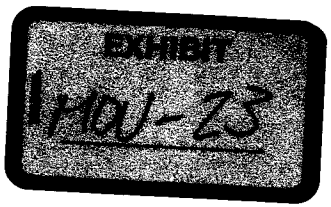


Renewable Resources

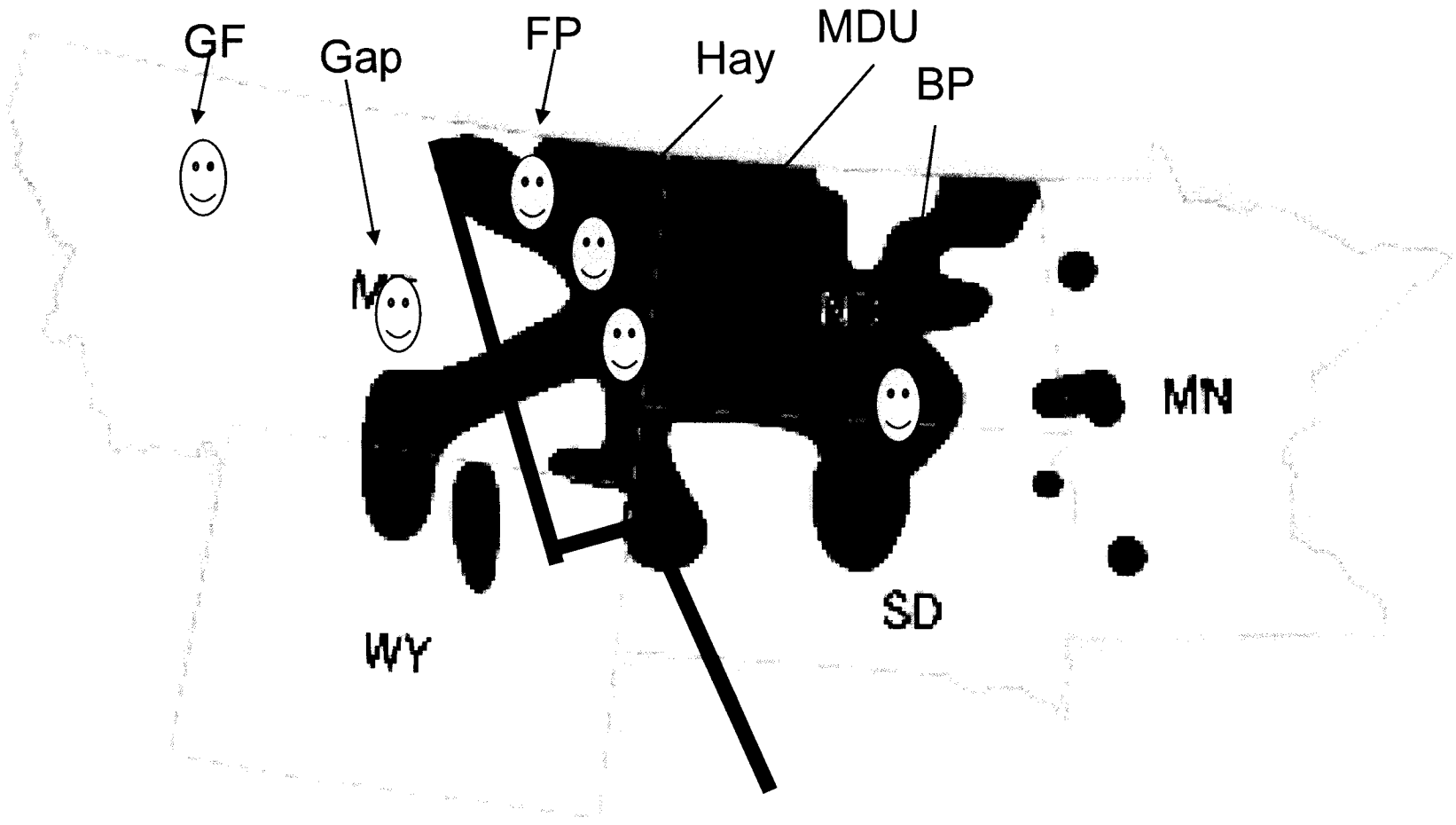
IRP Public Advisory Group

Duane Steen

Director, New Generation Development

March 20, 2007

RFP Locations



- **Electric and natural gas distribution area**
- **Electric generating stations**

Prices

- Gap - $60.45 – 20 y (western interconnect $8.50 pancake)
- Hay - $56.75 - 20 y (WAPA system)
- GF - $54.00 – 20 y (western interconnect $8.50 pancake)
- FP - $51.55 – 20 y (2/3 WAPA hydrogen)
- BP - $45.52 – 15 y (ND)
- MDU - $43.00 (MT)

- {Does not include regulation or balancing which is estimate at $2 to $16 per mwh }
- {Capacity value is $3.00 / mWh}

Crown Butte Wind

Executive Summary

The Crown Butte proposal is a self build option based on the project developer proposal. Crown Butte, the developer, has arranged for landowner approval for up to a 30 MW project approximately seven miles south of Baker, Montana. The project could be built in stages over time up to the 30 MW limit. As the developer, Crown Butte would act as the constructing agent for the project. Interconnect would be onto a 57 KV radial line between Baker and Little Beaver Substation. Montana-Dakota would finance the construction of the project as owner. Crown Butte could also be employed through an O&M agreement to be the operator of the project after construction completion. As the project could be built in stages, MDU would initially only construct 19.8 MW on the site which then would have an estimated annual energy of 75,623 MWhs.

Operations Summary

The project site is located about 7 miles south of Baker in Fallon County. Most of the land in this area is used for ranching with extensive oil field development in place. Historical wind data for the project was acquired from a met tower near Baker, MT. Using this data, the project's annual capacity factor is estimated to be at 43.6% which equates to approximately 75,623 MWh produced annually for a project slightly smaller than 20 MW. The project has selected has not made a turbine selection at this point and such will depend on turbine availability.

Project Financials

Under the proposed MDU would finance the project and be the owner. The 20 year levelized cost is expected to be $41 per MWh.

Fort Peck Tribes Wind

Executive Summary

The Fort Peck Tribes Wind/Hydrogen Energy System development will be located on sites within the Fort Peck Tribes Reservation in northeastern Montana. A feasibility study for wind energy development on the Fort Peck Tribes Reservation was completed by the Bechtel Corporation in 1996. Fort Peck Tribes Reservation is an excellent wind resource area, portions of which have an Annual Mean Wind Speed (AMWS) in excess of 19 mph. The first 10 MW phase of the project is proposed for the site referred to as "Poplar Bluff", located approximately 20 miles due north of the town of Poplar and accessible to a 57 KV MDU power line. The balance of the project may not be located on MDU's transmission system.

Operations Summary

Mariah Energy incorporates a unique, proprietary hydrogen manufacturing, storage, and delivery component into their wind turbine structures that allows for stabilized power generation, and fully rated power delivery on demand, regardless of wind velocity. The combined wind/hydrogen technology becomes a complete full time electrical power generation system. Mariah Wind Turbines equipped with this "Closed Cycle Hydrogen Generation System (CCGS)" manufactures the hydrogen, then uses it to operate the power generation, allowing the electrical output to be controlled based on load demands, not solely on availability of wind. This results in much more effective use of wind and stabilizes energy flow to the grid. The Mariah turbines are 1MW machines and the final project will be comprised of 33 machines. The project is proposed to be completed in three stages, 10MW completed for use in 2008, 10MW completed for use in 2010 and 13MW completed for use in 2014.

Project Financials

Fort Peck Tribes shall be sole owner and solely responsible for construction, operation and maintenance of the Energy System Facility, and shall bear the total cost of the enterprise. The proposed purchase price of electrical power produced by the project is at an initial rate of $0.039 per kWh which yields a levelized rate of $51.55/MWh, continuing for a term of twenty (20) years, to 2028, from the date of first delivery. This price shall escalate at approximately three percent (3%) per year for each year of the twenty year PPA life incorporated into the price at the anniversary date of first delivery. Confidentiality statement is located on page 8 of 43 in the Proposal from Fort Peck Tribes document.

Hay Creek Wind, LLC

Executive Summary

Hay Creek Wind, LLC (Project) is a proposed wind project located on private land near Lindsay, MT. The project is to be developed by Coyote Energy, Inc. located in Columbia Falls, MT. The proposed project size is 33MW and delivers an estimated annual energy of 106,000 MWh. Energy will be delivered to the grid through an interconnection point at a new substation constructed on WAPA's 115kV line.

Operations Summary

The main site of the project is located on private land approximately 10 miles northwest of Lindsay, MT. The project would be constructed on 3 to 5 sections of range land presently used for cattle grazing. Land would be leased from private land owners with the potential for future expansion. Meteorological (met) data has been collected to determine feasibility of the project. The project has two years of met data from a 30 meter met tower located on the proposed site. The data collected at the site along with long term historical data from the NWS station data located in nearby Glendive, MT was used model the project. The project has selected GE 1.5sle turbines as the most suitable machine for the wind resource. The GE 1.5sle is a 1.5 MW machine with a rotor diameter of 77 meters and a hub height of 80 meters. The project will consist of twenty turbines for a total nameplate capacity of 30 MW; these turbines will be coupled together with three smaller 1 MW cluster projects to be located remotely from the large commercial project to stabilize loads on the local distribution network. The total installed capacity will be 33 MW.

Project Financials (3 Options)

Option 1 is a 20 year PPA with the pricing starting at $64.50/Mwh escalating at a fixed rate of 1% per year for 20 years. This option can also offer a flat price of $68.50/MWh for the 20 year PPA.
Option 2 would follow the Option 1 pay schedule up to year 10 with an option to buy at year 11 the grater of fair market value or $44,000,000 **OR** The grater of fair market value or the amount to assure the Project achieves an 8% 10 year after tax rate of return based on total capital costs plus one-half the net present value of the project revenues for the project for years 11 through 20.
Option 3 is the outright purchase of the project at commercial operation date of $62,000,000

Proposal contains a general "Confidential" at the top of each page.

Judith Gap Wind II

Executive Summary

The first phase of the Judith Gap Wind Energy Center began producing power in November, 2006 with all 90 turbines currently online. Northwestern Energy purchases the electricity produced at the existing 135 MW project. The proposed project is 33 MW expansion of the existing project to be located on approximately 35,000 acres. All land necessary to complete the project has been procured. The proposed 33 MW project is to have an estimated annual energy of 121,500 MWh. A 230 kV high voltage transmission line connecting Broadview and Great Falls intersects the proposed site. This line is considered to take the projects produced energy. The energy would be delivered to the Western Interconnect.

Operations Summary

The project site is located in central Montana between Harlowton and Judith Gap in Wheatland County. Most of the land in this area is agricultural and used for ranching with some placed in CRP. Using historical data for the existing Judith Gap Wind Energy project the proposed project's annual capacity factor is estimated to be at 43.1% which equates to approximately 121,500 MWh produced annually. The project has selected GE 1.5sle turbines as the most suitable machine for the wind resource. The GE 1.5sle is a 1.5 MW machine with a rotor diameter of 77 meters and a hub height of 80 meters. The project will consist of twenty turbines for a total nameplate capacity of 33 MW.

Project Financials

Under the proposed project MDU would purchase the energy produced by the facility at a price of $54.94/MWh escalating at 2.5% annually per a 20 year Power Purchase Agreement or at a flat price of $60.45/MWh. Proposal has a general "Confidential" at the bottom of each page.

Liberty Wind Project

Executive Summary

Momentum Renewable Energy, Inc proposes to develop a 30 MW Liberty Wind Project is located on multiple landowner properties near Chester, MT. Momentum is currently in contact with all involved landowners. These properties were the subject of a Liberty County commissioned wind energy study performed by Global Energy Concepts in November, 2005. For this study the projected output is 93,000 MWh net annually. There is a WAPA owned 115 kV transmission line located with in the project site. The energy would be delivered to the Western Interconnect.

Operations Summary

The project site near Chester, MT has a met tower located on it. The data from this met tower was used to determine that the project's estimated average wind speed at 80 meters is 8.2 m/s. The projected net energy output of the project on a monthly basis is 7,750 MWh. There was an assumed 12% loss to obtain this net energy amount. 14 Suzlon S.88 2.1 MW wind turbines will be provided by John Deere Wind Energy (JDWE) for the project. The hub height of these turbines is 80 meters. Momentum has been in contact with WAPA to discuss interconnecting the project to the 115 kV transmission line located within the project site. WAPA reportedly confirmed that sufficient capacity exists on the line for the project.

Project Financials

Momentum and JDWE propose to own 100% of the project. Momentum proposes a firm, flat levelized price of 5.4 cents/kWh or $54/MWh. This price reflects the costs of developing the project in 2007, including the Production Tax Credit and reserves the right to make the price subject to renegotiation for changes in cost relating to environmental and other pertinent laws or regulations, including the PTC extension. Confidentiality statement is on page 4 of the proposal.

Northern Pains Wind Energy, LLC

Executive Summary

Northern Pains Wind Energy, LLC is currently developing a wind energy project in McIntosh, County in south central North Dakota. The project is being developed by BP Alternative Energy North America, Inc. (BPAE). The proposed project size is a 20 MW piece of a larger 65 MW project and would deliver and estimated 75,511 MWh of energy annually. The project will deliver directly to the Midwest Independent Systems Operator (MISO) service area by interconnecting to the Wishek Substation, near Wishek, ND.

Operations Summary

Northern Pains Wind Energy, LLC is currently developing a wind energy project in McIntosh, County in south central North Dakota. The project site is located near Wishek, ND on approximately 8,700 acres of land already under lease. The projects wind resource has been verified by five years of valid data collected form a met tower located on site. The wind resource is particularly well suited for wind energy development due to low turbulence. The project will consist of 8 Class IIb (96 meter) Clipper Liberty Wind Turbines (2.5 MW) for a total nameplate capacity of 20 MW. The project is expected to operate at a capacity factor of 43.1%, yielding annual production of approximately 75,511 MWh. The project will deliver directly to the MISO at the MDU Wishek Substation. The project will construct approx. 4 miles of 115 kV overhead interconnection line, from the project to the existing MDU Substation.

Project Financials

BPAE will fund the development phase and well as provide construction financing using balance –sheet equity and/or blank debt. At commercial operation, construction financing will be taken out with long term limited-recourse project financing. Northern Plains will own the project and supply wind energy to MDU under the terms of a long term power purchase agreement. The agreement will be for 15 years at a fixed price of $45.52/MWh beginning in 2007. Confidentiality statement is located on page 24 of 24 in the Wind Proposal to MDU document.

MONTANA-DAKOTA
UTILITIES, CO.

REQUEST FOR PROPOSALS
WIND ENERGY PROJECT

Montana-Dakota Utilities Co. (MDU) is issuing this Request for Proposals ("RFP") to solicit proposals from developers of wind energy resources ("Responders"). MDU desires to incorporate wind generated energy into its generation portfolio, from Montana wind resources, either through a long-term power purchase agreement ("PPA"), a design- build- operate for a period arrangement, or MDU ownership upon full development.

MDU's intent is to participate in a wind energy project that supports the following goals:

- Support the economy in areas of Montana that are served by MDU.
- Support and promote environmentally responsible cost effective electric generation processes for MDU's customers.
- Purchase of renewable energy at a price that does not increase MDU's cost to serve its customers over that identified in Montana requirements as codified in Montana Code Annotated (MCA) Section 69-8-1001 et seq.

MDU's Integrated Resource Plan will indicate that MDU will meet the requirements of Montana's Renewable Power Production and Rural Economic Development Act. MDU seeks eligible resources capable of providing a total of approximately 33,000 MWh of energy annually by the end of 2008, 69,000 MWh of energy annually by the end of 2010, and 106,000 MWh of energy annually by the end of 2015.

If this RFP were characterized in capacity terms alone, MDU would be seeking approximately 33 MW of nameplate wind capacity by 2015. Of this 33 MW, 30 MW is nominally intended to be from a large project or aggregate of smaller installations and in addition three MW would be reserved for qualified Community Renewable Energy Project (s) (CREP) as defined in the Montana Code Annotated (MCA) Section 69-8-1001 et seq. A competitive large project may include a CREP component. As indicated above, approximately 10 MW would be constructed in 2007 for use in 2008, an additional 10 MW would be added in

2009 for use in 2010, and another 10 MW would be added in 2014 for use in 2015. Economies of size might dictate an aggregate of these projects.

Criteria

Among the criteria that will be considered in determining a preferred Responder are the following:

1. Price
2. MISO Deliverability
3. Evidence of site control
4. Quality and experience of the development team.
5. Ability for a resource to be accredited in MAPP or succeeding reliability organization.
6. Financial capability of the Responder
7. Location within MDU service territory
8. An option for utility ownership

Preferred Responders will be considered that can demonstrate a history of successful wind energy project completion, have the ability to complete a project within the required timeframe, and can provide a wind energy project consistent with MDU's strategy. The selected Responder will be required to provide financial security of performance, in a format acceptable to MDU, which will ensure completion of the project in a timely manner. In addition, under a PPA as indicated in MCA Section 69-8-1004, the Responder will be responsible to insure yearly production and, if not successful, will be required to pay the penalty stated in the code. Advanced approval by the Montana Public Service Commission will be required before the PPA will be executed by MDU.

Process

MDU will assess all proposals to determine which are the most economical, feasible and viable options for meeting MDU's generation diversity and system needs. The assessment will take into account both economic and non-economic factors. Upon completion of this assessment, MDU will create a short list of qualified projects.

Short List

Responders who enter into preliminary discussions with MDU will be required to demonstrate the following:

- Site control by showing evidence of either site ownership, an option to purchase the site, or an option for a long term lease.
- A plan for determining local community reaction to the project and an action plan for working with the local community on project issues.
- Pay to MDU $0.05/kW of name plate capacity no later than five (5) business days after receiving notice from MDU that it qualifies for MDU's short list of qualified projects. This nonrefundable fee is

intended to secure the obligation of each Responder during the evaluation period and to ensure each Offer has been carefully considered and represents a binding offer to MDU. If the Responder fails to submit this fee within the five (5) business day deadline, the Responder's Offer will be rejected and removed from the short list of qualified projects.

REQUIRED INFORMATION:

Each Responder will be required to provide the following information:

1) **Location of Project:**
   Provide details on where the project will be located and any site description details, including size, and the right of Responder to acquire ownership or lease land.

2) **Siting Description:**
   Provide a description of plans for assessing local community siting issues and requirements with respect to resource and associated transmission. The Responder should include efforts to address any of these issues. Responders with approved siting and/or routing permits will receive greater weight.

3) **MDU Ownership:**
   MDU desires to own the facilities other than the CREP facilities. MDU will, however, evaluate PPA's, full ownership, partial ownership and turn-key proposals.

4) **MISO Deliverability:**
   Proposals will be evaluated based on the ability of the project to participate effectively in the Midwest Independent System Operator (MISO) market. More information on interconnect and market rules can be obtained at http://www.midwestiso.org/home. Proposals must include any information available relative to the proposed project and its interface with the MISO market. Evidence of interconnection with MISO and deliverability studies should be included in the proposal if available.

5) **Regulatory and Environmental Compliance:**
   Responder is responsible for meeting and satisfying all federal, state and local permits, licenses, approvals and/or variances that are currently, or may become in the future, required for the operation of the project and the delivery of energy.

6) **Company Qualifications and Experience:**

Responder should supply information regarding the corporate structure, including primary and secondary businesses, of the Responder.

Also include the Responder's projects and independent power supply ventures participated in over the last ten years.

Separate descriptions are required for each member if there is a consortium or partnership of two or more firms and the relationship between the entities for this proposal.

7) **Financial Considerations:**

Each Responder must include the following financial information for each Responder/entity involved in the proposal:

- Current annual report for each party. (If an annual report is not available, a listing of assets, liabilities and cash flow must be provided)
- Current quarter profit and loss statement for each party.
- DUNS #, S&P, Moody's and/or Fitch Debt rating.
- Description of project financing.

8) **Other Information:**

This section provides the opportunity to describe other aspects that may not fit into one of the other categories. This may include alternative approaches to providing renewable energy benefits.

9) **Pricing Information:**

Prices shall be quoted in U.S. dollars and shall be considered firm unless expressly stated otherwise. If the Responder's pricing policy involves escalation or an index, the escalation terms and conditions or specific index must be included for evaluation. Indexes used should be published and publicly available. Prices should include all taxes and environmental charges. The Responder will be responsible for compliance with all applicable existing and future environmental requirements during the term of a PPA. All prices shall be defined for the duration of the agreement signed by MDU and the Responder. The Responder may only make such prices subject to renegotiations for changes in costs relating to environmental requirements and other pertinent laws and/or regulations that are beyond the control of the Responder. Such renegotiations, if any, will be for purposes of adjusting only those price components directly affected by such regulatory and/or legislative changes.

10) **Pricing Terms:**

MDU encourages creative pricing proposals. However, at a minimum, all Responders offering a PPA should offer a flat/levelized price.

Prices should be stated in year of occurrence U.S. dollars and shall be considered firm unless expressly stated otherwise.

If the Responder's pricing policy involves escalation, the escalation terms and conditions must be included for evaluation.

MDU will be granted any and all current and/or future renewable energy certificates and emissions credits associated with the energy from the successful project. The project must be able to be certifiable in a Renewable Energy Credit (REC) market that will operate within the eastern grid system to be determined by the Montana Public Service Commission. In addition, MDU will be granted all accredited capacity from the proposed project.

11) Generation Equipment:

Describe the generation equipment and how it will be operated and maintained, including:

- manufacturer and model
- size of the generation units
- tower height for wind projects, and
- any other relevant equipment information.

Responder should also provide estimated maintenance schedules.

12) Term:

Responders should offer 15 and 20 year terms for PPA's, if applicable. Proposal terms should not be less than five years and may be up to 25 years in length. Reverse ownership of the project at the conclusion of the PPA is a desirable option.

13) Commercial Operation:

MDU will look most favorably on contracts that begin energy delivery matching MDU's needs, i.e. 2008, but will consider earlier commercial operation dates.

14) Energy Analysis:

Based upon site specific wind speed/fuel data and equipment performance specifications, include an initial study of the energy production from the facility indicating the:

- gross monthly and annual energy production
- calculation of energy losses
- projected net energy output on a monthly basis, and
- projected guaranteed monthly net megawatt hour energy production.

- the quality of the wind data used in the analysis.

15) Transmission:

Please provide information about all transmission work that the Responder has completed or plans to complete with respect to the project. For example, if the Responder has filed a generator interconnection request or a transmission service request with the Midwest ISO, please indicate the queue number, request size, and status. Also, if the Responder has performed its own transmission analysis for the project this should be provided.

Please indicate when the Responder believes that the project's generator interconnection will be completed and firm transmission service will be available. In addition, please indicate whether the Responder is willing to assume the risk of curtailment during periods when firm or non-firm transmission service is unavailable.

If placed by MDU on the short list of qualified projects, the Responder should be prepared to pay for any required interconnection and transmission studies.

16) Local Participation:

Please indicate whether the project will involve local ownership or participation in the revenue of the project. If applicable, describe the type and level of local ownership or participation in the project. MDU will submit CREP project information to the Montana Public Service Commission for qualification of ownership structure.

17) Confidentiality:

MDU will not disclose to another party any information contained in the Responder's proposal that is marked "Confidential", unless such disclosures are required by law or by a court or governmental or regulatory agency having appropriate jurisdiction. As a regulated utility, MDU may be required to release proposal information to various government agencies including the Montana Public Service Commission as part of a regulatory review or legal proceeding. MDU also reserves the right to disclose proposals to any MDU consultant(s) and attorneys for the purpose of assisting in evaluating proposals. In the event MDU is required to submit copies of proposals to any governmental or regulatory agency, MDU will attempt to file such information labeled as "Confidential" on a confidential basis. Designating specific information as confidential, rather than the entire proposal, may facilitate such efforts. However, MDU cannot guarantee that such information will be deemed confidential by the agency or court the information is filed with.

Acceptance of Proposals

MDU reserves the right, without qualification, to select or reject any or all proposals and to waive any formality, technicality, requirement, or irregularity in the proposals received. MDU also reserves the right to request further information, as necessary, to complete its evaluation of the proposals received. Responders who submit proposals do so without recourse against MDU for either rejection by MDU or failure to execute an agreement for purchase of capacity and/or energy for any reason. MDU will not reimburse any Responders for any cost incurred in the preparation or submission of a proposal and/or any subsequent negotiations regarding a proposal.

Proposal Submission

If you have any general questions about any portion of this RFP, please contact Duane Steen (MDU) at (701) 222-7804.

Proposals are due no later than October 27, 2006. Proposals submitted electronically via email will be most welcome. Proposals may be submitted by e-mail, mail, fax, or hand delivery. Faxed or e-mailed proposals must be followed up by mail with a signed original and may arrive after the due date as long as the fax or email copy meets the due date requirement. All proposals should be directed to Duane Steen at Montana-Dakota Utilities.

E-mail:	duane.steen@mdu.com
	Include "2006-1 Montana Resource RFP" in the subject line.
Voice:	701-222-7804
Fax:	701-222-7866
Mailing address:	Duane Steen Director – New Generation Development Montana-Dakota Utilities, Co. 400 North 4th Street Bismarck, ND 58501

Responses to this RFP will be due October 27, 2006. A Nonbinding Notice of Intent to Respond is due on October 13, 2006.

Proposal Schedule and Evaluation Process

Responders should submit three bound copies of their proposals including all appropriate documents and exhibits on or before October 27, 2006. An electronic copy of the proposal is also requested on a CD. Proposals should be delivered to:

Duane Steen
Director – New Generation Development
Montana-Dakota Utilities, Co.
400 North 4th Street
Bismarck, ND 58501

MDU requests that questions regarding this RFP be submitted by email to Duane Steen at duane.steen@mdu.com. Answers will be provided to all Responders, if appropriate as determined by MDU, by email or by amendment to this RFP.

MDU will complete its evaluation of proposals received by November 15, 2006, and will invite one or more Responders to meet with MDU's management team to discuss their proposals in further detail. Based on those discussions, MDU intends to select a developer by November 22, 2006, with the intent of finalizing documentation of a PPA, and/or other appropriate project documents, no later than December 15, 2006.

MDU reserves the right, at any time prior to finalization of a PPA, in its sole discretion, to terminate, or once terminated to resume, this RFP process or negotiations with any Responder. Nothing herein shall be construed to bind MDU unless and until a PPA or another binding contract has been negotiated, executed and is effective. The costs for responding to the RFP are the responsibility of the Responder.