MONTANA-DAKOTA
UTILITIES CO.
A Division of MDU Resources Group, Inc.

400 North Fourth Street
Bismarck, ND 58501
(701) 222-7900

October 25, 2012

Ms. Kate Whitney, Administrator
Utility Division
Montana Public Service Commission
1701 Prospect Avenue
Helena, MT 59620

Re: Certification of Eligible Renewable Resources and Community Renewable Energy Resources
Docket No. D2012.3.24

Dear Ms. Whitney:

Enclosed please find Montana-Dakota Utilities Co.'s responses to the Montana Public Service Commission's data requests dated October 15, 2012. Responses to the requests, numbered PSC-005 through PSC-024, are attached.

Please acknowledge receipt by stamping or initialing the duplicate copy of this letter attached hereto and returning the same in the enclosed self-addressed, stamped envelope.

Sincerely,

Tamie A. Aberle
Director of Regulatory Affairs

Attachments

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
DATA REQUEST
DATED OCTOBER 15, 2012
DOCKET NO. D2012.3.24

PSC-005

Regarding: Diamond Willow Phasing Rationale
Witness: Neigum

On page 6 of your testimony you state, "The site was in an advanced development stage with enough land leases and available transmission capacity to support a 30 MW project," and "Montana Dakota deemed it prudent and cost effective to obtain MISO approval of a 30 MW interconnection at that location." Please provide documentation from before or during the time frame in which this decision was made which describes the rationale as to why Diamond Willow was constructed in two phases, as opposed to just a single phase.

Response:

Diamond Willow was considered a 20 MW project from the onset. See Page iii of the Executive Summary to the 2007 Montana-Dakota Utilities Co. Integrated Resources Plan designated as Montana Public Service Commission Docket N2007.5.50 where the results of the 2007 IRP indicate Diamond Willow as a 20 MW project. Also refer to Page 2 of the "Environmental Considerations section of the 2007 IRP as follows:

"In 2006 the Montana legislature passed a law requiring the purchase of renewable energy up to fifteen percent of a utility's retail energy in Montana by 2015. The legislation requires five percent by 2008, another five percent by 2010, and the remaining five percent by 2015. Montana-Dakota is in the process of constructing a 20 MW wind farm near Baker, Montana (known as the Diamond Willow Wind Farm) to meet the first two phases of the Montana requirement, and will be installing an additional 10 MW in 2014 to meet the third phase."

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
DATA REQUEST
DATED OCTOBER 15, 2012
DOCKET NO. D2012.3.24

PSC-006

Regarding: Public Documentation on Diamond Willow
Witness: Neigum

a. Please provide documentation, including correspondence, testimony before the Montana PSC or elsewhere, press releases, media statements, and any other source, that refers to the planned or expected capacity of Diamond Willow.

b. Please provide documentation, including correspondence, testimony before the Montana PSC or elsewhere, press releases, and media statements that refers to Diamond Willow being built in phases.

Response:

a. Diamond Willow was specifically proposed to the Montana Public Service Commission as a 19.5 MW facility, and was approved by the Montana Public Service Commission as a 19.5 MW facility. On February 26, 2007, Montana-Dakota filed a Petition with the Commission for advance certification of Diamond Willow as an eligible renewable resource under Montana's Renewable Power Production and Rural Economic Development Act. The petition for advance certification was filed because there was a high demand for wind turbines at the time, and Montana-Dakota had to make a multi-million dollar advancement payment to lock in a price for the thirteen 1.5 MW wind turbines being purchased to build the wind farm. Nine days later, on March 7, 2007, the Commission issued a Notice of Commission Action certifying Diamond Willow as a 19.5 MW eligible renewable resource. Both Montana Dakota's Petition, and the Commission's Notice of Commission Action are official records of the Commission publicly available on the Commission's own website. For the convenience of the Commission, copies of the Petition and Notice are provided as Response No. 6 Attachment A.

b. Montana-Dakota did not need or seek the approval of the Montana Commission to build a second wind farm at Diamond Willow. When it decided to do so, it naturally named the original 19.5 MW wind farm as Diamond Willow I (also referred to in this Docket as Diamond Willow 1), and the second wind farm, built two years later, Diamond Willow II (also referred to in this Docket as Diamond Willow 2).

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA
* * * * *

IN THE MATTER OF the Petition of Montana-Dakota Utilities Co., for Certification of a 19.5 Mw Wind Farm to be Located in Fallon County, Montana, as an Eligible Renewable Resource	)))))	UTILITY DIVISION DOCKET NO. _____

PETITION OF MONTANA-DAKOTA UTILITIES CO. FOR CERTIFICATION OF AN ELIGIBLE RENEWABLE RESOURCE (Expedited Ruling Requested)

Montana-Dakota Utilities Co. a Division of MDU Resources Group, Inc. ("Montana-Dakota"), pursuant to the provisions of the Montana Renewable Power Production and Rural Economic Development Act ("Renewable Act"), Sections 69-8-1001 *et seq.* Mont. Code Ann., and the Commission rule implementing the Renewable Act, ARM 38.5.8301, petitions the Commission for certification of a 19.5 megawatt wind farm to be located in Fallon County, Montana ("The Project") as an Eligible Renewable Resource. In support of its Petition, Montana-Dakota respectfully shows as follows.

1. Montana-Dakota is a combination electric and gas utility and generally subject to the regulatory jurisdiction of the Commission under Title 69 of the Montana Code Annotated.

2 The Renewable Act, which is part of Title 69 of the Montana Code Annotated, requires the electric utilities subject to the jurisdiction of the Commission to acquire certain amounts of eligible renewable energy as defined at Section 69-8-1003(6), Mont. Code Ann.

3. Montana-Dakota has conducted a renewable resource solicitation, to which six proposals have been offered in response. Two of those proposals would be located west of the Miles City DC intertie between the western (WSCC) and mid-western (MAPP) power grids, one proposal would be located in North Dakota, and three proposals would be

located in Montana and east of the Miles City DC intertie.

4. Montana-Dakota has selected the Project as the best cost option.

5. The Project will be a 19.5 megawatt wind farm located in Fallon County, Montana, near the town of Baker. It will be physically located within the territorial boundaries of the State of Montana, and will be interconnected to Montana-Dakota's electric transmission system in Montana, on the Little Beaver 57Kv transmission line.

6. The developer of the Project has offered it to Montana-Dakota on an ownership basis. Under the proposal, Montana-Dakota will finance the project, and directly purchase the required wind turbines. Upon completion of the Project, it will owned by Montana-Dakota

7. As the owner of the Project, Montana-Dakota will control the disposition of the associated Renewable Energy Credits (RECs), as defined in the Renewable Act, and will use the power from the Project, and the associated RECs, to satisfy is procurement obligations under the Renewable Act.

8. Under the Renewable Act, specifically Mont. Code Ann. § 69-8-1006(1)(b), and Commission rule ARM 38.5.8301(3), Montana-Dakota is entitled to an order of this Commission certifying the Project as an Eligible Renewable Resource. It will be physically located in Montana, and will provide renewable energy to Montana-Dakota in Montana, along with the associated RECs. It will commence commercial operation after January 1, 2005.

9. By letter dated February 16, 2007, Montana-Dakota has obtained a firm price quote from GE Energy on the wind turbines required for the Project ("Price Quote"). Obtaining the Price Quote was a necessary ingredient in finally determining that the Project was the best cost option for Montana-Dakota. However, the Price Quote is only effective if Montana-Dakota makes a multi-million dollar down payment on the required turbines on

March 7, 2007. A redacted version of the Price Quote is attached as Appendix 1.[1] The deadline for making the required down payment is specified in paragraph 6.

10. Montana-Dakota needs the requested certification of the Project as an Eligible Renewable Resource before it makes the multi-million dollar payment to GE Energy to lock in the Price Quote for the required wind turbines. In the absence of a Commission certification of the Project as an Eligible Renewable Resource, it makes no sense for Montana-Dakota to make the multi-million dollar payment required to lock in the Price Quote.

11. Montana-Dakota needs the certification requested herein on an expedited basis, no later than March 6, 2007.

WHEREFORE, Montana-Dakota requests the issuance of a Commission order, on or before March 6, 2007, determining that:

(1) The Project is an Eligible Renewable Resource as defined in § 69-8-1003(6), Mont. Code Ann.

(2) Power from the Project, together with the associated RECs, can be used to satisfy Montana-Dakota's procurement obligations under § 69-8-1004, Mont. Code Ann.

DATED this 26th day of February, 2007.

HUGHES, KELLNER, SULLIVAN & ALKE, PLLP

By: John Alke

John Alke
40 West Lawrence, Suite A
P.O. Box 1166
Helena, MT 59624-1166
ATTORNEYS FOR MONTANA-DAKOTA UTILITIES CO.

[1] The competition for wind turbines is currently fierce, and the Price Quote from GE Energy is considered proprietary by GE Energy. However, GE Energy has consented to Montana-Dakota providing the text of the Price Quote to the Commission as long as the price terms are redacted.

CERTIFICATE OF SERVICE BY MAIL

I HEREBY CERTIFY that a copy of the foregoing **PETITION OF MONTANA-DAKOTA UTILITIES CO. FOR CERTIFICATION OF AN ELIGIBLE RENEWABLE RESOURCE (EXPEDITED RULING REQUESTED)** was served upon the following by mailing a true and correct copy thereof on this 26th day of February, 2007, addressed as follows:

MONTANA CONSUMER COUNSEL
PO BOX 201703
HELENA MT 59620-1703

John Alke

GE Energy

Mark Eilers – Account Manager
Power Generation

Date: February 16, 2007

To: Mr. Duane Steen
Director, New Generation Development
Montana Dakota Utilities Company
400 North 4th Street
Bismarck, ND 58501

Subject: Firm Proposal for Montana Dakota Utilities 13-1.5 SLE project

References: OID – 700509

Dear Duane:

The undersigned, on behalf of General Electric Company (herein "GE Energy"), is pleased to submit to Montana Dakota Utilities our firm proposal number OID - 700509 (herein the "Proposal"), regarding the supply of Wind Turbine Generators ("WTG") as described in Item 1 below and related services (herein the "Services") for your 2008 Project.

GE Energy is one of the world's leading wind turbine manufacturers. With design and manufacturing facilities located in the U.S. and Europe, we offer variable speed wind turbine technology ranging from 1.5 MW to 3.6 MW. We also provide a full array of professional wind power capabilities including project design and layout, project management as well as operation and maintenance services.

1. Scope of Supply and Price

1.1 WTG Equipment

- All prices are in USD
- 13 GE Energy Model 1.5sle-60Hz WTG packages as described in Attachment 1 "Scope of Supply and Options" of this Proposal
- The price for the WTG equipment ex-works (not including services, transportation or options) shall be [redacted]

  The pricing for the various options offered with this Proposal are located in Attachment 1 "Scope of Supply and Options" of this Proposal. If selected, these options must be exercised by the deadlines stated therein.

  ZVRT is included in the WTG Equipment pricing above.

APPENDIX A

GE Energy
2201 France Ave S
Minneapolis, MN 55416
Western US Region

Phone 952-922-0798
Fax 952-922-0798
email mark.eilers@ge.com

GE Energy

Mark Eilers – Account Manager
Power Generation

1.2 Startup and Commissioning Services

These services are mandatory and are not included in the above pricing. The Services will consist of the following:

- Technical advisory support at the project site during Startup and Commissioning
- Site receiving supervision and inventory control for GE Energy scope of supply
- Supervision of use of specialized installation tools
- Commissioning of WTGs, WindSCADA, and WindCONTROL
- Two full sets of operations manuals on CD

Price - [redacted] per unit

The pricing is based on the following assumptions:

- Mechanical completion of each WTG must occur no later than two (2) weeks following delivery of said WTG to the Site
- Wind farm project size remain unchanged at 13 WTGs.
- WTG mechanical completion must be at a rate of 5 to 10 WTG's per week.
- Backfeed power and the grid must be available no later than three days prior to the commissioning of the first WTG at site
- A complete SCADA (fiber optic) network connection for each WTG has been provided
- Commercial operation for the wind farm is achieved no later than one (1) week following Turbine Completion of the last WTG
- Additional details regarding these startup and commissioning Services are located in the Special Conditions Appendix A Section 1 of this Proposal

1.3 Transportation

- Transportation is not included in the WTG Equipment pricing. Refer to Appendix A of Attachment 2 "Transportation Supplement" of this Proposal for transporation details.

Price - Transportation price will be quoted at [redacted]

2. Price Basis, Payment Terms and Termination Schedule

The pricing herein excludes, and Montana Dakota Utilities is responsible for: sales taxes and duties (including on replacement parts supplied under warranty or maintenance service), approvals, permits, change of orders, insurance, operations facilities, turbine foundations, turbine installation, electrical infrastructure, pad mount transformers, substation, roads, communication infrastructure, site security and all other items not specifically quoted above.

GE Energy
2201 France Ave S
Minneapolis, MN 55416
Western US Region
Phone 952-922-0798
Fax 952-922-0798
email mark.eilers@ge.com

GE Energy

Mark Eilers – Account Manager
Power Generation

The payment schedule and termination schedule are tabulated in Attachment 3 "Price, Payments and Termination Charges" of this Proposal. The payment schedule is predicated upon evidence of adequate payment security acceptable to GE Energy.

3. Schedule of Shipment and Title Transfer

All equipment offered herein is subject to prior sales.

Due to the volatility of material availability, the shipment schedule will be confirmed upon receipt of the following:

- The duly executed contract
- Complete technical scope and performance definition
- Receipt of Initial Payment as specified in the payment schedule

Title to all WTG components shall transfer to Montana Dakota Utilities in accordance with Attachment 3 "Price, Payments and Termination Charges" of this Proposal.

4. Warranty

GE Energy shall warrant each WTG and its associated Services on the terms set forth in the Special Conditions Appendix A Section 1 of this Proposal from the effective date of the Contract until the earlier of: (i) twenty-four (24) months after Turbine Completion of such WTG, or (ii) thirty (30) months after Delivery of the last Major Component of such WTG (the "Warranty Period"). The Equipment warranty does not include the cost of labor and material for the removal and reinstallation of the defective component. Any import duties or taxes assessed within the country of installation associated with replacement parts are to be borne by Montana Dakota Utilities.

5. Terms and Conditions of Sale

This Proposal is specifically based on the enclosed GE Energy Terms and Conditions.

GE Energy reserves the right to assign or novate the Startup and Commissioning Services and local procurement of equipment to one of its wholly owned affiliates.

6. Proposal Validity and Confidentiality

This Proposal is valid until March 7, 2007 and cannot be extended without written agreement of GE Energy. No oral representation of a validity extension will be binding on either party.

All equipment offered herein is subject to prior sales.

In the event that an acceptable letter of commitment ("LOC") together with a non-refundable down payment of ten percent of the anticipated Contract Price is received from Montana Dakota Utilities

GE Energy
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Phone 952-922-0798
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Power Generation

before the WTGs offered herein are committed elsewhere, then the WTGs offered herein shall be made not subject to prior sale and this Proposal shall be extended for contract closure on or before March 19, 2007.

In the event that a LOC is closed as specified above and either (i) final contract is not executed by March 19, 2007, or (ii) the payment security is not received by GE Energy on or before March 19, 2007, this Proposal shall expire.

If Montana Dakota Utilities expresses an interest to proceed along these lines, a draft LOC may be provided within one day of expression of interest.

Further, this Proposal is submitted in confidence for evaluation by Montana Dakota Utilities. Its contents are proprietary to GE Energy. By taking receipt of this Proposal, Montana Dakota Utilities agrees not to reveal its contents in whole or in part beyond those persons in its own organization necessary to properly evaluate this Proposal or to perform any resulting contract. Montana Dakota Utilities shall not reveal the contents of this Proposal to a third party or make copies of this Proposal without the prior written consent of GE Energy.

As the largest and most experienced wind energy company in the Americas, GE Energy, its subsidiaries and affiliates offer a fully integrated and technologically unmatched array of equipment, development, construction and operating expertise.

We sincerely appreciate the opportunity to provide you with this proposal and are available to discuss any issues and resolve them on a mutually acceptable basis as you progress through your evaluation. Please contact me at anytime, for assistance with our offering.

Very truly yours,

Mark Eilers – Account Manager

Attach: "Contract for the Sale of Power Generation Equipment and Related Services"
Appendix A, Section 1 - "Special Conditions"
Appendix A, Section 2 - "General Conditions"
Appendix A, Section 3 - "Definitions"
Attachment 1 - "Scope Of Supply"
Attachment 2 - "Schedule"
Appendix A of Attachment 2 "Transportation Supplement"
Attachment 3 - " Payment and Termination Schedule"
Attachment 4 - "Governing Law, Disputes and Limitation of Liabilities"

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GE Energy

Mark Eilers – Account Manager
Power Generation

Attachment 5 – "Guarantee Agreement"

cc:
Rafael Alcalde-Navarro - Commercial Leader
Scott Stalica - Commercial Director
Steve Swift – Regional Market Manager

GE Energy
2201 France Ave S

Minneapolis, MN 55416
Western US Region

Phone 952-922-0798
Fax 952-922-0798
email mark.eilers@ge.com

Service Date: March 7, 2007

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA
* * * * *

IN THE MATTER OF the Petition of Montana-Dakota Utilities Co. for Certification of a 19.5 Mw Wind Farm to be Located in Fallon County, Montana, as an Eligible Renewable Resource	)))))	UTILITY DIVISION DOCKET NO. D2007.2.23

NOTICE OF COMMISSION ACTION

On February 26, 2007, Montana-Dakota Utilities Co. (MDU) filed a Petition for Certification of an Eligible Renewable Resource (Petition), pursuant to the Montana Renewable Power Production and Rural Economic Development Act (Act), 69-8-1001 *et seq.*, MCA, and ARM 38.5.8301. In its Petition, MDU states that to comply with the Act, it intends to acquire a 19.5 megawatt wind project to be constructed in Fallon County, Montana, near the town of Baker.

The Act requires public utilities to satisfy a graduated renewable energy standard that starts at 5% of the public utility's retail electrical energy sales in Montana in 2008 and increases to 15% in 2015. Public utilities must use eligible renewable resources, as defined in § 69-8-1003(6), MCA, to satisfy the renewable energy standard. Section 69-8-1003(6), MCA, defines an eligible renewable resource, in relevant part, as "...a facility located within Montana...that commences commercial operation after January 1, 2005, and that produces electricity from ...(a) wind...." ARM 38.5.8301(3) states, in relevant part:

> Before entering into a long-term contract to purchase renewable energy credits, with or without associated electricity, for purposes of complying with the renewable resource standards, a public utility must petition the commission to certify that the renewable energy credits were produced by an eligible renewable resource. . . . [A] public utility's petition must contain sufficient information on the source of the renewable energy credits to allow the commission to determine whether the source is an eligible renewable resource.

In the Petition, MDU states that the project is to be constructed, will be physically located within the territorial boundaries of the state of Montana, will interconnect to MDU's electric transmission system, and will produce electricity from wind. MDU will finance the project and purchase the wind turbines. MDU states that once the developer completes construction of the project, MDU will own the project and control the disposition of the associated renewable energy credits. MDU states it will use the power generated by the project and the associated renewable energy credits to satisfy the standards in the Act.

In the Petition, MDU requests an expedited decision by the Commission because the turbine vendor requires a substantial deposit to lock-in the price of the turbines.

MDU did not request advanced approval of the Fallon County wind project.

The Commission finds that the Fallon County wind project, if built as described in the Petition, will be an eligible renewable resource and hereby certifies it as such.

The Commission's certification of the Fallon County wind project as an eligible renewable resource does not constitute a determination that MDU has achieved, or will achieve, compliance with the renewable energy standard. Nor does the Commission's certification of the Fallon County wind project as an eligible renewable resource constitute a determination that MDU's decision to acquire the Fallon County wind project

is prudent, that the resource will ultimately be used and useful or that any resource-related costs are recoverable in rates.

Done and dated this 6th day of March 2007, by a vote of 5 - 0.

BY THE MONTANA PUBLIC SERVICE COMMISSION

GREG JERGESON, Chairman
DOUG MOOD, Vice Chairman
BRAD MOLNAR, Commissioner
ROBERT H. RANEY, Commissioner
KEN TOOLE, Commissioner

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
DATA REQUEST
DATED OCTOBER 15, 2012
DOCKET NO. D2012.3.24

PSC-007

Regarding: IRPs on Diamond Willow
Witness: Neigum

Please provide copies of any pages from Montana-Dakota's Integrated Resource Plans that refer to Diamond Willow.

Response:

Please see Attachment A for excerpts from the 2007, 2009 and 2011 Integrated Resource Plans submitted to the Commission and docketed as N2007.5.50., N2009.9.122 and N2011.8.70 respectively.

1. Promote ENERGY STAR® refrigerators
2. Promote ENERGY STAR® freezers
3. Implement and promote interruptible rates in Montana and South Dakota
4. Promote residential central air conditioning cycling
5. Promote light-emitting diode (LED) exit lights
6. Promote commercial air conditioner cycling
7. Implement a refrigerator roundup program
8. Promote commercial high efficiency air conditioning
9. Promote high efficiency motors

The nine programs will provide an estimated non-coincident demand reduction of 13.8 MW upon full implementation.

The **supply-side analysis** is an evaluation process to determine the potentially feasible generation options applicable to Montana-Dakota's system. The potential options studied included Lignite Vision 21 Gascoyne, Big Stone II and Elk Run base load plants, other generic base load generation, as well as peaking and renewable generation options.

The **integration and risk** process considers the feasible supply-side and demand-side options to determine a 'least cost' resource expansion plan. Supply-side and demand-side options were allowed to compete against each other without bias based on the individual characteristics of the various options. Several scenarios were investigated to determine the robustness of the 'least cost' plan. The analytical tool used for the integration process was Strategist®, a capacity expansion program developed by NewEnergy Associates. The results of the integration and risk process are then considered as part of the overall decision in determining the best resource plan for Montana-Dakota and its customers.

The **results** of the integrated resource planning process for 2007, considering the computer modeling, scenario analysis, and risk assessment, consist of the addition of Big Stone II in 2012 as well as the implementation of 13.8 MW of additional demand side resources between 2008 and 2011. The following table presents Montana-Dakota's total resource by type and percent as it will be in 2012 upon implementation of the resources identified in this IRP.

Natural Gas/Oil Glendive 1 and 2 Miles City Williston	110.8 MW	(17%)
Wind Diamond Willow	20.0 MW	(3%)
Demand-side Conservation Interruptible	19.3MW	(3%)
Coal Heskett 1 and 2 Lewis and Clark Big Stone 1 and 2 Coyote	488.3 MW	(77%)

The 2007 IRP process and product (report and appendices) were enhanced with the participation of Montana-Dakota's IRP Public Advisory Group (PAG). The PAG has been a valuable tool within the IRP process since 1994. The 2007 advisory group was established at the beginning of the 2007 planning cycle and provided Montana-Dakota with input throughout the 2007 IRP process.

The 2007 IRP process also addresses the comments that the Montana Public Service Commission, the Montana Consumer Counsel, and the Montana Department of Environmental Quality submitted to Montana-Dakota as a result of their review of the 2005 Integrated Resource Plan.

farm built in North Dakota. However, the developer never built the wind farm and the contract was terminated. In 2005, Montana-Dakota entered into another power purchase agreement to purchase up to 31.5 MW of wind energy from a wind farm located near Java, South Dakota. However, that contract went into default in November 2006.

In 2006 the Montana legislature passed a law requiring the purchase of renewable energy up to fifteen percent of a utility's retail energy in Montana by 2015. The legislation requires five percent by 2008, another five percent by 2010, and the remaining five percent by 2015. Montana-Dakota is in the process of constructing a 20 MW wind farm near Baker, Montana (known as the Diamond Willow Wind Farm) to meet the first two phases of the Montana requirement, and will be installing an additional 10 MW in 2014 to meet the third phase.

Air Quality

All power generation owned or operated by Montana-Dakota complies with federal and state air quality requirements. In some cases it has been possible to exceed those requirements. For instance, Montana-Dakota has reduced emissions at the Heskett Station by installing a fluidized bed boiler on Unit 2 in 1987 which significantly reduced sulfur dioxide emissions.

The design of the proposed Big Stone II unit includes state of the art emission equipment as well as having a super-critical boiler and a joint scrubber with Big Stone I. Overall, when built, the Big Stone complex (Units I and II) will have fewer emissions then the existing Big Stone I plant.

Waste

The stoker boiler at Heskett Unit 1 has allowed the burning of waste tires, railroad ties, and tar sands from manufactured gas plant clean-up. Distressed corn, tires, and refuse derived fuels have also been burned at the jointly owned Big Stone Plant, of which Montana Dakota is a co-owner.

SF6 Reduction

Sulfur hexafluoride gas (SF6) has been used for many years in the industry as a means of arc suppression in high voltage circuit breakers. However, SF6 has been identified as a greenhouse gas. Montana-Dakota has replaced a number of high-volume and leaking SF6

CHAPTER 4

SUPPLY-SIDE RESOURCE ANALYSIS

The objective of the supply side analysis is to identify the available and most cost-effective supply-side resources to be added to Montana-Dakota's generating system. The resources must be proven technology and be able to maintain the system reliability that Montana-Dakota's customers have come to expect. The selected supply-side resources, together with the beneficial DSM programs are then used as input to the integration analysis, the final process to determine the least cost integrated resource plan.

The supply-side analysis considers all supply-side alternatives currently available to Montana-Dakota as well as those resources to which Montana-Dakota has made a commitment to install or purchase. A detailed discussion of the supply-side model assumptions, characteristics of the existing generation, the committed resources, and the proposed resources is included in Attachment C.

Committed Supply-Side Options

Existing Generation

Montana-Dakota's existing generation is comprised of base load generation at Heskett Station (Units I and II), Lewis & Clark, and its share of Coyote and Big Stone I, and peaking generation at Glendive (Units I and II), Miles City, and Williston. None of the existing generating units are scheduled for retirement during this planning period. Total summer capacity available from the existing units is 479.1 MW.

Montana Wind

In 2006 the Montana legislature passed a law requiring the purchase of renewable energy up to fifteen percent of a utility's energy sold in Montana. The legislation required five percent by 2008, an additional five percent by 2010, and the remaining five percent by

2015. The law also required some of the renewable energy to be obtained from Community Renewable Energy Projects (CREP's) starting in 2010 if cost effective. On October 1, 2006, Montana-Dakota issued a Request for Proposal (RFP) to secure wind energy resources to meet the Montana requirement. Five bids were received by October 27, 2006 and based on the analysis of the bids and interviews with the developers, Montana-Dakota chose to implement the self-build option at Baker, Montana proposed by Crown Butte Wind Power LLC (known as the Diamond Willow Wind Farm). The Montana Public Service Commission certified the project as meeting the intent of the law on March 6, 2007 and the initial 19.5 Mw of capacity is expected to be operational by the end of 2007. The remaining 10 MW of required capacity will be installed by 2015. Montana-Dakota anticipates issuing an RFP for approximately 1.5 MW of CREP's energy in 2008 for installation in 2009. The remaining 1.5 MW of CREP's would be installed in 2014. It is anticipated that the CREP installations will be significantly more costly then the 30 MW portion of the legislative requirement. The legislation does not require the installation of CREP if it is not cost effective; therefore, the CREP portion of the Montana legislation is not being included in this IRP.

Purchased Power

Montana-Dakota entered into an agreement with Excel Energy's operating company Northern States Power (NSP) in December 2005 for the purchase of peaking capacity for the following summer seasons:

- 2007 Summer – 85 MW
- 2008 Summer – 90 MW
- 2009 Summer – 95 MW
- 2010 Summer – 100 MW

In April 2007, Montana-Dakota was negotiating with NSP to purchase an additional ten megawatts of summer peaking capacity for 2007 through 2012. The purpose of the additional capacity purchase is to cover the potential impacts on peak demand associated with hot summer weather as determined using the 90/10 forecast probability. In the event that Montana-Dakota does not meet the MAPP required fifteen percent reserve capacity

Generic Integrated Gasification and Combined Cycle (IGCC)

IGCC units are a new technology that is touted as having the ability to allow CO2 capture more easily. In an IGCC unit, coal is gasified and injected into a combined cycle arranged unit. There are a number of IGCC plants in operation in the world, but most of the units are not of a sufficient size, nor is the technology developed sufficiently, to make the technology commercially competitive with conventional base load generation without some form of governmental subsidy. IGCC units have high capital costs because of the gasification plant required at the front end of the process. IGCC units are projected to have moderate energy costs.

Generic Wind

In addition to the Diamond Willow Wind Farm, generic wind generation was also allowed to compete to be the least cost resource. Wind is characterized as having high installation costs, but very low energy costs, since there is no cost for the wind, only some operating and maintenance costs. However the disadvantage of wind is that it is considered an intermittent resource because of its variability. Therefore, the installation of wind requires some other generation to produce energy during times of less than desirable wind conditions.

5. Interruptible Demand Response rates
6. High-Efficiency Commercial Motor rebates
7. High-Efficiency Commercial Air Conditioner rebates
8. Commercial Lighting Retrofit rebates
9. Residential New Construction Bundle rebates
10. Residential Lighting program

The ten programs will provide an estimated non-coincident demand reduction of 22.7 MW upon full implementation.

The **supply-side analysis** is an evaluation process to determine the potentially feasible generation options applicable to Montana-Dakota's system. The latest resource added to Montana-Dakota's system is the Glen Ullin Station 6 waste heat unit that came on-line in July 2009. Montana-Dakota has considered resources committed to, but not on-line yet as part of the existing generation portfolio. Those resources that have been committed to but not yet commercially available include: Big Stone Unit II expected to come on-line in June 2015, an addition to the existing Diamond Willow wind farm expected to come on-line the fourth quarter of 2010, and the Cedar Hills wind farm expected to come on-line the fourth quarter of 2010. The potential options studied included combustion turbines, combined cycle units, coal-fired units, wind generation, and purchased power.

The **integration and risk** process considers the feasible supply-side and demand-side options to determine a least-cost resource expansion plan. A number of scenarios were investigated to determine the sensitivity of the least-cost plan to several factors that may impact the expansion plan. The analytical tool used for the integration process was the Electric Generation Expansion Analysis System (EGEAS), a capacity expansion program developed by the Electric Power Research Institute. The results of the integration and risk process are then considered as part of the overall decision in determining the best resource plan for Montana-Dakota and its customers.

The **results** of the supply-side and integration analysis indicate that the least-cost resource plan for Montana-Dakota consists of the following resources in addition to the existing generation portfolio and the committed new resources described above:

CHAPTER 1

ENVIRONMENTAL CONSIDERATIONS

MDU Resources Group, Inc's Corporate Environmental Statement states:

> *"Our company will operate efficiently to meet the needs of the present without compromising the ability of future generations to meet their own needs. Our environmental goals are:*
>
> - *To minimize waste and maximize resources;*
> - *To support environmental laws and regulations that are based on sound science and cost-effective technology; and*
> - *To comply with or exceed all applicable environmental laws, regulations and permit requirements".*

Montana-Dakota strives to maintain compliance and operate in an environmentally proactive manner, while taking into consideration the cost to customers. Montana-Dakota has been involved with renewable energy analysis for many years. Montana-Dakota's commitment to environmental stewardship is evidenced as follows:

Wind Resources

Montana-Dakota has been involved in wind studies and projects for over fifteen years. Since 1993, when the Company first participated in the development of a regional wind monitoring network, a "green power" program was offered to our customers and the Company was involved in two power purchase agreements with wind developers in North Dakota. The wind projects did not come to fruition due to contractor default, and the "green power" program was not implemented because there were not enough customers willing to sign up to cost-effectively implement the program.

Montana-Dakota constructed a 19.5 MW wind farm near Baker, Montana, named Diamond Willow Wind Farm; this was commercially available in February 2008. Montana Dakota will be installing an additional 10 MW at the Diamond Willow location in 2010.

Montana-Dakota is also constructing a 19.5 MW wind farm near the town of Rhame, in the southwest corner of North Dakota named the Cedar Hills Wind Farm.

The Diamond Willow and Cedar Hills wind projects will serve to meet all or a portion of the renewable standards/objectives applicable in Montana, North Dakota and South Dakota.

Air Quality

All power generation owned or operated by Montana-Dakota complies with federal and state air quality requirements.

Montana-Dakota has been an active sponsor of research on technology that removes mercury from lignite-based electric generation facilities. Montana-Dakota's Lewis & Clark Station in Sidney, Montana conducted testing in the summers of 2007 and 2008 to assess a variety of mercury removal products and equipment. As required by the Montana Department of Environmental Quality, Lewis & Clark Station will install an activated carbon and oxidizing agent injection system to reduce its mercury emissions by approximately ninety percent starting in 2010.

The design of the proposed Big Stone Unit II unit includes state of the art emission equipment as well as a super-critical boiler and a joint scrubber with Big Stone I. Overall, when operational, the Big Stone complex (Units I and II) will produce fewer emissions than the existing Big Stone I plant does alone today.

Waste Heat Recovery

Montana-Dakota has constructed a 7.5 MW organic Rankine cycle unit on the Northern Border Pipeline near the town of Glen Ullin, in central North Dakota. The Glen Ullin Station 6 waste heat unit uses high temperature exhaust gas (which is currently wasted to the atmosphere) from a combustion turbine as the primary heat source. The exhaust gas will pass through a large heat exchanger to heat a thermal oil heat transfer fluid before being discharged to the atmosphere. The heated thermal oil will then pass through a number of additional heat exchangers to superheat an organic working fluid, which will expand through a turbine to generate electricity. Given that waste heat is utilized as the "fuel" for this facility, no other types of fuel are required and therefore emissions are insignificant.

SF6 Reduction

Sulfur hexafluoride gas (SF6) has been used for many years as a means of arc suppression in high voltage circuit breakers. However, SF6 has been identified as a greenhouse gas. Montana-Dakota is a participant in the EPA's voluntary "SF6 Emission Reduction Partnership," helping to

CHAPTER 4

SUPPLY-SIDE RESOURCE ANALYSIS

The objective of the supply side analysis is to identify the available and most cost-effective supply-side resources to be added to Montana-Dakota's generating system. The resources must be proven technology and be able to maintain the system reliability that Montana-Dakota's customers have come to expect. The selected supply-side resources, together with the feasible Demand Side Management (DSM) programs are then used as input to the integration analysis, the final process to determine the least-cost integrated resource plan.

The supply-side analysis considers all supply-side alternatives currently available to Montana-Dakota as well as those resources to which Montana-Dakota has made a commitment to install or purchase. A detailed discussion of the supply-side model assumptions, characteristics of the existing generation, the committed resources, and the proposed resources is included in Attachment C.

Committed Supply-Side Options

Existing Generation

Montana-Dakota's existing generation is comprised of base load generation at Heskett Station (Units I and II), Lewis & Clark, and Montana-Dakota's shares of Coyote station and Big Stone Unit I, and peaking generation at Glendive (Units I and II), Miles City, and Williston. Montana-Dakota also has the Diamond Willow Wind Farm, a diesel unit in Glendive, and the Glen Ullin Station 6 waste heat unit. Coming on-line in July 2009, the Glen Ullin unit takes the waste heat produced from a compressor station, located along the Northern Border natural gas pipeline near Glen Ullin, North Dakota, to produce energy. Williston is modeled in EGEAS to be retired with the addition of the next non-purchase resource after 2010. Total summer capacity available from the existing units is 486.9 MW.

Big Stone Unit II

Montana-Dakota has been participating in the development of the proposed jointly-owned Big Stone Unit II project. The project involves the construction of a nominal 580 MW base load, super critical sub-bituminous-fired plant planned to be on-line in 2015. The current co-owners are:

- Central Minnesota Municipal Power Agency,
- Heartland Consumers Power District,
- Missouri River Energy Services,
- Montana-Dakota Utilities Co., and
- Otter Tail Power Company.

Montana-Dakota's expected capacity share of the unit would be not more than 22.58 percent or 131 MW. The final joint decision to construct Big Stone Unit II has not yet been made, but the Company's intentions are to participate, and as all its major permits to construct have been approved, Big Stone Unit II was considered a committed unit in the EGEAS model.

Montana and North Dakota Wind

In December 2008, Montana-Dakota announced plans to develop a 19.5 MW wind farm located approximately five miles west of Rhame, North Dakota; this new farm is to be named Cedar Hills.

Montana-Dakota also announced an expansion of the Diamond Willow wind farm by an additional 10.5 MW. This would increase the capability of Diamond Willow to 30 MW, which would meet the requirements of Montana law regarding the purchase of renewable energy up to 15 percent of a utility's energy sold in Montana.

North Dakota legislature has enacted a renewable objective that recommends the purchase of renewable energy up to ten percent of a utility's energy sold in North Dakota by 2015.

Generic Wind

In addition to the Diamond Willow and Cedar Hills wind farms, generic wind generation was also allowed to compete with other future resource options. Wind is characterized as having high installation costs, but very low energy costs, since there is no cost for the fuel (wind), only operating and maintenance costs. Also, a $20/MWh (after tax) Production Tax Credit, which was modeled as a negative variable O&M, was assumed to be in effect for wind generation until 2012. However, the disadvantage of wind is that it is an intermittent resource because of its variability. Therefore, the installation of wind requires other additional resource to produce energy during times of less than desirable wind conditions.

Purchased Power

Purchased power alternatives were assumed available for the 2011-2014 time period. Montana-Dakota issued a request for proposal (RFP) on December 22, 2008 for power during this period until Big Stone Unit II comes on line. Based on the responses to the RFP, purchased power was modeled on an annual basis, as opposed to the summer season only, for the 2012-2014 time period.

Load and Capability

Existing and Committed Resources

The need for any type of new resource, whether it is a supply-side resource or the implementation of demand-side programs, is primarily driven by the forecast of the peak demand and energy needs of customers. In addition, the retirement of aging and high maintenance existing facilities will also trigger the need for new resources. At present, Montana-Dakota is modeling the retirement of the Williston turbines with the next non-purchase resource addition beyond 2010.

As the result of its integrated resource planning efforts, including the supply-side and integration analysis in this IRP and its request for proposal issued on December 22, 2008, Montana-Dakota will be extending the NSP contract for the 2011 summer season and purchasing capacity from WE Energies in the 2012-2014 time period to meet the increasing demand for electricity by its customers. For an understanding of Montana-Dakota's capability to serve the projected loads, a comparison of its summer accredited capability and peak load obligation is shown in Table 4-1.

CHAPTER 7

TWO-YEAR ACTION PLAN

This section of the report provides the two-year action plan resulting from the present IRP. The plan describes the specific activities that Montana-Dakota intends to implement for its long-range integrated resource plan.

Load Forecasting

- Montana-Dakota will continue to review its load forecasting assumptions and inputs as part of its routine process.
- Montana-Dakota will continue to evaluate the accuracy of its forecasts to determine the areas that need improvements.

Demand-Side Resources

- Montana-Dakota expects to implement the ten DSM programs identified in Chapter 3. As shown in Attachment B, the DSM implementation will include:
    - Continuation and enhancements of the five currently offered DSM programs
    - Implementation of the remaining three DSM programs identified in the 2007 IRP, and
    - Implementation of two new DSM programs.

Supply-Side Activities

- Montana-Dakota will continue to pursue ownership in Big Stone Unit II.
- Montana-Dakota will construct the addition to the existing Diamond Willow wind farm and the Cedar Hills wind farm.
- Montana-Dakota will exercise the option to extend an existing power purchase agreement with Northern States Power for the summer of 2011.
- Montana-Dakota will seek MAPP accreditation for the peaking capacity purchased from WE Energies to satisfy the condition of the WE Energies power purchase agreement for the 2012-2014 time period.
- Montana-Dakota will continue to investigate the feasibility of a 75 MW

period. Along with these resources are the committed resources: the expansion of Diamond Willow in 2010, Cedar Hills in 2010, the extension of the NSP contract to 2011, the WE Energies contract in the 2012-2014 time period, and Big Stone Unit II in 2015.

As identified by the demand-side analysis in Chapter 3, two new DSM programs, Residential Lighting and Residential New Construction Bundle, were found feasible. The DSM Analysis also assumes higher expected customer participations, compared to those predicted in the 2007 IRP, for the Residential Air Conditioner Cycling and Commercial Lighting programs. The impact of the two new programs and the incremental customer participation in the other two are bundled in a "New DSM Package."

When the "New DSM Package" was added as an additional resource option in the base case, it was selected to be implemented in 2010, taking until 2012 to reach its full customer participation. This DSM package lowered the NPV by about 2.5% from the base case. Compared to the base case, the expansion resource plan had the same amounts of purchase power requirements in 2011 (10 MW) and 2012 (120 MW), but 10 MW less in 2013 (120 MW) and 2014 (130 MW). The needed purchase capacity indicated by the resource expansion analysis (in the base case and all sensitivity runs) will be covered by the WE Energies contract for 110 MW in 2012, 115 MW in 2013, and 120 MW in 2014. The 75 MW combustion turbine is still needed in 2015 and, instead of the two 43 MW combustion turbines in 2021 and 2025, one 75 MW combustion turbine was selected in 2021.

The sensitivity scenarios indicate that the base case resource plan is very robust under all assumptions. Load growth makes a significant impact on the resource selection: As expected, the low-growth scenario indicates the need for less peaking capacity, while the high-growth scenario shows much more peaking capacity is needed than is shown in the base case plan. The high gas price scenarios also support the base case selections for capacity.

The cost of materials and labor as well as potential environmental costs put upward pressure on the cost estimates for both base load coal-fired units and combustion turbines. The scenario in which the installed cost of combustion turbines increased by 20 percent also selected the same capacity additions as in the base case.

The carbon tax scenarios show the economic impact of a tax on carbon on Montana-

resource option is the best choice for Montana-Dakota's customers. In this plan, Montana-Dakota is to purchase capacity between 2011 and 2014 and build two 75 MW combustion turbines in 2015 and 2021, in addition to the continuation and implementation of the ten DSM programs identified in Chapter 3 between 2010 and 2012. These DSM programs would amount to 22.2 MW of peak demand reduction. Along with these resources are the committed resources: the expansion of Diamond Willow in 2010, Cedar Hills in 2010, the extension of the NSP contract to 2011, the WE Energies contract for the 2012-2014 period, and Big Stone Unit II in 2015. Table 6-3 shows the capacity mix (in megawatts and percent) by fuel and unit type for 2010, 2015, and 2020 for the least-cost resource expansion plan.

Table 6-3:

Montana-Dakota's Capacity Mix (in MW and Percent) for the Least-Cost Resource Expansion Plan

Fuel/Unit Type	2010	2015	2020
Natural Gas/Peaking	113.7 (17%)	179.1 (24%)	179.1 (24%)
Purchased Power	112.8 (17%)	2.8 (0%)	2.8 (0%)
Variable Generation	57.5 (9%)	57.5 (8%)	57.5 (8%)
Demand-Side/Interruptible	7.6 (1%)	22.7 (3%)	22.7 (3%)
Fossil/Base Load	368.7 (56%)	499.7 (66%)	499.7 (66%)

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- Montana-Dakota will continue to review its load forecasting assumptions and inputs as part of its routine process.
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- Montana-Dakota expects to implement the ten DSM programs identified in Chapter 3. As shown in Attachment B, the DSM implementation will include:
    - Continuation and enhancements of the five currently offered DSM programs
    - Implementation of the remaining three DSM programs identified in the 2007 IRP, and
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Supply-Side Activities

- Montana-Dakota will continue to pursue ownership in Big Stone Unit II.
- Montana-Dakota will construct the addition to the existing Diamond Willow wind farm and the Cedar Hills wind farm.
- Montana-Dakota will exercise the option to extend an existing power purchase agreement with Northern States Power for the summer of 2011.
- Montana-Dakota will seek MAPP accreditation for the peaking capacity purchased from WE Energies to satisfy the condition of the WE Energies power purchase agreement for the 2012-2014 time period.
- Montana-Dakota will continue to investigate the feasibility of a 75 MW

1. Analysis Method

A computer model called Electric Generation Expansion Analysis System (EGEAS) version 9.02, developed by the Electric Power Research Institute (EPRI), is used to perform the resource expansion analysis and develop the least-cost integrated resource expansion plan. The analysis included various scenarios based on the load forecasts, availability of resources, and economic variables. Each of the scenarios constituted a resource expansion plan unique to the assumptions used in that scenario. The resource expansion analysis minimized the present worth of revenue requirements (PWRR), or net present value (NPV), over fifty years by using an algorithm called "dynamic programming." The dynamic program in EGEAS calculated each scenario one year at a time to satisfy the reliability constraints and to fulfill the forecasted energy and capacity requirements. For each year, this process identified all possible states that satisfied the reliability requirements. Finally, each year was combined to determine the least-cost plan.

The base year used in the resource expansion analysis was 2008 with the study period starting in 2009. This means that the costs indicated in this report are in 2008 dollars, unless specified. The study was run over a 20-year period (2009-2028) in which new resources are allowed to be added to meet the forecasted load growth and compensate for unit retirements. To model unused capital investment of the resources installed during the study period, an additional 30 years, called the extension period, was added. During this extension period, loads stayed the same as the final year of the study period, and any resource retirements during this extension period were replaced with an identical resource. However, all associated costs continue to be escalated through the extension period. The associated costs include fuel and fixed and variable operating and maintenance (O&M) costs.

2. Resources

Montana-Dakota's existing generation portfolio includes coal, natural gas, diesel, and wind, along with two capacity purchase contracts. Additional wind generation, a waste heat unit, and Big Stone Unit II are also part of Montana-Dakota's current generation portfolio for expansion planning purposes. The resource expansion analysis considered potential from available alternative resources to build out the generation portfolio to meet forecasted energy and capacity requirements. All resources were modeled with their capacity, fixed and variable O&M costs, and fuel costs that are shown in Tables 2-1 through 2-5 below.

The summer accredited capacity shown in Tables 2-1 through 2-5, also known as MAPP Uniform Rating Generating Equipment (URGE) capacity, is the resources' accredited capacity for July, which is Montana-Dakota's forecasted peak month. This URGE capacity represents the previously

mentioned capability of Montana-Dakota to meet its peak load obligation. MAPP requires its members to run URGE tests on their thermal generation resources (steam units and combustion turbines) at least once a year and accredits the members' monthly generating capability based on the results of the tests.

The MAPP accreditation process considers the variable generation resources such as wind, solar, and run-of-river hydro differently. The accreditation for those variable generation resources is based on a four-hour window around the peak hour for every day of the month. The median value of all these values for the month is the monthly capacity to be accredited. Therefore, the existing Diamond Willow wind farm has a nameplate capacity of 19.5 MW, but its summer accredited capacity is estimated at 4.37 MW. Because of the potential variability of its fuel supply, the existing Glen Ullin Station 6 waste heat unit would also fall into the variable generation category. While its expected nameplate capacity is 7.5 MW, the corresponding accredited capacity is projected at 4.5 MW. This unit which came on-line in July 2009 takes the waste heat produced from a compressor station, located along the Northern Border natural gas pipeline near Glen Ullin, North Dakota, to produce energy. In the resource expansion analysis, which was conducted before its commercial date, the Glen Ullin Station 6 unit was modeled as a "committed unit."

2.1. Existing Resources

The existing generation portfolio is broken down to three groups: coal, natural gas, and miscellaneous. The miscellaneous group consists of the capacity purchase contracts, wind, and diesel. Figure 2-1 shows Montana-Dakota's existing generation mix by summer accredited capacity.

2.1.2. Natural Gas

The natural gas-fired combustion turbines, operated as peaking units, make up about 20 percent of Montana-Dakota's existing summer accredited capacity. Summer accredited capacity and costs for Montana-Dakota's existing combustion turbines are shown in Table 2-2.

Table 2-2

Montana-Dakota's Existing Natural Gas Combustion Turbines

Unit	Summer Accredited Capacity (MW)[1]	Fixed O&M ($/kW/year)	Variable O&M ($/MWh)	Fuel ($/MBTU)
Glendive 1	36.0	9.48	2.35	6.90
Glendive 2	41.6	5.58	2.35	6.90
Miles City	24.5	9.06	2.35	6.90
Williston	9.6	3.08	2.35	6.90

1 - Based on July URGE rating (11/1/08-10/31/09)

2.1.3. Miscellaneous

In addition to coal and natural gas, Montana-Dakota has other generation resources: capacity from purchased power, diesel, and variable generation. These three different types of resources, shown in Table 2-3, make up about 21 percent of Montana-Dakota's generation mix.

Table 2-3

Montana-Dakota's Existing Contracts, Variable Generation, and Diesel Unit

Unit	Summer Accredited Capacity (MW)[1]	Fixed O&M ($/kW/year)	Variable O&M ($/MWh)	Fuel ($/MBTU)
Diamond Willow[1]	4.37	10.16	-27.23	-
Glendive Diesel	2.01	4.00	2.35	16.57
Glen Ullin Station 6	4.50	31.33	6.5	-
NSP contract[2]	95.00	17.70	84.30	-
NSP contract[3]	10.00	17.70	184.30	-
WAPA contract[4]	2.80	-	16.84	-

1. Summer Accredited Capacity is based on 22.43% capacity factor. Variable O&M cost includes the Production Tax Credit, which is represented by a negative $/MWh cost value.
2. Increase to 100 MW in 2010 with option years in 2011-12.
3. Expires in 2010
4. Expires in 2020

2.2. Committed Resources

With the need for more capacity, Montana-Dakota has committed to add two renewable resource projects, construct Big Stone Unit II, extend an existing peaking capacity purchase contract, and enter into a new peaking capacity purchase agreement.

The two renewable resources are wind projects. The first wind project is an addition to the existing Diamond Willow wind farm. Another seven wind turbines with a nameplate rating of 1.5 MW each will be added to this wind farm for a total nameplate capacity of 30 MW. The other wind project is a new wind farm, called Cedar Hills, located near the city of Rhame in Bowman County, North Dakota. With thirteen wind turbines at 1.5 MW each, Cedar Hills will have a nameplate capacity of 19.5 MW. Both committed wind projects are expected to be on-line by the end of the third quarter of 2010.

The next committed resource is Big-Stone Unit II, which will be a jointly owned coal-fired unit. This unit will be located near Big Stone City, South Dakota. The unit is planned for commercial operation in 2015, and Montana-Dakota's expected capacity share of the plant will be not more than 22.58 percent or 131 MW. The current co-owners are:

- Central Minnesota Municipal Power Agency
- Heartland Consumers Power District
- Montana-Dakota Utilities Co.
- Otter Tail Power Company
- Missouri River Energy Services

The final joint decision to construct Big Stone Unit II has not yet been made, but Montana-Dakota's intentions are to participate, and as all its major permits to construct have been approved, Big Stone Unit II was considered a committed unit in the EGEAS model.

Another committed resource is the option to extend the existing power purchase agreement with Northern States Power (NSP). Montana-Dakota has notified NSP of its intent to exercise the contract option for 105 MW of capacity during the 2011 summer season and the option was modeled in the EGEAS analysis.

As a result of Montana-Dakota's request for proposal issued on December 22, 2008, on August 11, 2009, Montana-Dakota and Wisconsin Electric Power Company (WE Energies) entered into an agreement for peaking capacity to help fill Montana-Dakota's need for capacity in the 2012-2014 time frame. Contingent upon the purchased capacity becoming approved as accredited capacity in MAPP within 90 days of the agreement date, the contract is to start on

June 1, 2012 and expire on May 31, 2015. The capacity purchased will be on an annual basis over the contract period as follows:

- June 2012 through May 2013 – 110 MW
- June 2013 through May 2014 – 115 MW
- June 2014 through May 2015 – 120 MW

In the resource expansion analysis, which was conducted before the signing of the agreement, the WE Energies contract was modeled as part of the "Purchased Capacity" resource alternatives (in Section 2.2.5), rather than a "committed unit."

All the above committed resources can be seen in Table 2-4.

Table 2-4

Montana-Dakota's Committed Resources

Unit	In-Service Date	Summer Accredited Capacity (MW)	Capital Cost ($/kW)	Fixed O&M ($/kW/year)	Variable O&M ($/MWh)	Fuel ($/MBTU
Big Stone Unit II	2015	131.00	2938.59	29.84	1.80	1.66
WE Energies Contract	2012-2014	110-120	-	34.80	111.50	-
NSP Contract Extension	2011	105.00	-	21.00	77.50	-
Diamond Willow Addition[1]	2010	2.24	2400.00	10.16	-27.23	-
Cedar Hills Wind[1]	2010	4.37	2400.00	10.16	-28.77	-

1 - Summer Accredited Capacity is based on 22.43% capacity factor. Variable O&M cost includes the Production Tax Credit, which is represented by a negative $/MWh cost value.

Table 3-2

Carbon Footprint
CO_2 Intensity & Total CO_2 Emissions Tons

	Carbon Intensity (lb/MWh)				Total CO_2 Emissions (1,000 Tons)			
	2014	2015	2020	2025	2014	2015	2020	2025
Base Case	2,383	2,184	2,207	2,227	3,464	3,249	3,518	3,794
No Big Stone Unit II	2,383	2,371	2,357	2,336	3,464	3,506	3,743	3,971

4. Conclusions

Based on the results of the supply-side and integration analysis, the resource plan resulting from the base case with the "New DSM Package" added as a resource option is the best choice for Montana-Dakota's customers. In this plan, Montana-Dakota would purchase capacity between 2011 and 2014 and build two 75 MW combustion turbines in 2015 and 2021, in addition to the continuation and implementation of the ten DSM programs described in the Demand-Side Analysis (Attachment C) between 2010 and 2012. These DSM programs would amount to 22.7 MW of peak demand reduction. Along with these resources are the committed resources: the expansion of Diamond Willow in 2010, Cedar Hills in 2010, the extension of the NSP contract to 2011, the WE Energies contract for the 2012-2014 time period, and Big Stone Unit II in 2015. Table 4-1 shows the capacity mix (in megawatts and percent) by fuel and unit type for 2010, 2015, and 2020 for the least-cost resource expansion plan.

Table 4-1

Montana-Dakota's Capacity Mix (in MW and Percent)*
for the Least-Cost Resource Expansion Plan

Fuel/Unit Type	2010	2015	2020
Natural Gas/Peaking	113.7 (17%)	179.1 (24%)	179.1 (24%)
Purchased Power	112.8 (17%)	2.8 (0%)	2.8 (0%)
Variable Generation	57.5 (9%)	57.5 (8%)	57.5 (8%)
Demand-Side/Interruptible	7.6 (1%)	22.7 (3%)	22.7 (3%)
Fossil/Base Load	368.7 (56%)	499.7 (66%)	499.7 (66%)

* Resource capacity values in MW are based on summer accredited capacity, except for variable generation resources whose nameplate capacity is used.

CHAPTER 4

SUPPLY-SIDE RESOURCE ANALYSIS

The objective of the supply side analysis is to identify the available and most cost-effective supply-side capacity resources available to be added to Montana-Dakota's generating portfolio. Capacity resources must be proven technology and be able to maintain the system reliability that Montana-Dakota's customers have come to expect. Selected supply-side resources, together with the feasible Demand-Side Management (DSM) programs are used as inputs to the integration analysis, the final process to determine the least-cost integrated resource plan.

The supply-side analysis considers supply-side alternatives currently available to Montana-Dakota as well as those resources to which Montana-Dakota has made a commitment to install or purchase. A detailed discussion of the supply-side model assumptions, characteristics of the existing generation, the committed resources, and the proposed resources is included in Attachment C.

Committed Supply-Side Options

Current Resources

Montana-Dakota's existing generation serving the Integrated System is comprised of baseload coal-fired generation at Heskett Station (Units I and II), the Lewis & Clark Station, Montana-Dakota's shares of the Coyote and Big Stone Stations, and natural gas-fired peaking generation at Glendive (Units I and II), Miles City, and Williston. Montana-Dakota also owns the Diamond Willow and Cedar Hills wind farms, a 2 MW portable diesel unit, and the Glen Ullin Station 6 waste heat generating unit serving the Integrated System. With a total capacity of 9.6 MW, the Williston combustion turbines, built in 1953, are the oldest in Montana-Dakota's fleet and are modeled to be retired from service in 2011. Total planning resource credits (PRC) available from the existing units is 440.4 PRC in 2011.

Future Capacity Resources

Montana-Dakota entered into an agreement with Xcel Energy Services' operating company Northern States Power (NSP) in December 2005 for the purchase of peaking capacity through 2010. The contract included an option to extend the agreement through the 2011 summer season under the same price and terms as the proceeding years.

each scenario was conducted over a 20-year period (2011-2030) in which new resources are allowed to be added to meet the forecasted load growth and to compensate for unit retirements. To model the remaining life of capital investments installed during the study period, an additional 30 years, called the extension period, was added. During this extension period, loads stayed the same as the final year of the study period. All associated operational and fuel costs continue to be escalated at specified rates through the extension period.

2. Planning Resources

Montana-Dakota's existing generation portfolio includes coal, natural gas, diesel, waste heat and wind, along with three capacity purchase contracts – the extension of the Northern States Power contract for 2011, the Basin Electric Power Cooperative (Basin Electric) contract for 2011, and the WE Energies contract for the 2012-2015 timeframe. Additional blocks of short-term purchased capacity at the WE Energies contract price through 2014 are also modeled as part of Montana-Dakota's current generation portfolio for resource expansion planning purposes. The resource expansion analysis considered other potential available alternative planning resources to build out the generation portfolio to meet forecasted energy and capacity requirements. All resources were modeled with applicable planning resource credit (PRC) amounts, fixed and variable O&M costs, and fuel costs that are shown in Tables 2-1 through 2-7 below.

For resource capacity accreditation, the Midwest ISO considers wind generation resources differently than thermal resources. The PRC for wind generation resources is only available if the wind resources has been designated as a network resource in the Midwest ISO or if the wind resource has a transmission service request. The PRC value for wind resources is based on an effective load carrying capability (ELCC) study performed annually by the Midwest ISO. This study examined the Midwest ISO's top eight annual summer peaks for the last five years to determine how much wind is actually generated during summer peak conditions and compares the amount of wind generated to the Midwest ISO's peak load. This study is done on a Midwest ISO system-wide basis and on all single commercial pricing nodes (CPNode). On a system-wide basis for the 2011-2012 planning year, the ELCC study concluded that 12.9 percent of nameplate wind capacity could be converted into a PRC value if the wind resource is a network resource or has a transmission service request (TSR). Based upon Montana-Dakota's wind farms' CPNodes, Diamond Willow was determined to contribute up to 21.4 percent of its nameplate capacity to

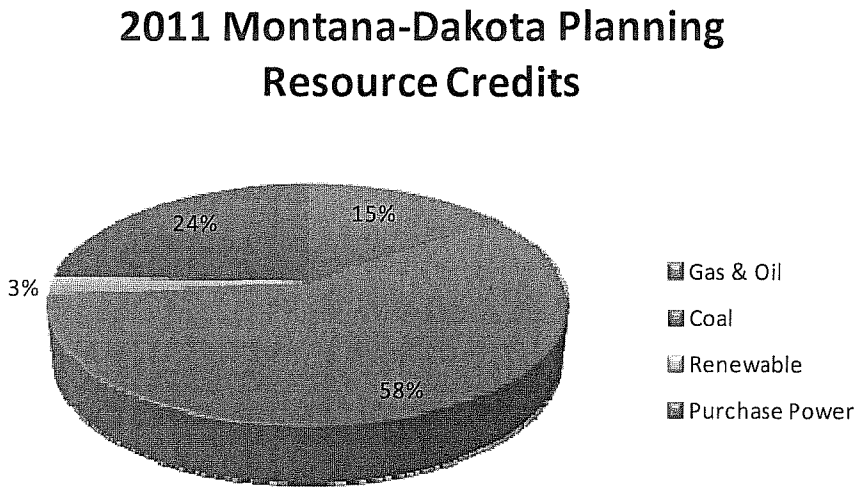
PRCs, and Cedar Hills was allowed up to 30.2 percent of its nameplate capacity to PRCs. Ultimately, Diamond Willow, a designated network resource, was accredited with 6.42 PRCs as Montana-Dakota holds a TSR for Diamond Willow. Cedar Hills, also a designated network resource, was accredited with 3.90 PRCs.

2.1. Current Resources

The existing generation portfolio is broken down into four groups: coal, natural gas/oil, renewable, and purchase power. Figure 2-1 shows Montana-Dakota's 2011 current generation mix by planning resource credits. Fifty-eight percent of Montana-Dakota's PRCs comes from coal generation, 15 percent from gas-fired generation, 24 percent from purchased capacity, and three percent from renewable resources.

Figure 2-1

Montana-Dakota's Current Generation Mix by Planning Resource Credits



2.1.1. Coal

Montana-Dakota currently owns five coal-fired units two of which are jointly owned with other regional utilities. Coal currently accounts for 58 percent of the planning resource credits on Montana-Dakota's system. Table 2-1 shows the capacity in MW established by the Midwest ISO Generator Verification Test Capability (GVTC)

2.1.3. Renewable

In addition to coal, diesel, and natural gas, Montana-Dakota owns three renewable resources, as shown in Table 2-3. The renewable resources make up about three percent of Montana-Dakota's existing planning resource credits.

Table 2-3
Montana-Dakota's Renewable Generation

Unit	Planning Resource Credits[1]	Fixed O&M ($/kW/year)	Variable O&M ($/MWh)	Fuel ($/MBTU)
Diamond Willow[1]	6.42	14.73	-28.26	-
Cedar Hills[1]	3.90	12.56	-30.31	-
Glen Ullin Station 6[2]	4.50	45.88	6.70	-

1. PRC is based on Midwest ISO ELCC study. Variable O&M cost includes the Production Tax Credit, which is represented by a negative $/MWh cost value.
2. Based on Midwest ISO 2011-12 Planning Year ICAP and $EFOR_d$

2.1.4. Purchased Power

In addition to generation resources that Montana-Dakota owns, the Company has entered into three purchased power contracts, shown in Table 2-4, to meet the planning reserve margin requirements within the Midwest ISO.

Table 2-4
Montana-Dakota's Purchase Power

Unit	Planning Resource Credit[1]	Fixed O&M ($/kW/year)	Variable O&M ($/MWh)	Fuel ($/MBTU)
NSP contract[1]	105	17.70	84.30	-
Basin Electric contract	35	4.80	-	-

1. Expires after 2011 summer season

2.2 Future Capacity Resources

As described in the Company's 2009 Integrated Resource Plan, Montana-Dakota has entered into an agreement with Wisconsin Electric Power Company (WE Energies) to purchase peaking capacity during the 2012-2015 timeframe. The contract term begins June 1, 2012 and expires on May 31, 2015. The capacity will be purchased on an annual basis as follows:

- June 2012 through May 2013 – 110 MW
- June 2013 through May 2014 – 115 MW

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
DATA REQUEST
DATED OCTOBER 15, 2012
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PSC-008

Regarding: Diamond Willow Key Points Timeline
Witness: Neigum

Please provide a timeline for Diamond Willow which includes key decision points, significant events in planning, construction and operation, and any changes in Montana laws which influenced Montana-Dakota's decision-making.

Response:

Please see Attachment A.

Montana-Dakota Utilities Co.
Wind Generation Timeline
2006 through 2010

MDU Activities	Other Activities
September 1, 2006 MDU issued an RFP to secure wind resources to meet the MT requirement	2006 MT Legislature passed into law requiring the purchase of renewable energy up to 15% of a utility's energy sold by 2015
February 2007 Decision to pursue Diamond Willow I	2007 ND Legislature enacted a state renewable & recycle energy objective that 10% of all electricity sold at retail within the state by 2015 be obtained from renewable or recycled energy sources.
February 26, 2007 Filed a Petition with the MT PSC to certify Diamond Willow I as an eligible renewable resource (D2007.2.23)	
March 6, 2007 MT PSC certified Diamond Willow I as as an eligible renewable resource (D2007.2.23)	
March 6, 2007 Signed turbine purchase agreement with General Electric for the wind turbine purchases for Diamond Willow I	
August 27, 2007 Signed construction services contract with Wanzek Construction for the construction of Diamond Willow I	

Montana-Dakota Utilities Co.
Wind Generation Timeline
2006 through 2010

MDU Activities	Other Activities
February 2008 Diamond Willow I was placed into commercial operation	2008 SD Legislature enacted a state renewable & recycle energy objective that 10% of all electricity sold at retail within the state by 2015 be obtained from renewable or recycled energy sources. In 2009, the Legislature amended the objective to include conserved energy as a resource under the objective.
Septmber 12, 2008 Entered into Turbine Purchase Agreement for Diamond Willow II and Cedar Hills	Production Tax Credits (PTCs) for new wind were set to expire December 31, 2008
December 17, 2008 Filed a CPCN application with the ND PSC for Cedar Hills	PTCs extended through December 31, 2012
December 22, 2008 Issued a RFP for power for 2012 - 2014	
March 22, 2009 Signed construction services contract with Wanzek Construction for the construction of Diamond Willow II	

Montana-Dakota Utilities Co.
Wind Generation Timeline
2006 through 2010

MDU Activities	Other Activities
March 25, 2009 Received Order from ND PSC Granting CPCN for Cedar Hills	
June 6, 2010 Cedar Hills commenced commercial operation	
June 28, 2010 Diamond Willow II commenced commercial operation	

MONTANA-DAKOTA UTILITIES CO.
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PSC-009

Regarding: Diamond Willow 1 and 2 Commonality
Witness: Neigum

Please describe and provide detailed documentation which augments information previously supplied in response to discovery questions on the extent to which Diamond Willow 1 and Diamond Willow 2 have common or separate elements such as control houses, roads, and perimeter fences. Provide a legible layout or map of the Diamond Willow facility, including a scale of distance.

Response:

Please see Response No. PSC-008 Attachment A and Attachment A to this response for a layout drawing of Diamond Willow I and II. A separate electronic file with this layout drawing will also be submitted.

- Diamond Willow I and II share a common substation (blue box in center of drawing) which utilize a common perimeter fence and control house. Electric equipment and interconnections are separate and independent facilities. See Response No. PSC-011.
- Project access roads used existing county roads.
- Turbines G1 – G14 are Diamond Willow I
- Turbines G16 – G22 are Diamond Willow II

Response No. PSC-009
Attachment A
Page 1 of 1

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
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PSC-010

Regarding: Diamond Willow Construction Overlap
Witness: Neigum

Please describe and provide detailed documentation on the extent to which there was work completed during the construction of Diamond Willow 1 which was necessary for the construction of Diamond Willow 2, such as pouring concrete pads, establishing roads, erecting fences, completing permit requests, filing required reports, amending land leases or agreements, or obtaining bids.

Response:

See Response No. PSC-008 Attachment A and Response No. PSC-009. Diamond Willow I and Diamond Willow II utilize the same landowner lease agreements.

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
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PSC-011

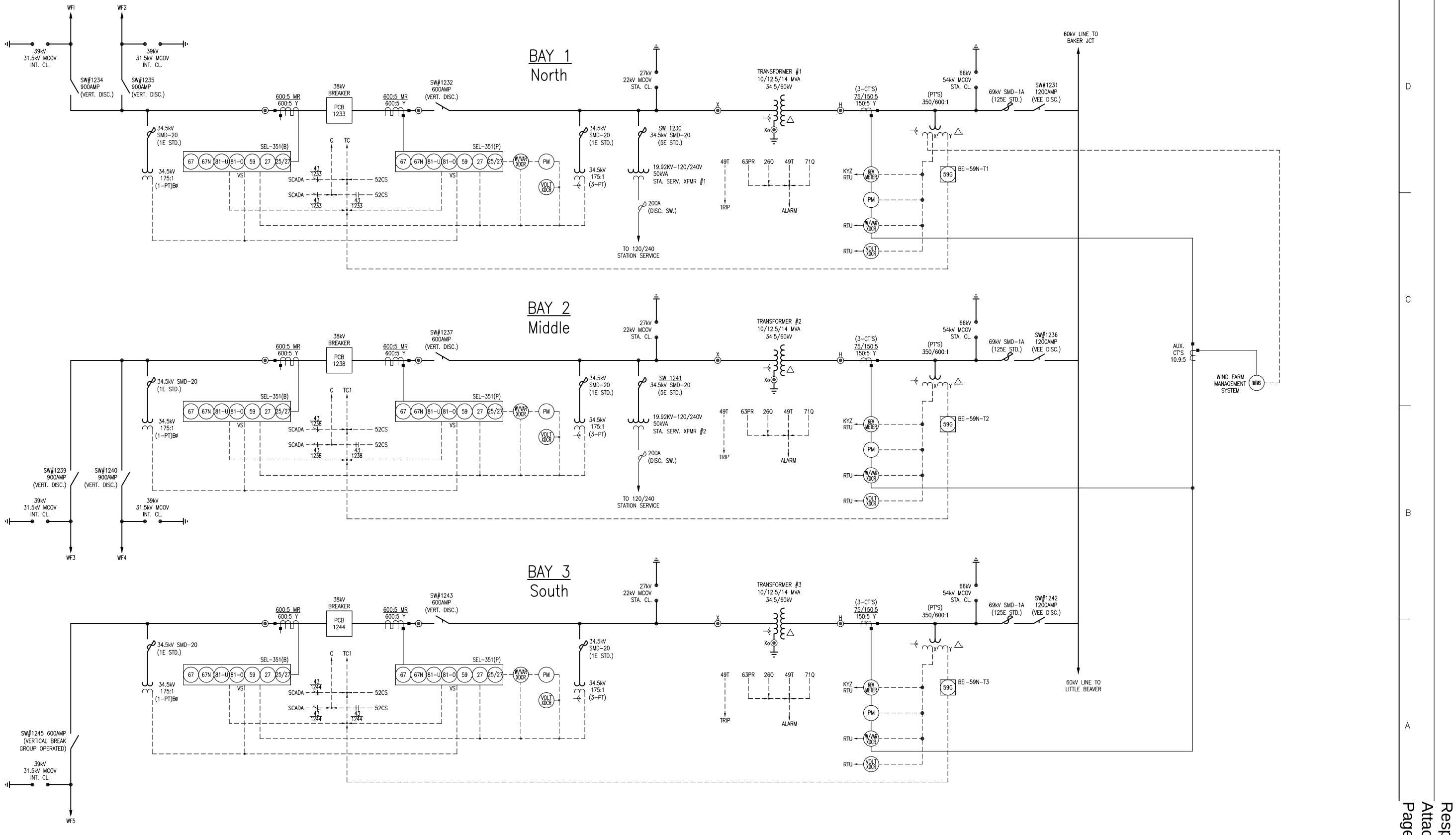
Regarding: Diamond Willow Electrical Details
Witness: Neigum

Please provide legible documentation showing the details of the electrical connections within Diamond Willow and the tie to the power grid, including items such as generators, transformers, fuses, disconnects, switches, breakers, cross ties, taps, meters, and instrumentation.

Response:

See Attachment A for a one-line diagram and Response No. PSC-001. A separate electronic file with this diagram will also be submitted.

- Diamond Willow I is connected to WF-1, WF-3, and WF-4.
- Diamond Willow II is connected to WF-5



HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION
4	7/30/10	ADDED 60KV LINE TO LITTLE BEAVER-BAKER
3	7/1/10	ADDED TRIP
2	2/22/2010	Added 3rd Bay
1	3-08	AS BUILT
0	9-07	ISSUED FOR CONSTRUCTION

PROJECT MANAGER	STEVEN SHELTON
	TYSON STANNEBEIN
	Tanya Noonan
PROJECT NUMBER	65284

MONTANA-DAKOTA UTILITIES CO.
BISMARCK, NORTH DAKOTA

DIAMOND WILLOW SUBSTATION

ONE LINE DIAGRAM

0 1" 2"

DWG NO.	DIWOL01ø1
SCALE	NONE

SHEET **61-400**

Response No. PSC-011
Attachment A
Page 1 of 1

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
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DATED OCTOBER 15, 2012
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PSC-012

Regarding: Title 69 Legislation in 2009
Witness: Neigum

Please provide copies of all correspondence in Montana-Dakota's or its representatives' possession, including emails, regarding bills considered by the Montana Legislature in 2009 relating to community renewable energy projects.

Response:

Montana-Dakota does not believe that any such documents exist. The 2009 legislation which changed the statutory criteria for CREPs to allow utility ownership, and increased the size of CREPs, was the initiative of NorthWestern Energy (NWE), and Montana-Dakota neither assisted NWE with its legislative initiative, nor opposed it. The only communications which Montana-Dakota received on this legislation were privileged communications from legal counsel rendering advice about the proposed legislation.

MONTANA-DAKOTA UTILITIES CO.
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PSC-013

Regarding: Legislative History
Witness: Neigum

a. Provide documentation from the legislative history to support the assertion made in Montana-Dakota's July 19, 2012 filing, Consolidated Motions for Reconsideration and Rehearing, on page 8, which states, "The legislative history behind the 2009 amendments to the Act make it abundantly clear that the Montana Legislature intended that utility-owned and locally-owned community renewable energy projects (CREPs) be treated on the same footing."

b. Provide documentation from the legislative history to support Montana-Dakota's assertion that "total calculated nameplate capacity" and "total nameplate capacity" are terms with an identical meaning.

Response:

a. The referenced Motion for Reconsideration was prepared by legal counsel for Montana-Dakota in this docket, and sets forth the rationale and authority in support of the Company's legal position.

b. See Montana-Dakota Motion for Reconsideration at pages 8-9.

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
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DATED OCTOBER 15, 2012
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PSC-014

Regarding: Montana-Dakota's CREP Obligations
Witness: Neigum

On Page 10 of its Consolidated Motions for Reconsideration and Rehearing (filed July 19, 2012) Montana-Dakota states, "If it had been provided proper notice, Montana-Dakota would have shown that while 6 MW of CREP generating capacity will allow it to meet its obligations under the Act through 2014, it will likely need another 4 MW of CREP power in 2015 to meet its obligations under the Act."

a. Please provide a complete list of assumptions and the detailed calculation showing how Montana-Dakota computed its obligations under the Act through 2014.

b. Please provide a complete list of assumptions and the detailed calculation as to how Montana-Dakota's obligations under the Act in 2015 (given as an additional 4 MW) were computed.

Response:

a. The actual amount of Montana CREP requirements for Montana-Dakota is an estimate at this time. See Attachment A for an estimate of Montana-Dakota's CREP requirement calculated in 2008. From a planning standpoint Montana-Dakota has always assumed that we would need 6 MW of CREP resources in 2012 and an additional 4 MW for a total of 10 MW in 2015. This value ensures that we have a sufficient amount of eligible CREP resources to meet our Montana RPS obligation in case of customer growth or resource availability issues.

b. The additional 4 MW was the value used in the Motion for Reconsideration in this Docket. See Response No.PSC-014a. above.

MT Renewable Power Production & Rural Economic Development Act
Share of Community Renewable Energy Projects

Renewable Calculation	Actual Sales 2005	Actual Sales 2006	Actual Sales 2007	Forecast 2008	Forecast 2009	Forecast 2010	Forecast 2011	Forecast 2012	Forecast 2013	Forecast 2014	Forecast 2015
NWE Retail Sales	5,571,137	5,787,221	5,928,450	5,983,585	6,026,666	6,069,456	6,111,942	6,154,114	6,195,962	6,238,095	6,279,890
Load Growth				0.93%	0.72%	0.71%	0.70%	0.69%	0.68%	0.68%	0.67%
MDU Retail Sales	631,603	644,910	671,160	679,415	687,772	696,232	704,796	713,464	722,240	731,124	740,116
Load Growth				1.23%	1.23%	1.23%	1.23%	1.23%	1.23%	1.23%	1.23%
Total MDU CREP Req'd						5.1	5.2	5.2	5.2	5.2	7.9

This sheet uses actual retail sales before line losses to make same unit calculations of data available.
Community renewable energy projects are less than 5 MW's capacity per MCA 69-3-2003 (3).
Proportionately allocate community req based on each public utilities retail sales (per MCA 69-3-2004 (3)c and (4)c:

Year	MDU Act	NWE Act	Total MT
2005	631,603	5,571,137	6,202,740
2006	644,910	5,787,221	6,432,131
2007	671,160	5,928,450	6,599,610
2009 Share	10.2%	89.7%	
2014 Share	10.5%	89.5%	

Elegible renewable resource is a facility in MT or delivering into MT with commercial operation after 1/1/05 per MCA 69-3-2003 (7)
Renewable Energy Credit is a tradable certificate of proof for 1 MWh of renewable electric generation with environmental attributes per MCA 69-3-2003 (10).
RRS Requirement limits and MPSC reporting is outlined per MCA 69-3-2004 and 2005:

Submittal of 2008's 5% required by 1/1/07
Submittal of 2010's 10% required by 1/1/08 at least 50 MW's must have both generation and credits
Submittal of 2015's 15% required by 1/1/13 at least 75 MW's must have both generation and credits

Renewable Calculation	Forecast 2016	Forecast 2017	Forecast 2018	Forecast 2019	Forecast 2020
NWE Retail Sales	6,321,965	6,363,690	6,405,054	6,446,687	6,487,946
Load Growth	0.67%	0.66%	0.65%	0.65%	0.64%
MDU Retail Sales	749,220	758,435	767,764	777,208	786,767
Load Growth	1.23%	1.23%	1.23%	1.23%	1.23%
Total MDU CREP Req'd	7.9	8.0	8.0	8.1	8.1

MONTANA-DAKOTA UTILITIES CO.
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PSC-015

Regarding: Cost of Additional CREP Power
Witness: Neigum

On page 10 of the Consolidated Motions for Reconsideration and Rehearing, Montana-Dakota states, "It would have further shown that the likely annual cost of acquiring that additional 4 MW of CREP power would approach a half million dollars." On page 9 of your testimony, you estimate the incremental cost of acquiring 4 MW of Montana CREPs to be $485,654. On page 4, you estimate that Montana-Dakota's CREP requirement in 2015 will be 8 MW. On page 9, you indicate Montana's share of Cedar Hills is 5.3 MW. This results in an apparent shortfall of 2.7 MW, not 4 MW.

a. **Please explain how you arrive at a projected 4 MW shortfall in the CREP obligation if Diamond Willow was not to be recognized as two distinct CREPs.**

b. **If the 4 MW calculation was an error, please show how this affects the cost calculation on page 9.**

c. **Whatever the correct power shortfall is, please provide more complete documentation as to how the cost in dollars was determined, including the source and derivation of each key input.**

d. **Please provide a list of alternatives to obtaining an additional 2.7 or 4 MW of power that is CREP qualified. Include the costs for each alternative and discuss the positive and negative aspects for each alternative.**

Response:

a. See Response No. PSC-014.
b. Not applicable.
c. Assumptions:
   - Montana-Dakota CREP Requirements of 6 MW in 2012 and 10 MW in 2015
   - See Response No. PSC-014 Attachment A for the estimate of Montana-Dakota's requirement calculated in 2008.
   - 40% wind capacity is typical for utility sized wind projects in this area.
   - Price of small wind from 2010 RFP – see Attachment A for a summary of the responses to the Montana 2010 CREP Request for Proposal. The $70

per MWh price of energy was used as an adjustment to the OWN Energy proposal for a 19.2 MW project, to account for a smaller project size and is no higher in cost than the Carnege proposal, a 75 MW project.

- Montana-Dakota's marginal cost of energy for 2012.

d. Wind is the only cost effective eligible renewable resource available for consideration within Montana-Dakota's service territory.

Montana-Dakota Utilities Co.

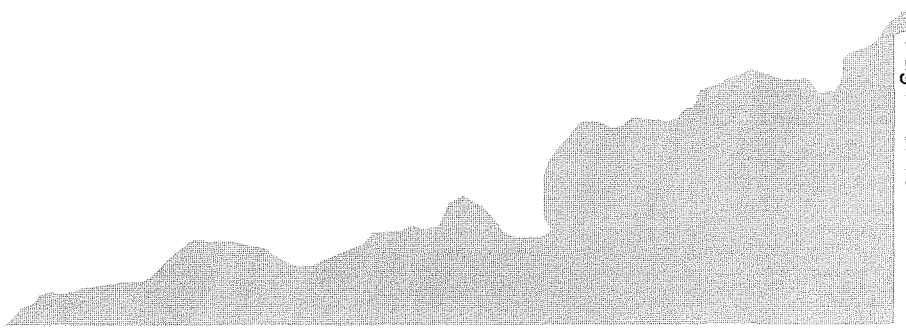
Report on Montana 2010 CREP Request for Proposal

Hoa Nguyen, P.E.

20 January 2011

Presentation Outline

- Objective of Community Renewable Energy Projects (CREP)
- CREP Request for Proposal (RFP)
- RFP Informational Meetings
- Notices of Intent to Bid
- Proposals
- Proposal Evaluation
- Conclusions



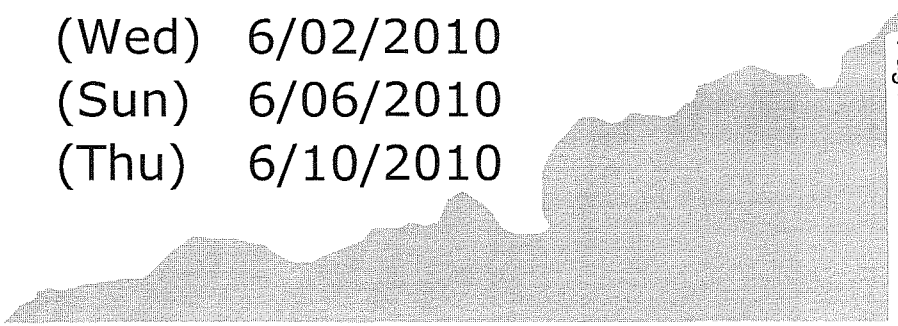
Objective of Community Renewable Energy Projects

- Supports the local economy in areas of Montana served by Montana-Dakota.
- Supports and promotes environmentally responsible and cost-effective electric generation for Montana-Dakota's customers.
- Supports Projects that meet the State of Montana's requirements as defined in Montana Code Annotated ("MCA") Section 69-3-2003(4) for a Community Renewable Energy Project.

CREP Request for Proposal

- Montana-Dakota issued a request for proposal for CREP on June 1, 2010.
  - The RFP was posted on Montana-Dakota's website: www.montana-dakota.com/montana/pages/overview.aspx
  - A series of advertisements was run on the newspapers in Montana-Dakota's service area in Montana:

Baker Fallon Co. News	(Fri)	6/04/2010
Billings Gazette	(Wed)	6/02/2010
Billings Gazette	(Sun)	6/06/2010
Glendive Range Review	(Thu)	6/03/2010
Glendive Range Review	(Sun)	6/06/2010
Miles City Star	(Wed)	6/02/2010
Miles City Star	(Fri)	6/04/2010
Sidney Herald	(Wed)	6/02/2010
Sidney Herald	(Sun)	6/06/2010
Wolf Point The Herald	(Thu)	6/10/2010

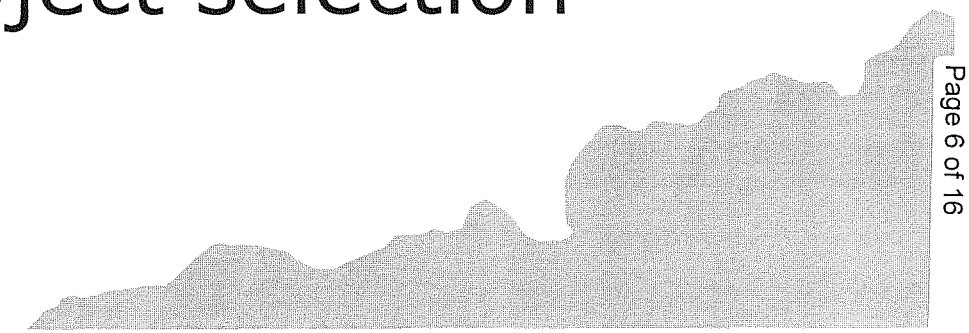


Montana-Dakota Requirements

- Montana-Dakota sought proposals for Projects consisting of up to six megawatts (MW) of nameplate capacity by 2012 and Projects consisting of up to ten MW of nameplate capacity by 2015. The proposed resources must qualify as a Community Renewable Energy Project under MCA Section 69-3-2003(4).
- Montana-Dakota would accept proposals for qualifying Projects of up to ten MW nameplate capacity.

RFP Timeline

- July 7 – Informational meetings in Glendive and Sidney
- July 23 – Notices of Intend to Bid due
- August 20 – RFP proposals due
- October 1 – Short list responders notified
- November 15 – Project selection completed

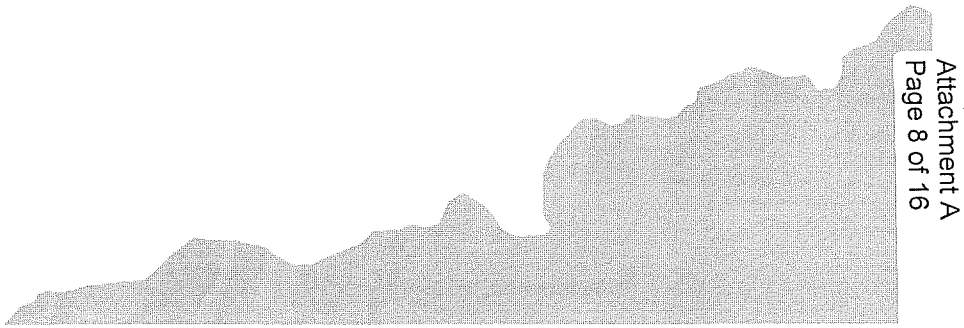


RFP Informational Meetings

- Prior to the informational meetings, they were again announced through an additional series of newspaper advertisements:
  - Baker Fallon Co. News (Fri) 6/25/2010
  - Billings Gazette (Sun) 6/27/2010
  - Billings Gazette (Wed) 6/30/2010
  - Glendive Range Review (Sun) 6/27/2010
  - Glendive Range Review (Thu) 7/01/2010
  - Miles City Star (Mon) 6/28/2010
  - Miles City Star (Wed) 6/30/2010
  - Sidney Herald (Sun) 6/27/2010
  - Sidney Herald (Wed) 6/30/2010
  - Wolf Point The Herald (Thu) 7/01/2010

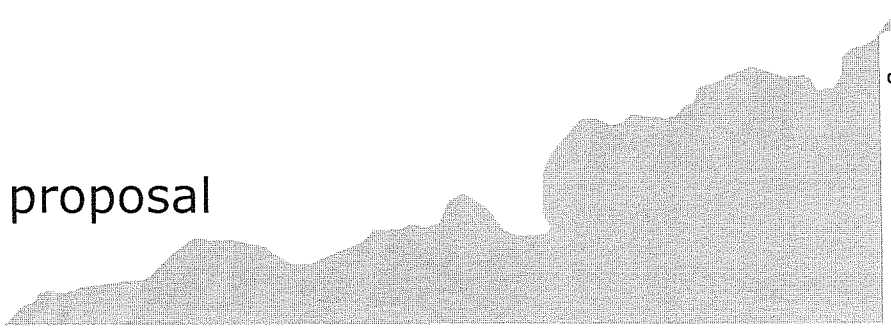
RFP Informational Meetings

- Two informational meetings were conducted
  - July 7, 2010 at 10:00 am MDT
    Northern Plains Agricultural Research Center
    560 North Central Avenue
    Sydney, Montana
  - July 7, 2010 at 2:00 pm MDT
    The Eastern Plains Event Center
    313 South Merrill Avenue
    Glendive, Montana



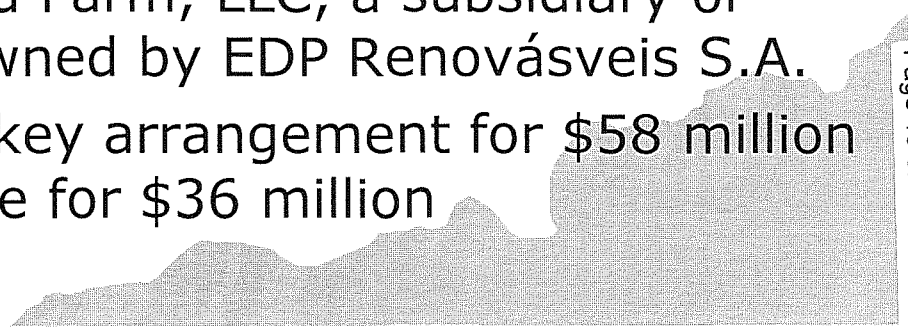
Notices of Intent to Bid

- Four notices of intent to bid were received:
  - Carnegie Power — 08/17/2010
    P.O. Box 322
    Carnegie, PA 15106
  - Compass Wind — 07/23/2010
    1730 Blake Street, Suite 400
    Denver, CO 80202
  - Horizon Wind Energy — 07/23/2010
    53 SW Yamhill Street
    Portland, OR 97204
  - Own Energy — 08/20/2010
    45 Main Street, Suite 538
    Brooklyn, NY 11201
- Three proposals received
  - Compass Wind did not submit proposal



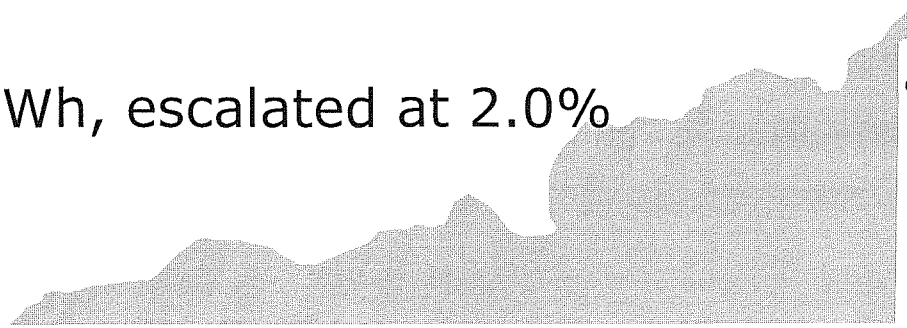
Proposals

- Carnegie Power
  - 25-year PPA from the 75 MW Lindsay Divide wind power project located in Lindsay, Montana
  - A joint venture between Carnegie Power and GE Energy Financial Services
  - Starting price of $70.0/MWh, escalated at 2.5% annually
- Horizon Wind Energy
  - 23.4 MW from the Martinsdale wind farm located 20 miles west of Harlowton in the Wheatland and Meagher counties, Montana
  - Owned by Martinsdale Wind Farm, LLC, a subsidiary of Horizon, which in turn is owned by EDP Renovásveis S.A.
  - Asset sale for either a turnkey arrangement for $58 million or a development asset sale for $36 million



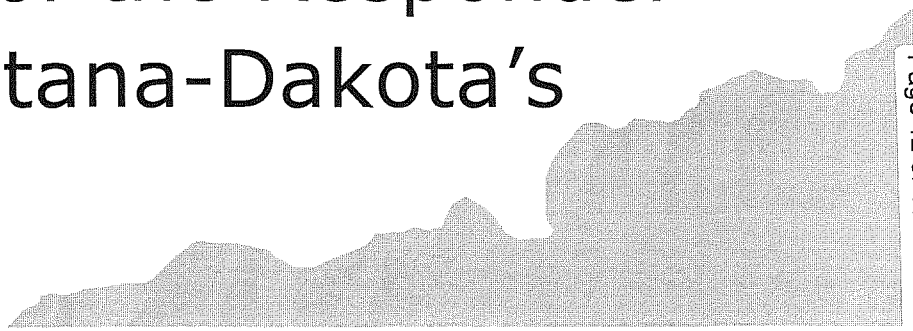
Proposals (Cont.)

- Own Energy
  - 25-year PPA from a 19.2 MW project to be constructed in Carter County, Montana, of which 6.4 MW will be allocated to Montana-Dakota.
  - Teaming up with a local company, Prairie Wind, MT-1, LLC and contemplating a board governance which would give Prairie Wind, MT-1 60 percent of the board in order to satisfy MCA 69-3-2004(3)(b) for a "Community Renewable Energy Project"
  - Proposed to deliver power at the Baker Junction substation through a Southeast Electric Cooperative's 60 kV line
  - Starting price at $54.90/MWh, escalated at 2.0% annually.



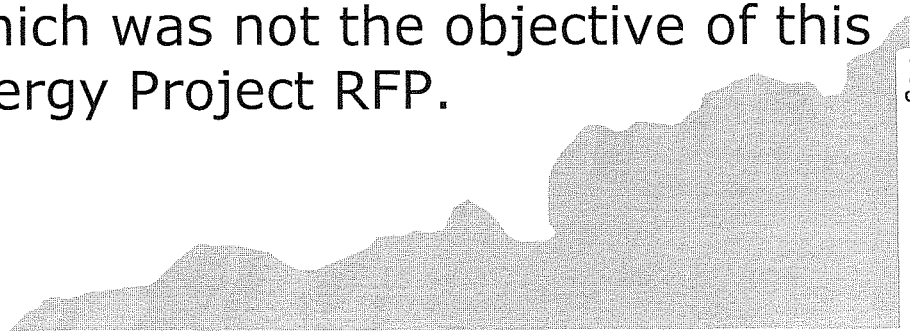
Proposal Evaluation Criteria

- Eligible Community Renewable Resource as defined in MCA 69-3-2003
- Energy sales price
- Power deliverability
- Evidence of site control
- Quality and experience of the Project development team
- Financial capability of the Responder
- Location within Montana-Dakota's service territory



Proposal Evaluation

- Carnegie Power
  - Located outside of Montana-Dakota's service territory; no transmission available to deliver power to Montana-Dakota's system
  - Unlikely to meet local ownership requirements
  - Not cost-effective ($70/MWh, escalated at 2.0% annually))
- Horizon Wind Energy
  - Located in the Western Interconnection; not deliverable to Montana-Dakota and Midwest ISO
  - Unlikely to meet local ownership requirements
  - Proposed an asset sale, which was not the objective of this Community Renewable Energy Project RFP.



Proposal Evaluation (Cont.)

- Own Energy
  - Appeared to meet the local ownership and power deliverability requirements
  - The proposed price ($54.90/MWh, escalated at 2.0% annually) was compared with the cost of power from another alternate generating resource available to Montana-Dakota – energy purchase from the Midwest ISO market
  - The MISO average energy purchase prices were projected by the Electric Market Administration section of the System Operations & Planning Department in March 2010.
  - The cost comparison (next slide) shows that, for the ten-year period 2012-2021, the Own Energy CREP proposal would cost 57 percent more than that of the alternate generating resource.

Montana-Dakota Utilities Co.

MISO Market Price vs. Own Energy Proposed CREP Project

	MISO Market			Own Energy		
	Avg Mrkt Price	**Present Value**	**Net Present Value**	**Price**	**Present Value**	**Net Present Value**
YEAR	$/MWh	$/MWh	$/MWh	$/MWh	$/MWh	$/MWh
2012	$30.96	$27.14	$27.14	$54.90	$48.13	$48.13
2013	$32.51	$26.69	$53.83	$56.00	$45.96	$94.09
2014	$34.14	$26.23	$80.06	$57.12	$43.89	$137.98
2015	$35.84	$25.79	$105.85	$58.26	$41.92	$179.90
2016	$37.64	$25.35	$131.20	$59.43	$40.03	$219.93
2017	$39.52	$24.93	$156.13	$60.61	$38.23	$258.16
2018	$41.50	$24.50	$180.64	$61.83	$36.51	$294.67
2019	$43.57	$24.09	$204.73	$63.06	$34.87	$329.54
2020	$45.57	$23.59	$228.32	$64.32	$33.30	$362.84
2021	$47.85	$23.19	**$251.51**	$65.61	$31.80	**$394.64**

Discount Rate: **6.806%**

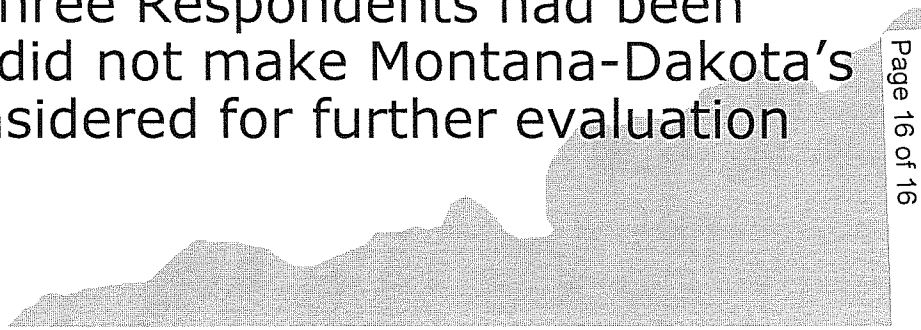
Present Year: **2010**

Difference:	**$143.14**
Increase:	**156.9%**

Response No. PSC-015
Attachment A
Page 15 of 16

Conclusions

- In 2010, Montana-Dakota again made efforts to seek proposals for the community renewable energy projects in its service territory in Montana.
- Montana-Dakota's 2010 CREP RFP process was well implemented.
  - There appeared to be some interest in developing these projects at the local level.
  - The proposed projects would be actually owned by national or international entities.
  - There was only one proposal that appeared to meet the local ownership and power deliverability requirements. Based on the provision of Montana Code Annotated Section 69-3-2007(2), however, the proposed project were found not cost-effective.
- As of November 22, 2010, all three Respondents had been provided with notice that they did not make Montana-Dakota's short-list and would not be considered for further evaluation and discussion.



MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
DATA REQUEST
DATED OCTOBER 15, 2012
DOCKET NO. D2012.3.24

PSC-016

Regarding: MISO Commercial Pricing Node
Witness: Addison and Neigum

Page 4 of Ms. Addison's testimony indicates that "the MISO data stream from the commercial pricing node is the same regardless of whether there are one or two wind farms behind the commercial pricing node," and page 7 of Mr. Neigum's testimony refers to a "single market generation value."

a. Please explain whether MISO automatically assigns the same "market generation value" to multiple wind farms because they lie behind the same commercial pricing node.

b. Please indicate whether MISO has ever assigned different "market generation values" to Diamond Willow I and II, and if not, further explain why not.

c. Please explain how MRETS assigns a unique identifier ("REPORTINGENTITYID") to multiple units that lie behind a single MISO commercial pricing node. Specifically, is a "REPORTINGENTITYID" unit-specific or entity-specific?

Response:

a. Every generator, except behind the meter generators, needs to be connected to a CPNode in MISO. Multiple generators behind the same CPNode aggregate their generation output to the same CPNode.
b. No.
c. See testimony of Theresa Addison at pp. 3-4 and Exhibit No._(TLA-2) submitted in this Docket.

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
DATA REQUEST
DATED OCTOBER 15, 2012
DOCKET NO. D2012.3.24

PSC-017

Regarding: MISO Interconnection Rights
Witness: Addison and Neigum

If Montana-Dakota had secured separate interconnection rights for Diamond Willow I and II, please indicate whether each would have had:

a. Separate market generation values (please explain whether and how these "values" differ from the "generation data" referred to on page 8 of Mr. Neigum's testimony); and

b. Separate MISO commercial pricing nodes.

Response:

a. Diamond Willow I and II have separate generation values and nothing would need to change if Diamond Willow had separate interconnection agreements. Every generator, except behind the meter generators, needs to be connected to a CPNode in MISO. Multiple generators behind the same CPNode aggregate their generation up to the same CPNode.

b. If Montana-Dakota had secured a separate generator interconnection agreement for Diamond Willow II it could have used the same CPNode as Diamond Willow I or it could have created a new one for the Diamond Willow II generation.

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
DATA REQUEST
DATED OCTOBER 15, 2012
DOCKET NO. D2012.3.24

PSC-018

Regarding: Diamond Willow's RFP Proposal
Witness: Neigum

On the bottom of page 5 and the top of page 6, you indicate that Montana-Dakota issued a Request for Proposal in September 2006 for renewable energy resources and the Diamond Willow project was both the least cost and best alternative presented.

Please provide the subject proposal and the final agreement relative to acquiring the Diamond Willow site from the developer as a result of Montana-Dakota's 2006 RFP.

Response:

See Attachment A for the Crownbutte Proposal and Attachment B for the Crownbutte General Consulting Agreement - Diamond Willow.

AGREEMENT

FOR THE DEVELOPMENT AND INSTALLATION OF A

Wind Turbine Park in eastern Montana of less than 20 MW nameplate capacity and expandable to 30 MW nameplate capacity.

BETWEEN

Montana-Dakota Utilities Co.
(Hereafter "MDU")

And

Crownbutte Wind Power LLC
(Hereafter "Crownbutte")

Whereas MDU is desirous of having an operational Wind Park in their service area in eastern Montana as soon as possible (2007 – if feasible), Crownbutte suggests the following sequence of requirements and costs.

Phase I

Project Development

Location: The location of a wind park must be based on four parameters:

a. The necessary transmission capability to carry the proposed new generation.
b. The required topography for physically installing the generating facility in respect to the primary wind directions and obstruction characteristics of the surrounding land.
c. Sufficient meteorological data to satisfy both financing and turbine manufacturer's interests.
d. Existing land ownership conducive to the park's installation.

To THIS END:

A.Crownbutte shall provide:

1. A proposed interconnect point within the MDU transmission system capable of carrying the desired new generation, and coordinated with MDU's systems requirements.
2. Legal land descriptions with land ownership map.
3. Wind farm micro-siting based upon the turbine type availability.
4. All of the meteorological data that can be accumulated given the time constraints.
5. A certified consulting meteorologist's report based on that data.

The cost of these deliverables and services (including the meteorological report, site maps etc.) is:

$85,000.00

UPON ESTABLISHING A SUITABLE SITE:

B. Crownbutte shall provide:

1. A lease option agreement and Wind Energy Lease acceptable and assignable to MDU.
2. Signed lease option agreements with all of the necessary landowners.
3. Design and location of the collector system, service roads, crane pads, turbine erection sequence and road and crane access conditions (road quality, road type, seasonal road bans, over/underpass constraints, bridge constraints), and Crownbutte shall provide MDU with 5 copies (and a CD) of the engineering drawings.
4. Geotechnical conditions with engineering report.
5. Official land survey of the turbine sites.
6. Completed and submitted FAA applications.
7. Environmental assessments (State and Federal Fish and Wildlife).
8. Historic Resource Impact Assessment.
9. Foundation design.
10. State and County permitting where required.
11. Contractor contract for the work to be preformed.

The cost of these deliverables and services is:

$230,000.00

PRIOR THE COMMENCEMENT OF THE PARK CONSTRUCTION

C. Crownbutte shall provide:

1. An essential materials list with delivery dates (Corrugated metal pipe, anchor bolts & nuts, concrete and slurry delivery, grout etc.) either provided by a subcontractor or directly from Crownbutte with pro-forma invoices for MDU's approval and payment.
2. Coordination with the turbine (or tower) manufacturer for delivery of the upper and embedment templates.
3. Coordination with the turbine (or tower) manufacturer to determine the status all bolts, nuts, fasteners, droop cables, junction boxes, connectors, safety cables, interior lighting, etc., prior to delivery of the towers. If the interior of the towers is not complete prior to delivery, provision for the installation of such shall be provided by Crownbutte on direct-cost plus 10% basis if not provided for by the turbine manufacturer.

4. Determination of the status of the FAA lighting. If it is not installed prior to the delivery of the nacelles, Crownbutte shall do so on site at a direct-cost plus 10% basis if not provided for by the turbine manufacturer.
5. Preparation of the sites for construction to include road improvement, establishing approaches from existing roads in coordination with the county authority and land owners, removal of fences and cattle guards where necessary and crop assessment if applicable,

The cost of these deliverables and services is:

$180,000.00

In addition, the present cost of an umbrella insurance policy for the installation of a 19.5 MW wind project with an estimated cost of $33,000,000.00, is:

$140,000.00

This policy must be in place before the begin of any road improvement.

PARK CONSTRUCTION

D. Foundations:

1. Crownbutte shall promptly notify MDU of any material information concerning new or significant developments concerning the turbines or foundations, and provide MDU with weekly status reports.
2. Crownbutte shall supervise all contractors and sub-contractors to ensure compliance with the foundation designer's specifications and keep samples of all concrete pours for a period of 5 years.
3. Crownbutte shall review all invoices from contractors, and approve them for payment by MDU.
4. Crownbutte shall ensure that the foundations, transformer pads and crane pads follow the siting plan as described in B-3 above, and that any changes made to that plan are noted and the plan is altered to reflect those changes. MDU shall again be provided with five copies and a CD.
5. Except for cranes above 80 tons capacity, Crownbutte shall provide all labor and equipment for the unloading and warehousing all material (CMP, anchor bolts, sweeps, conduit, cabling, etc.) delivered to the site if not provided by the turbine manufacturer, contractors or sub-contractors.
6. Crownbutte shall have competent representation present on the job site at all times during working hours when work is being carried out, he or she shall be authorized to sign any documents required.
7. Site clean up and inspection and coordinate with local law enforcement for the prevention of vandalism and/or theft.

8. Crownbutte shall co-ordinate with the landowners to eliminate or avoid any dissatisfaction.
9. Crownbutte shall prepare a final report on the foundation.

The cost of these deliverables and services is:

$165,000.00

E. Erection:

1. Crownbutte shall insure that all the necessary equipment and lifting gear is on the site for the unloading and erection of all material including cranes, booms, lifting tackle, clevises, torque wrenches, bolt tensioners etc. in coordination with the turbine manufacturer and the contractors and subcontractors.
2. Crownbutte shall coordinate with the turbine manufacturer and the contractors to insure that sufficient labor is available on site to accomplish the work in a timely and professional manner.
3. Crownbutte shall notify MDU of any of the following that would or could have a material adverse effect on MDU or the performance of the park:
    a. Any material damage to or destruction of the turbines, towers or other components.
    b. Any equipment failure reasonably expected to result in a significant impairment of the park's ability to generate electricity.
    c. Any release of hazardous substances that would violate any law or permit that might subject MDU to any liability or penalty.
    d. Any safety violation or accidents at the site.
4. In coordination with the crane contractor, delivery schedule and turbine manufacturer, Crownbutte shall establish an erection sequence and provide MDU such in written form.
5. Crownbutte shall ensure that the FAA lighting system has been installed according to the permitting (see C-4 above).
6. Crownbutte shall ensure that all of the tower interior equipment is properly installed (see C-3 above).
7. Crownbutte shall provide daily and final site preparation and clean up.
8. Crownbutte shall co-ordinate safety measures and ensure that they are followed.
9. Crownbutte shall ensure that the turbine manufacturer and the HV contractor coordinate their responsibilities for the proper installation of the interconnect between the turbine controller and the turbine transformers and the SCADA system.
10. The tower erection must be accomplished by G.E. or a contractor authorized by G.E. (Wanzek Construction is authorized). Crownbutte shall coordinate with the turbine manufacturer, the designated contractor or contractors to ensure that all necessary preliminary work has been accomplished and that

any supporting material and equipment not supplied by the contractor is available.

11. Crownbutte shall prepare a final report on the erection.

The cost of these deliverables and services is:

$165,000.00

COMMISSIONING

After erection, the commissioning of a wind turbine takes anywhere between two to five days, occasionally longer. The task is accomplished by the turbine manufacturer with support from the construction contractor and the developer/O&M contractor.

F. Commissioning Support

1. Crownbutte shall provide the turbine manufacturer with continued support of both labor and material until the turbines are operational.
2. Crownbutte shall coordinate with MDU to ensure that system's Dispatch has all of the necessary computer equipment, programs and access codes to successfully integrate the new generation into the MDU system.
3. Crownbutte shall inform MDU of the final date of commissioning for the final release of funds to the turbine manufacturer.
4. Crownbutte shall conduct a final site clean-up, restore all fencing and cattle guards as desired by the landowner.
5. Crownbutte shall adjust for any crop damage.

The cost of these deliverables and services is:

$30,000.00

Timothy H. Simons, CEO
Crownbutte Wind Power LLC
7 March 2007

GENERAL CONSULTING SERVICES AGREEMENT

This Consulting Services Agreement (this "**Agreement**") is made and entered into as of JULY 31, 2007 (the "**Effective Date**") by and between Montana-Dakota Utilities Co. ("Montana-Dakota"), a Division of MDU Resources Group, Inc., a Delaware corporation, and Crownbutte Wind Power LLC ("Crownbutte"), a North Dakota limited liability company (individually a "Party" and collectively the "Parties").

WHEREAS, Montana-Dakota is desirous of acquiring all of the assets Crownbutte has vested in a wind park near Baker, Montana only if that wind park can be successfully permitted, the land appropriately leased, the transmission capability at the site is sufficient to carry the desired additional generation, and the wind resource assessment at the site shows financeable quality.

WHEREAS, Crownbutte selected the Baker, Montana site because of the above attributes, has prepared wind energy conversion leases for use by MDU, identified and contacted all of the pertinent land owners, solicited and acquired the cooperation of local government, prepared letters of application for the necessary permitting, and has presented to MDU a wind resource assessment prepared by a certified consulting meteorologist showing financeable quality based on meteorological data acquired by Crownbutte.

WHEREAS, Montana-Dakota will from time-to-time have a need for certain additional assistance and consulting services regarding issues (the "Services") related to the wind energy facilities near Baker, Montana.

WHEREAS, Montana-Dakota desires to engage Crownbutte to provide the Services from time-to-time and Crownbutte desires to provide the Services to and on behalf of Montana-Dakota.

NOW, THEREFORE, in consideration of the mutual covenants and agreement contained herein, the Parties hereby agree as follows:

1. In accordance with the terms and conditions set forth herein, Crownbutte agrees to provide the Services requested by Montana-Dakota: (a) as set forth in the attached Exhibit A-1, and (b) as set forth in future scopes of work to be agreed to by the Parties and attached hereto as subsequent subparts to Exhibit A (e.g., A-2, A-3, etc.), which exhibits are and shall be incorporated by reference herein for all purposes.

2. Crownbutte shall perform the Services with due diligence, in a safe, competent and workmanlike manner, utilizing reasonable care and skill, in accordance and consistent with customary industry standards. The Services to be performed by Crownbutte hereunder are solely for the benefit of Montana-Dakota, and there

shall be no third party beneficiary thereof except as expressly permitted by Montana-Dakota in writing.

3. Crownbutte will supply any information related to the Services to Montana-Dakota that is provided to Crownbutte from another source.

4. The consideration to be paid by Montana-Dakota to Crownbutte for Services provided hereunder shall be the fee stated in the appropriate subpart of Exhibit A (e.g. A-1, A-2, etc.) applicable to the Services contemplated plus the reimbursement of incidental expenses specifically provided for in Exhibit A. Crownbutte shall supply at its own expense, all other materials, supplies, equipment and tools required for it to accomplish the services to be performed in accordance with this Agreement. Montana-Dakota shall not be liable to Crownbutte for any expense paid or incurred by Crownbutte unless specifically agreed to in writing.

5. If the Services involve the purchase or procurement of machinery, equipment, materials, or services from others to be paid for by Montana-Dakota, all contracts for such purchase or procurement shall be in the name of Montana-Dakota, pre-approved by Montana-Dakota and executed by Montana-Dakota. Crownbutte shall have no power under this Agreement to enter into such contracts on behalf of Montana-Dakota.

6. Each invoice for services performed under this Agreement shall be paid by Montana-Dakota within 30 days upon receipt of the invoice by Montana-Dakota. If Montana-Dakota disputes any portion of an invoice, the undisputed portion shall be paid and, when the dispute is resolved, Crownbutte shall issue an adjusted invoice and Montana-Dakota shall pay any remaining amount owing as reflected on the adjusted invoice. In no event will Montana-Dakota be liable for payment of interest on amounts disputed in good faith. If payment is not received within 45 days of receipt by Montana-Dakota of the undisputed portion of an invoice in question, a late payment charge of one and one-half percent (1.5%) of the outstanding balance owed will be added to the invoice by Crownbutte for the month following the date of such unpaid invoice and for each month thereafter until payment is received.

7. Upon Montana-Dakota's request and as a condition precedent to final payment, Crownbutte shall furnish all partial and final lien waivers and releases and sworn statements under the mechanics lien act of the state where the wind energy facilities are located, for Crownbutte and all of Crownbutte's subcontractors and suppliers, together with receipted bills showing payment by Crownbutte of any items included in the services hereunder.

8. Crownbutte shall be solely responsible for and pay and discharge, when due and owing, any and all taxes associated with or attributable to any fees paid by Montana-Dakota to Crownbutte for the Services.

9. Crownbutte is engaged as an independent contractor and not as an employee. Montana-Dakota shall have no control over Crownbutte's manner or method of performance of the Services. Crownbutte shall have no right or power to bind Montana-Dakota and shall not enter into any agreement with any third party on behalf of Montana-Dakota. Crownbutte shall not have any of the rights of an employee with respect to Montana-Dakota including, but not limited to workers' compensation, retirement benefits, health insurance, and all other benefits provided to Montana-Dakota's employees. No payroll taxes of any kind shall be withheld from payments to Crownbutte hereunder, nor paid by Montana-Dakota on behalf of Crownbutte or any employees of Crownbutte. Neither Crownbutte nor anyone employed, retained or contracted by Crownbutte will be (or may claim to be) the agent, partner, servant, employee or representative of Montana-Dakota in the performance of the Services.

10. Crownbutte agrees to comply with the Confidentiality Provisions attached hereto as Exhibit B, which exhibit is hereby incorporated by reference (the "**Confidentiality Provisions**").

11. Crownbutte shall effect and maintain insurance at its own cost and expense to protect itself from and against: (a) any claims under applicable Worker's Compensation Acts, (b) claims arising out of the bodily injury or death of any of its employees and other agents, (d) claims arising out of the performance or rendition of services caused by errors, omissions or negligent acts for which it can be held liable, each with limits of no less than $1,000,000 per occurrence. Crownbutte shall provide certificates evidencing that such insurance is in place, and, in the case of all coverages (excluding Workers Comp), such certificates shall name Montana-Dakota and MDU Resources Group, Inc. as additional insureds thereunder.

12. In no event will either Party be liable to the other for special, indirect, incidental, punitive, exemplary, or consequential damages or loss, including lost profits, loss of business opportunity or similar damages.

13. Crownbutte hereby releases Montana-Dakota from and shall fully protect, defend, indemnify and hold harmless Montana-Dakota, its affiliates, and their respective directors, officers, employees and successors and assigns from and against any and all claims and damages relating to, arising out of, or connected with, directly or indirectly, Crownbutte and its performance of the Services hereunder, but only to the extent caused by the acts or omissions of Crownbutte or anyone directly or indirectly employed by Crownbutte or anyone for whose acts it may be liable and for all claims and damages asserted by employees, agents or representatives of Crownbutte.

14. Montana-Dakota shall indemnify and hold Crownbutte harmless from and against any and all claims, liabilities, damages and costs (including reasonable attorney fees related thereto) for any bodily injury or death to persons or property damage

of and to the extent caused by the negligence and willful misconduct of Montana-Dakota and those for whom Montana-Dakota is legally liable.

15. Crownbutte shall make every reasonable effort to perform the Services in a manner compliant with all applicable safety legislation and with applicable laws, rules, and regulations in force at the time of providing the Services including all environmental laws, rules and regulations. Crownbutte shall also be responsible for the safety of its own employees at all times during the performance of the Services.

16. Original drawings, specifications, final project specific calculations, and other engineering documents which Crownbutte prepares, obtains, or delivers to Montana-Dakota pursuant to this Agreement shall become the property of Montana-Dakota when Crownbutte has been compensated for Services rendered.

17. Crownbutte may not assign, sublet or subcontract the Services, or any part thereof, without the prior consent of Montana-Dakota.

18. Montana-Dakota may terminate this Agreement at any time for reason of demonstrable breach or default after informing Crownbutte of such breach or default in writing and after having given Crownbutte fifteen (15) days to cure such breach or default. The compensation due Crownbutte will be based on the actual services provided prior to the date of termination and demobilization, minus any amounts previously paid to Crownbutte.

19. Crownbutte may terminate this Agreement upon ten working days notice if Montana-Dakota becomes insolvent or bankrupt, or commits a material breach or default of any of the covenants or obligations hereunder, including failure to make payments to Crownbutte as and when required by this Agreement. In such case, Crownbutte shall be paid costs incurred and fees earned to the date of termination and demobilization.

20. Notwithstanding anything contained in this Agreement to the contrary, termination of this Agreement will not modify Crownbutte's obligations of confidentiality under the Confidentiality Provisions or Crownbutte's indemnification obligations hereunder, and such obligations will survive the termination of this Agreement.

21. In the event of a dispute between the Parties regarding fees, costs or any other aspect of their relationship, including claims of professional negligence, errors and omissions, the dispute will be resolved by binding arbitration before a single arbitrator and otherwise in accordance with the rules of the American Arbitration Association. By agreeing to binding arbitration of any such disputes, each Party understands and agrees that it is waiving its right to a jury trial with regard to a resolution of such disputes should they occur.

22. All notices and other communications required, permitted or desired to be given hereunder must be in writing, properly addressed as set forth below, and sent by U.S. mail or courier service, with all postage or charges fully prepaid, or delivered by hand or by facsimile transaction. Date of service by U.S. mail, courier service or hand delivery is the date on which such notice is confirmed as received by the addressee. Date of service by facsimile transmission is the date such notice is sent and written confirmation of receipt is obtained. If the date of service falls on a weekend or holiday, then service is considered to be given on the next business day. Each Party may change its address by notifying the other Party in writing.

If to Montana-Dakota
Montana-Dakota Utilities Co.
400 North 4th Street
Bismarck, ND 58501
Facsimile: 701-222-7606
Attention: VP Electric Supply

If to Crownbutte
Crownbutte Wind Power LLC
1400 Monte Drive
Mandan, North Dakota 58554
Facsimile: (701)663-8825
Attention: Tim Simons
Email: Crownbutte@bis.midco.net

23. No alterations, modifications, amendments or changes in this Agreement will be effective or binding on the Parties unless the same shall be in writing and signed by both Parties.

24. THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED PURSUANT TO THE LAWS OF THE STATE OF NORTH DAKOTA WITHOUT REGARD TO ANY CHOICE OF LAW RULES OR PRINCIPLES WHICH MAY DIRECT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION.

25. Nothing contained in this Agreement shall entitle any person or entity other than Montana-Dakota or Crownbutte or their authorized successors and assigns to any claim, cause of action, remedy or right of any kind whatsoever.

26. This agreement supersedes all prior negotiations, understandings, letters of intent and agreements between the Parties relating to the Services described in Exhibit A (including its subparts thereof) and constitutes the entire understanding

and agreement between the Parties with respect to the Services; provided that the Confidentiality Provisions attached as Exhibit B shall be understood to be continuing in full force and effect in accordance with its terms.

IN WITNESS THEREOF, the Parties hereto have executed this Agreement to be effective as of the date first above written.

Montana-Dakota Utilities Co., a
Division of MDU Resources Group, Inc.

By: _____ DK
Name: Andrea Stomberg
Title: V.P. Electric Supply

Crownbutte Wind Power LLC

By: _____
Name: Timothy H. Simons
Title: President and CEO

EXHIBIT A-1

GENERAL CONSULTING SERVICES AGREEMENT
for
MONTANA-DAKOTA WIND ENERGY FACILITIES

Pursuant to the terms and conditions of the General Consulting Services Agreement executed and made effective as of the 31 day of JULY, 2007, by and between Montana-Dakota and Crownbutte, Montana-Dakota hereby requests and Crownbutte agrees to perform the following Services:

DESCRIPTION OF SERVICES

1. **Scope of Work:** Crownbutte will perform for Montana-Dakota the Services described in this Exhibit A as follows:

2. **Fee:** Crownbutte will charge Montana-Dakota for the Services described in this Exhibit A-1 as follows:

3. **Term of Agreement**

   a. Crownbutte is entitled to a total sum of **five hundred thousand dollars ($500,000) minus the eighty-five thousand ($85,000)** payment received on May 7, 2007, upon Crownbutte's completion of the following individual items. Note: Values for the Services listed below represent progress payments to Crownbutte in lieu of a specific development fee for a constructible project.

      1. Verification by Montana DNRC of need (or not) for permissory application. **($25,000)**
      2. Application for and obtaining of project permission by Montana Fish, Wildlife and Parks. **($25,000)**
      3. Verification by Montana DEQ of need (or not) for permissory application. **($25,000)**
      4. Application for and obtaining of project permission from US Fish and Wildlife. **($25,000)**
      5. Application for and obtaining of project permission from Montana State archeological, historical, and cultural authorities. **($25,000)**
      6. Crownbutte's application for and obtaining of FAA permit. **($40,000)**
      7. Proper project zoning and permitting from all government agencies where required. **($25,000)**
      8. Crownbutte will be responsible for reimbursing Montana-Dakota for the actual costs associated with obtaining the MISO Interconnect up to $50,000. **($50,000)**
      9. Responsible for setting up proper Geotechnical study. **($50,000)**

10. Retaining foundation design engineer and obtaining a buildable foundation design. Crownbutte will be responsible for all engineering costs associated with the wind turbine foundation design (i.e. cost associated with Patrick and Henderson). **($50,000)**
11. Detailed project plan/schedule submitted to MDU. **($25,000)**
12. Assist MDU in assembling a spare parts list. **($25,000)**
13. Provide pre-construction drawing package containing all engineering drawings to MDU. **($25,000)**

In order for Crownbutte to receive full payment for these items in **(a.)** services must be completed no later than 30 October, 2007 (except for MISO Interconnect completion). Completion of items in **(a.)** to be determined by an MDU representative.

4. Other Terms

This Exhibit A together with any attachments hereto and the above referenced Agreement constitutes the complete understanding between the parties with respect to the Services specified herein. In the event of a conflict between this Exhibit and the Agreement, the terms of the Agreement shall prevail.

EXHIBIT B

CONFIDENTIALITY PROVISIONS

1. For the purpose of these Confidentiality Provisions, the terms set forth below will have the following meaning:

   (a) "Parties" means the parties to this Agreement.
   (b) "Party" means a party to this Agreement.
   (c) "Person" should be interpreted broadly to include, without limitation, a corporation, entity, trust, group, partnership or individual.
   (d) "Representatives" means the principals, directors, officers and employees of Crownbutte.

2. Crownbutte has agreed to provide Services relating to a Montana-Dakota wind energy project (the "Project"). In order to allow Crownbutte to perform Services hereunder, Montana-Dakota may disclose to Crownbutte certain information relating to the Project and Project sites, including without limitation, analyses, compilations, business plans, reports, studies, drawings, site layouts, technical information, financial information, contractual information, environmental information and other information. Any and all such information and all copies and extracts of said information, whether coming from Montana-Dakota or prepared by Crownbutte in connection herewith, are referred to herein as "Information".

3. Crownbutte shall:

   (a) treat the Information as confidential and protect the Information in the same manner as it protects its own confidential information;
   (b) not use the Information, directly or indirectly, for any purpose other than in connection with providing the Services;
   (c) not disclose the Information to any Person, except as provided in Sections 5 and 6 below; and
   (d) upon request by Montana-Dakota, promptly return to Montana-Dakota all Information or materials, records and data which incorporate any of the Information or was prepared based on said Information.

4. Crownbutte will have no obligation hereunder with regard to Information which, other than by breach of this Agreement: (a) lawfully comes into Crownbutte's possession without restriction on disclosure; (b) is developed by Crownbutte without use of the Information; or (c) is currently, or at the time of disclosure by Crownbutte, within the public domain.

5. Subject to restrictions set forth herein, Crownbutte may disclose Information to its Representatives who have a need to know the Information to the extent necessary to provide the Services. Crownbutte shall require any Representative

who receives the Information under this Section 5 to agree to keep the Information confidential in accordance with the terms of this Agreement and shall remain liable for any Representative's breach hereof. Crownbutte may disclose the Information and technical evaluation to a third party only upon obtaining written authorization from Montana-Dakota.

6. If Crownbutte is required to disclose the Information by law, order, decree, regulation or rule (including without limitation, those of any regulatory agency, securities commission or stock exchange), or if any Person seeks to legally compel (by interrogatories, document requests, subpoena or otherwise) Crownbutte to disclose any Information, Crownbutte will provide Montana-Dakota prompt written notice so Montana-Dakota may: (a) seek a protective order or other remedy (including without limitation, participation in any proceeding), or (b) waive compliance with the terms of this Agreement as to such disclosure. Crownbutte may only furnish such Information as is legally required and will use reasonable efforts to obtain confidential treatment of any and all Information required to be disclosed.

7. The Confidentiality Provisions stated in this Exhibit B shall remain in full force and effect for three (3) years from the Effective Date first stated in this General Consulting Services Agreement

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
DATA REQUEST
DATED OCTOBER 15, 2012
DOCKET NO. D2012.3.24

PSC-019

Regarding: 2008 RFP Respondents
Witness: Neigum

Regarding statements made on page 6, please explain why Diamond Willow 2 and Cedar Hills were not respondents to the 2008 RFP.

Response:

Montana-Dakota does not submit responses to its own Requests for Proposal. Diamond Willow 1, Diamond Willow 2, and Cedar Hills were not built to meet the Company's requirement for Montana CREP resources. Montana-Dakota has issued two RFP's for Montana CREP resources, one in 2008 and one in 2010, and based on changes made to the Montana RPS statue through legislation in 2009; Diamond Willow I, Diamond Willow II, and Cedar Hills all qualify as eligible Montana CREP resources.

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
DATA REQUEST
DATED OCTOBER 15, 2012
DOCKET NO. D2012.3.24

PSC-020

Regarding: Diamond Willow Construction and Generation Times
Witness: Neigum

On page 4, you state that Diamond Willow 1 was constructed "in 2007 and in full operation by February 2008."

a. Specifically, on what date did construction of Diamond Willow 1 begin?

b. Did all Diamond Willow 1 turbines begin generating electrical power on the same date? If not, please give the date each turbine began generation.

Response:

a. Construction of Diamond Willow I commenced August 13, 2007; the first turbine was commissioned December 29, 2007; and the final turbine was commissioned in February 13, 2008.
b. See Attachment A for the wind turbine in service dates.

In-service dates (GE Commissioning Date)

	Turbine #	Date
DW 1		
	14	12/29/2007
	13	1/12/2008
	12	1/25/2008
	11	1/17/2008
	10	1/21/2008
	8	2/13/2008
	7	2/6/2008
	6	2/1/2008
	5	1/31/2008
	4	2/1/2008
	3	2/7/2008
	2	2/4/2008
	1	2/5/2008
DW 2		
	22	6/28/2010
	21	6/25/2010
	20	6/16/2010
	19	6/16/2010
	18	6/25/2010
	17	6/25/2010
	16	6/25/2010
Cedar Hills		
	13	5/20/2010
	12	5/21/2010
	11	5/24/2010
	10	5/25/2010
	9	2/27/2010
	8	6/6/2010
	7	5/28/2010
	6	5/29/2010
	5	6/1/2010
	4	6/6/2010
	3	6/3/2010
	2	6/6/2010
	1	6/6/2010

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
DATA REQUEST
DATED OCTOBER 15, 2012
DOCKET NO. D2012.3.24

PSC-021

Regarding: SGIA versus LGIA
Witness: Neigum

On pages 6 and 7, you describe how the MISO interconnection approval was obtained.

a. Would a 19.5 MW wind farm have required an LGIA or an SGIA?

b. If SGIA would have been sufficient, would it have been easier to obtain that interconnection than the process you describe on page 6 as "...no easy matter..."?

c. If interconnected through two different agreements, would the Diamond Willow projects be behind two different MISO commercial pricing nodes?

Response:

a. Prior to August of 2008, a 19.5 MW wind project could have utilized a Small Generator Interconnection Agreement (SGIA) under the MISO Tariff. Post-August 2008, MISO only has a single proforma Generator Interconnection Agreement (GIA).
b. No. The same network electrical impact studies and study phases were required for an LGIA and SGIA.
c. One or two CPNodes could be used in this case.

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
DATA REQUEST
DATED OCTOBER 15, 2012
DOCKET NO. D2012.3.24

PSC-022

Regarding: Cost Competitiveness and Cost Cap
Witness: Neigum

On page 9, you state that the 2010 CREP RFP responses "were not considered cost competitive".

Is your contention that Montana-Dakota would nonetheless be required to acquire such a CREP, or would it be eligible for an exemption under the Montana RPS's cost cap provision?

Response:

Mr. Neigum's testimony has nothing to do with the cost cap. The referenced testimony was that the construction of Diamond Willow 2 was a cost effective solution for the Montana CREP requirement, while the responses to the 2010 RFP were not. Unless it is assumed that the Commission is going to grant Montana-Dakota a waiver of the CREP requirement after it issues an unlawful decision rejecting Diamond Willow 2 as a CREP, using the 2010 RFP response as the proxy cost for the next CREP is a reasonable measure of the rate impact of the Commission's unlawful decision.

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
DATA REQUEST
DATED OCTOBER 15, 2012
DOCKET NO. D2012.3.24

PSC-023

Regarding: Wind Plant Cost Allocation
Witness: Neigum

On pages 8 and 9, you state, "The costs for Cedar Hills are jurisdictionally allocated among Montana-Dakota's customers in Montana, North Dakota, and South Dakota."

a. Please provide the portion from the ruling of the Montana PSC in Montana-Dakota's last rate case where the Commission ordered costs from wind plants in Montana-Dakota's service territory to be allocated on this jurisdictional basis.

b. If no such ruling of the Montana Commission exists, please state the same.

Response:

a. Please see Attachment A for an excerpt from Rita A. Mulkern's testimony filed in Docket No. D2010.8.82 in regard to the allocation of the Cedar Hills wind farm to Montana and the referenced schedule (Statement C, page 10) showing the Total Company and the allocated Montana portion. This allocation methodology is consistent with the Company's resource planning for the integrated system noted throughout the IRPs and the Commission's final order in Docket No. D2010.8.82 effectively incorporated the jurisdictional allocations included in Ms. Mulkern's testimony.

b. Please see Response PSC-023 a.

Rita A. Mulkern
Direct Testimony - Docket No. D2010.8.82

Adjustment B is Montana's allocated portion of the wind generation expansion at Diamond Willow and Cedar Hills, annualized to reflect the plant additions as if they were in service the entire year and is shown on page 10. All related adjustments were also annualized.

Adjustment C is the reallocation of the 19.5 MW Diamond Willow generation that commenced operation in 2008 and is shown on page 11. Montana-Dakota has historically allocated all generation facilities to the jurisdictions on the twelve month integrated system peak demand. The wind, while providing capacity, is more reflective of an energy facility than meeting peak demand and Montana-Dakota is now allocating wind generation to the jurisdictions on a combined demand and energy factor made up of 20 percent of the twelve month system peak demand factor and 80 percent of the interconnected system kwh sales factor. Both the plant and accumulated reserve were reallocated to Montana electric operations.

Adjustment D, shown on page 12, eliminates the acquisition adjustment and related accumulated reserve for depreciation on the 1986 Coyote and Big Stone plant acquisitions pursuant to past Commission Order.

Adjustment E, shown in Rule 38.5.133, Statement D, page 2, increases the average reserve for depreciation on the per books plant by $5,184,364 to restate the reserve to the average pro forma level in order to match the average pro forma plant levels.

D2010.8.82

Docket No. ____
Rule 38.5.123
Statement C
Page 10 of 12

MONTANA-DAKOTA UTILITIES CO.
DIAMOND WILLOW AND CEDAR HILLS WIND GENERATION
ELECTRIC UTILITY - MONTANA
TWELVE MONTHS ENDING DECEMBER 31, 2009
ADJUSTMENT B

Project No.	Acct. #	Description	Total Company	Montana
		Other Production		
J159831	344	Install 10.5 MW Wind - Diamond Willow	$24,948,091	$7,030,537
J159831	344	Install 19.5 MW Wind - Cedar Hills	46,542,125	13,115,878
		Total Other Production	$71,490,216	$20,146,415
		Transmission		
J160143	355	Line interconnect - Cedar Hills	$142,513	$40,161
J160144	355	Line interconnect - Diamond Willow	18,425	5,192
		Total Transmission	$160,938	$45,353
		Total	$71,651,154	$20,191,768

MONTANA-DAKOTA UTILITIES CO.
MONTANA PUBLIC SERVICE COMMISSION
DATA REQUEST
DATED OCTOBER 15, 2012
DOCKET NO. D2012.3.24

PSC-024

Regarding: MISO Commercial Pricing Node
Witness: Addison

On page 3 you explain how Diamond Willow 1 and 2 are behind a MISO commercial pricing node (CPNode).

a. Please provide further explanation as to how a MISO commercial pricing node is constituted.

b. Provide a map of MISO commercial pricing nodes in Montana-Dakota's service territory within MISO. Identify by name and generator each commercial pricing node in Montana-Dakota's service territory within MISO.

c. Please provide examples from Montana-Dakota's service territory within MISO, if any, of commercial pricing nodes where two putatively distinct generating facilities are located behind the same commercial pricing node.

Response:

a. CPNode is generally created when a new load or generation resources are added to the electric system.

b. Montana-Dakota CPNodes within the MDU service territory

MDU.MDU	MDU customer Load
MDU.HESKET1	Heskett Unit 1
MDU.HESKET2	Heskett Unit 2
MDU.CEDARHLS	Cedar Hills Wind
MDU.DIAMNDWILW	Diamond Willow I and II
MDU.GLENULST6	Glen Ullin Station 6
MDU.LEWIS1	Lewis & Clark
MDU.GLENDC1	Glendive Unit 1
MDU.GLENDC2	Glendive Unit 2
MDU.MCTURB1	Miles City

Others CPNodes within the MDU service territory

MDU.TATANKA1	Tatanka wind
MDU.WISHEK1	Wishek heat recovery unit
MDU.BEPMAVS2	Antelope Valley Station Unit 2
MDU.MPC	Coyote Station Service - Minnkota

MDU.NWPS	Coyote Station Service - NorthWestern
MDU.OTP	Coyote Station Service – Otter Tail Power

c. Diamond Willow I and II are the only current generators in Montana-Dakota's service territory in MISO that are distinct facilities which are located behind the same commercial pricing node. Prior to retirement of the Williston Combustion turbines in 2012, those units were treated as a single "behind the meter" generating resource even though they were comprised of two distinct generating units.