6, requesting that the appropriate interim committee of the Legislature spend time analyzing the Montana Renewable Power Production and Rural Economic Development Act, focusing on the economic impacts of the renewable portfolio standard, the environmental benefits of the renewable portfolio standard, and the impacts the renewable portfolio standard has had on Montana consumers. In a poll of legislators to gauge interest in the study, SJ 6 ranked third among 17 study resolutions.[2] The Legislative Council assigned the study to the Energy and Telecommunications Interim Committee (ETIC). The information included in this report is intended to provide an introduction to the Act and how it has taken shape since its passage and approval in 2005. Future reports will dive into mechanisms related to the administration of the standard and the impact of the standard on utility and supplier portfolios, as well as customer impacts.

Why an RPS?

The Renewable Power Production and Rural Economic Development Act, often referred to as Montana's Renewable Portfolio Standard (RPS) or the standard, was brought to the Montana Legislature as Senate Bill No. 415 (Chapter 457, Laws 2005), as a request from former, and at the time newly elected, Governor Brian Schweitzer's office. The proposal was aimed at ensuring that renewable resources would supply an increased share of Montana's electricity and encouraging the view that renewable energy development and use would be encouraged in Montana. Enactment of the legislation reflected a policy shift from requiring utilities or other suppliers to simply obtain sufficient electricity to meet customer loads at the best price to instead advocating that certain types of electrical generation be developed or purchased by utilities and suppliers serving Montana customers. As oil and natural gas prices increased at the time, there was a growing interest in renewable energy and the supply security, environmental benefits, and economic development goals that accompanied it.

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[1] http://www.epa.gov/agstar/tools/funding/renewable.html

[2] *The Interim* newsletter, http://leg.mt.gov/content/Publications/Interim-Newsletter/2013-Interim-Newsletters/2013/June/Poll%20Results.pdf.

While renewable energy had been used for many years in Montana, proponents of the legislation, as illustrated in the title of the act, argued that additional renewable resources were needed in Montana to diversify electricity supply, reduce greenhouse gases and other air emissions to improve public health, and to support local renewable projects that would bring jobs and revenue to Montana's economy.[3] Montana's RPS includes specific procurement requirements to stimulate rural economic development. In addition, public utilities must enter into contracts that include a preference for Montana workers.

Proponents also stated that the bill included a number of mechanisms to hold down costs for Montana families and businesses who pay monthly electric bills. Public utilities could seek preapproval from the Montana Public Service Commission (PSC) to protect customers from excessive costs and to protect utilities from the risk of disallowance of the costs of meeting the renewable standard. The legislation also included specific cost caps for the acquisition of renewable resources by public utilities. Utilities would have the ability to petition the PSC for a short-term waiver from full compliance. The cost caps would limit the additional cost utilities must pay for renewable energy and allow cost recovery from ratepayers for contracts preapproved by the PSC.

Testimony in favor of the bill noted that one of the principal barriers facing wind development in Montana had been the absence of established markets. "To remedy this problem, 18 other states have adopted renewable energy standards requiring utilities to incorporate a certain percentage of renewable power into the mix by a certain date."[4]

Utilities largely opposed the legislation at the time. Montana's two largest utilities, NorthWestern Energy and Montana-Dakota Utilities Co. (MDU), however, had differing concerns.

At the time, NorthWestern Energy (formerly Montana Power Company) had sold its generating facilities following electric utility deregulation in Montana. Montana-Dakota did not deregulate, due to an exemption that was included in the 1997 deregulation legislation. Because MDU owned its own generation, the utility argued that renewable energy would be competing against the cost of running MDU's existing generation stations, which were quite inexpensive. In the NorthWestern Energy portfolio, on the other hand, renewables would be competing against higher priced wholesale market power.

NorthWestern Energy raised specific concerns about "community renewable energy project" requirements, or requirements for the integration of smaller locally owned renewable resources.

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[3]For the text of testimony in support and in opposition, see the committee minutes of Senate Bill No. 415 during the 2005 legislative session.

[4]Testimony provided by the Montana Environmental Information Center on April 11, 2005 before the House Federal Relations Energy and Telecommunications Committee of the Montana Legislature.

Concerns about arranging sufficient regulating, or load-following resources were also voiced by utilities. Additional reliability concerns, mostly specific to wind, were raised.

Opponents largely argued against a mandate or a static requirement from year to year, noting that tax breaks would encourage more development as opposed to an RPS. The potential cost of mandating certain resources be included in a utility portfolio was a point repeatedly raised. They argued that they felt, "if it didn't cost more, a mandate wouldn't be needed."[5]

With the passage of SB 415, a number of legislators in favor of the legislation noted that an RPS could create jobs, reduce reliance on foreign oil and gas, diversify portfolios, provide environmental benefits, and conserve fossil resources for the future. It was noted that implementation of the standard might be painful to utilities at the time, but that down the road, an RPS would provide tangible benefits to Montana citizens.

The ETIC, as outlined in SJ 6, will be tasked with examining the impact the RPS has had on both utilities and Montana citizens and determining, what, if any, changes are needed in the standard.

Who meets the standard?

The bill, as originally passed and approved, required public utilities to obtain a percentage of their retail customer sales from renewable resources. Starting in 2008, public utilities were required to acquire renewable energy equal to 5% of its retail sales of electricity in Montana. That percentage bumped up to 10% in 2010 and 15% beginning in 2015. If a utility or competitive supplier exceeds the standard in any year, it may carry forward the amount by which the standard was exceeded to comply with the standard in either or both of the two subsequent compliance years.

Before diving into the details, it is important to review "who" or what entities are subject to Montana's RPS. The original legislation captured just public utilities and defined those utilities to include any electric utility regulated by the PSC on January 1, 2005 and their successors or assignees. Rural electric cooperatives were specifically exempted from the bill, with one exception. A cooperative that has 5,000 or more customers is responsible for implementing and enforcing a renewable energy standard that "recognizes the intent of the legislature to encourage new renewable energy production and rural economic development".[6]

In 2007, the Montana Legislature passed and approved House Bill No. 681 (Chapter 246, Laws 2007) which, in addition to public utilities, required competitive electricity suppliers to meet the standard. Competitive electricity suppliers include any person, corporation, or governmental

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[5]Testimony proved by the Montana Large Customer Group on April 11, 2005 before the House Federal Relations Energy and Telecommunications Committee of the Montana Legislature.

[6]69-3-2008, Montana Code Annotated.

entity that is selling electricity to small customers at retail rates in the state of Montana and that is not a public utility or cooperative. In 2009, the Legislature once again revisited competitive electricity suppliers. With passage of House Bill No. 179 (Chapter 118, Laws 2009), governmental entities selling electricity produced only by facilities generating less than 250 kilowatts that were in operation prior to 1990 were exempted from the RPS.

In 2013, the Montana Legislature passed and approved two additional pieces of legislation that change what entities are subject to Montana's RPS. Senate Bill No. 164 (Chapter 73, Laws 2013) exempted public utilities serving 50 or fewer retail customers in Montana on December 31, 2012 from Montana's RPS. In addition, Senate Bill No. 327 (Chapter 197, Laws 2013) exempted competitive electricity suppliers serving four or fewer customers from Montana's RPS. **Appendix A** shows the evolution of the entities subject to the standard from 2008 through 2012. The impact of the 2013 legislation on the entities subject to the RPS is also noted on the chart.

What is renewable?

To meet the standard, utilities and competitive electricity suppliers are required to procure renewable energy from renewable resources along with renewable energy credits (RECs). Before entering into a long-term contract to purchase RECs, with or without the associated electricity, a utility must petition the PSC to certify that the RECs were produced by an eligible renewable resource.

Public utilities and competitive suppliers meet Montana's standard by entering into long-term contracts for electricity and RECs, by purchasing RECs separately, or by a combination of both. For utilities operating in Montana within the geographic boundaries of the Western Electricity Coordinating Council, all RECs used to comply with the standard are generally tracked and verified through the Western Renewable Energy Generation Information System (WREGIS). For public utilities operating in Montana within the geographic boundaries of Midwest Reliability Organization, all RECs used to comply with the standard are tracked and verified through the Midwest Renewable Energy Tracking System (MRETS). One supplier has been approved to use both systems. A portion of the SJ 6 study will include a discussion of RECs in Montana. In addition, the ETIC is charged with reviewing REC reports in accordance with 69-3-2009, MCA.

The RPS also includes specific requirements for utilities to use community renewable energy projects referred to as CREPs, defined, originally, as renewable energy projects less than or equal to 5 megawatts where local owners had a controlling interest. Beginning in 2010, public utilities would have been required to purchase both the RECs and the electricity from CREPs totaling at least 50 megawatts in nameplate capacity. Beginning 2015, that increases to at least 75 megawatts in nameplate capacity.

In the future, additional information about the development of CREPs in Montana's RPS will be compiled. A few pieces of legislation should, however, be noted. In 2009, the definition of a CREP was altered by the passage of House Bill No. 207 (Chapter 30, Laws 2009) which increased the size of CREPs from 5 megawatts to 25 megawatts. House Bill No. 208 (Chapter 31, Laws 2009) also extended the deadline for meeting the CREP requirement from 2010 to

2012. The third change was included in House Bill No. 343 (Chapter 232, Laws 2009), which allowed public utilities to own CREPs.

What is determined to be a renewable resource under Montana law has also changed over time. Originally the legislation included facilities either located within Montana or delivering electricity from another state into Montana that commenced commercial operation after January 1, 2005. Facilities must produce electricity from wind; solar; geothermal; water power, in the case of a hydroelectric project that does not require a new appropriation, diversion, or impoundment of water and that has a nameplate rating of 10 megawatts or less; landfill or farm-based methane gas; gas produced during the treatment of wastewater; low-emission, nontoxic biomass; hydrogen derived from any of the sources noted above for use in fuel cells; and the renewable energy fraction from the sources identified above of electricity production from a multiple-fuel process with fossil fuels.

This definition first changed in 2009, with the passage of House Bill No. 343 (Chapter 232, Laws 2007) The legislation made a number of changes in the administration of the standard and also revisited the definition of a renewable resource. The legislation allows up to 15 megawatts installed at an existing reservoir or on an existing irrigation system that did not have hydroelectric generation as of April 16, 2009 and compressed air derived from renewable resources and forced into an underground storage reservoir and later released, heated, and passed through a turbine generator to be considered a renewable resource for meeting the RPS.

In 2013, the Legislature also revised the definition of a renewable resource. Senate Bill No. 45 (Chapter 361, Laws 2013) was passed and approved, allowing expansions of an existing hydroelectric project that commence construction and increase existing generation capacity after April 2013 to be included in the RPS. Senate Bill No. 106 (Chapter 259, Laws 2013) was passed and approved, adding flywheel storage, hydroelectric pumped storage, and batteries to the mix. Senate Bill No. 325 (Chapter 328, Laws 2013) made one additional change, allowing wood pieces that have been treated with chemical preservatives, such as creosote, pentachlorophenol, or copper-chrome arsenic, and that are used at a facility that has a nameplate capacity of 5 megawatts or less to be included in Montana's RPS.

Appendix B captures the renewable resources that have been used by public utilities and competitive electricity suppliers in order to meet the Montana RPS requirements. Future reports will examine the generation resources individually and analyze their relationship to the specific requirements of Montana's RPS.

Appendix A

2008 RPS Compliance Year[7]			
Public Utilities			
	REC's Needed	**Facilities**	**Status**
NorthWestern Energy	296,696	Judith Gap	✓[8]
Montana-Dakota Utilities	34,718	Diamond Willow I	✓
Black Hills	1,490	Happy Jack	✓
Avista			Paid fee: $153
Competitive Electricity Suppliers			
	REC's Needed	**Facility**	**Status**
PPL Treasure State	4,058	Judith Gap	✓
Electric City Power			Paid fee: $23,260
Electricity Suppliers (Reports filed with PSC, but supplier is not subject to the RPS)			
Conoco Phillips			
Powerex			
Hinson Power			
PPL Energy Plus			
Western Area Power Administration			

[7]Utilities and competitive electricity suppliers were required to acquire renewable energy equal to 5% of their retail sales of electricity in Montana in compliance years 2008 and 2009.

[8]The checkmark shows that the utility or supplier met PSC and statutory requirements.

2009 RPS Compliance Year			
Public Utilities			
	REC's Needed	**Facilities**	**Status**
NorthWestern Energy	298,759	Judith Gap	✓
Montana-Dakota Utilities	34,717	Diamond Willow I	✓
Black Hills	1,985	Happy Jack	✓
Avista			Paid fee: $219
Competitive Electricity Suppliers			
	REC's Needed	**Facility**	**Status**
PPL Treasure State	4,058	Klondike Wind III	✓
Electric City Power	6,720	Klondike Wind III	✓
Conoco Phillips			Paid fee:$69,400
Electricity Suppliers (Reports filed with PSC, but supplier is not subject to the RPS)			
Powerex			
Hinson Power			
PPL Energy Plus			

2010 RPS Compliance Year[9]			
Public Utilities			
	REC's Needed	**Facilities**	**Status**
NorthWestern Energy	583,403	Judith Gap[10]	✓
Montana-Dakota Utilities	70,040	1.Diamond Willow I 2.Cedar Hills	✓
Black Hills	4,663	Happy Jack	✓
Avista			Paid fee: $550
Competitive Electricity Suppliers			
	REC's Needed	**Facility**	**Status**
PPL Treasure State	7,712	Klondike Wind III	✓
Electric City Power			Paid fee:$99,120
Conoco Phillips	13,108	Klondike Wind III	✓
Electricity Suppliers (Reports filed with PSC, but supplier was not subject to the RPS)			
Powerex			
Hinson Power			
Idaho Power			
PPL Energy Plus			

[9]Utilities and competitive electricity suppliers are required to acquire renewable energy equal to 10% of their retail sales of electricity in Montana in compliance years 2010 through 2014.

[10]NorthWestern Energy also acquired credits from Klondike Wind III, however, after an error in accounting for RECs was made, only credits from Judith Gap were necessary to meet the standard.

2011 RPS Compliance Year			
Public Utilities			
	REC's Needed	**Facilities**	**Status**
NorthWestern Energy	577,561	Judith Gap	✓
Montana-Dakota Utilities	71,151	1.Diamond Willow I 2.Cedar Hills	✓
Black Hills	4,964	Happy Jack	✓
Avista			Paid fee: $481
Competitive Electricity Suppliers			
	REC's Needed	**Facility**	**Status**
PPL Treasure State	12,394	Diamond Willow I	✓
Electric City Power	13,823	Happy Jack	✓
Conoco Phillips	11,931	Klondike Wind III	✓
Electricity Suppliers (Reports filed with PSC, but supplier was not subject to the RPS)			
Powerex			
Hinson Power			
Independent Electricity[11]			
PPL Energy Plus			

[11]Independent Electricity Supply Service Inc was determined not to be a competitive electricity supplier but purchased 3,162 credits from the Bonneville Power Administration that could be applied toward the 2012 compliance year. Independent Electricity purchased wholesale power solely from Southern Montana Electric Generation and Transmission Cooperative. With the bankruptcy of Southern Montana and appointment of a trustee, the REC requirement of Independent is unclear.

2012 RPS Compliance Year						
Public Utilities						
	REC's Needed	**Facilities**	**Status**	**CREP[12]**	**Facilities**	**Status**
NorthWestern Energy	592,007	1.Judith Gap 2.Spion Kop 3.Lower South Fork[13]	✓	44 MW	1.Gordon Butte 2.Turnbull	✓[14]
Montana-Dakota Utilities	74,756	1.Diamond Willow I 2. Cedar Hills	✓	5.6 MW	1. Diamond Willow I 2.Cedar Hills	✓
Black Hills	5,082	Happy Jack	✓	.355 MW		Waiver Granted[15]
Avista[16]			Paid fee: $634	.045 MW		✓[17]
Competitive Electricity Suppliers						

[12]Beginning in 2012, public utilities were required to purchase both credits and electricity output from community renewable energy projects (CREPS) that total at least 50 megawatts in nameplate capacity. Community renewable energy projects are locally owned and 25 megawatts or less. Public utilities proportionately allocate the CREP purchase required based on each public utility's retail sales in Montana in the calendar year 2011.

[13]NorthWestern Energy is requesting that the PSC certify the Lower South Fork Hydroelectric project as a CREP.

[14]NorthWestern Energy acquired 22.6 megawatts of CREP power. The PSC granted the utility a one year waiver from acquiring the remaining 21.4 megawatts.

[15]With the passage of Senate Bill No. 164 by the Montana Legislature, Black Hills is no longer subject to Montana's RPS or the CREP requirements.

[16]With the passage of Senate Bill No. 164 by the 2013 Montana Legislature, Avista is no longer subject to Montana's RPS or the CREP requirements.

[17]The fee paid includes both a penalty for neither meeting the RPS nor the CREP.

	REC's Needed	Facility	Status			
PPL Treasure State	20,406	Diamond Willow I	✓			
Electric City Power	9,587	Klondike Wind III	✓			
Conoco Phillips[18]	12,347	Klondike Wind III	✓			
Electricity Suppliers (Reports filed with PSC, but supplier was not subject to the RPS)						
Powerex						
Independent Electricity[19]						
PPL Energy Plus						

Appendix B

[18]With the passage of Senate Bill No. 327, Conoco Phillips is no longer subject to Montana's RPS.

[19]See footnote #5.

Eligible Renewable Resources and Community Renewable Energy Projects						
Project	**Type**	**Size (MW)**	**Location**	**Owner**	**Certified**	**CREP**
Diamond Willow I	Wind	19.5	Fallon County, MT	MDU	2007	Yes
Happy Jack	Wind	30	Laramie County, WY	Duke Energy	2009	No
Judith Gap	Wind	135	Wheatland County, MT	Invenergy	2009	No
Wastewater Treatment Plant	Cogen	.35	Great Falls, MT	City of Great Falls	2009	No
Turnbull	Hydro	13	Teton County, MT	Turnbull Hydro, LLC	2010	Yes
Klondike III	Wind	200	Sherman County, OR	Klondike Wind Power III, LLC	2010	No
Gordon Butte	Wind	9.6	Meagher County, MT	Gordon Bute Wind, LLC	2011	Yes
Spion Kop	Wind	40	Judith Basin County, MT	NorthWestern Energy	2012	No
Silver Sage	Wind	42	Laramie County, WY	Silver Sage Windpower	2012	No
Cedar Hills	Wind	19.5	Bowman County, ND	MDU	2012	Yes
Lower South Fork	Hydro	.455	Carbon County, MT	Lower South Fork Hydro	2012	Pending
Diamond Willow II	Wind	10.5	Fallon County, MT	MDU	2013	Yes
Musselshell 2	Wind	10	Wheatland County, MT	Musselshell Wind Project	Pending	No
Musselshell 1	Wind	10	Wheatland County, MT	Musselshell Wind Project	Pending	No
Flint Creek	Hydro	2	Granite County, MT	Flint Creek Hydroelectric	Pending	No