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

Before the South Dakota Public Utilities Commission

Docket No. EL15-___

Direct Testimony
of
Darcy J. Neigum

Q. Please state your name and business address.

A. My name is Darcy J. Neigum and my business address is 400 North Fourth Street, Bismarck, North Dakota 58501.

Q. By whom are you employed and in what capacity?

A. I am the Director of System Operations and Planning for Montana-Dakota Utilities Co. (Montana-Dakota), a Division of MDU Resources Group, Inc.

Q. Please describe your duties and responsibilities with Montana-Dakota.

A. I have managerial responsibility for overseeing the day-to-day operations of the Company's electric control center and System Operations & Planning Department. The System Operations & Planning Department is responsible for preparing electric resource plans and expansion studies for the Company.

Q. Please outline your educational and professional background.

A. I hold a Bachelor's Degree in Electrical and Electronics Engineering from North Dakota State University as well as a Masters of

Business Administration from the University of Mary. My work experience includes four years as a nuclear plant engineer, three years of experience as a coal-fired power plant engineer, and eleven years of generation development and operational responsibilities for coal-fired, gas-fired, and renewable generation sources. I have been responsible for the development of the Company's integrated resource planning activities since 2008.

Q. What is the purpose of your testimony in this proceeding?

A. I will provide support and justification for the Company's investment in incremental generation as described by Ms. Kivisto and Mr. Skabo. This includes addition of the Heskett III gas turbine, the two Reciprocating Internal Combustion Engines (RICE) the Company is installing at the Lewis & Clark Station and the Thunder Spirit Wind Project (Thunder Spirit) through the Company's integrated resource planning process. I will describe the modeling used to support the required environmental upgrade projects at Big Stone Station and Lewis & Clark Station; the Diamond Willow I and II, Cedar Hills, and Glen Ullin heat recovery generation resources the Company added to its integrated electric system in recent years and finally I will discuss the changes in transmission service arrangements occurring in the third quarter of 2015.

Q. How has Montana-Dakota customer peak load and energy requirements grown since 1985?

A. As shown on Exhibit No. ____(DJN-1), Montana-Dakota's peak load requirements on the integrated system have grown from 350 MW on the summer peak in 1985 to 533 MW on the summer peak in 2014. Likewise, the winter peak has increased from 331 MW to 557 MW over the same time period. Annual energy requirements have increased by approximately 77 percent since 1985. A graphical representation is provided on page 2 of Exhibit No.___ (DJN-1) where the blue line represents the Company's annual energy requirements in MWh, the red line represents the Company's annual summer peak demands in MW and the green line represents the Company's annual winter peak demands from 1985 to 2014.

Q. Is Montana-Dakota a summer peaking or winter peaking utility?

A. As shown on Exhibit No.___(DJN-1), Montana-Dakota has historically been a summer peaking utility. However, the summers of 2013 and 2014 have been unseasonably cool as compared to seasonal averages and Montana-Dakota has seen higher winter peaks as compared to summer peaks in 2013 and 2014. This is largely due to the increased customer load since 2012 and the absence of hot summer temperatures. Montana-Dakota still believes that it is a summer peaking utility and its peak demand requirements in the Midcontinent ISO (MISO) are based upon summer load forecasts and conditions.

Q. If Montana-Dakota would have experienced summer temperatures in 2014 as experienced in 2012 what might it have seen for a peak summer load?

A. As shown on Exhibit No.___ (DJN-1), Montana-Dakota's peak summer load indicated by the red line typically tracks with customer energy requirements indicated by the blue line. Based on 2012 peak data and weather and if similar weather conditions would have been experienced in 2014 it is likely that Montana-Dakota would have seen a peak summer load of approximately 650 MW.

Q. What would Montana-Dakota's summer peak load in 2014 have been if the summer peak load would have occurred on an adjusted 50/50 peak summer load condition?

Montana-Dakota's last peak demand versus temperature study indicated that for every one additional degree Fahrenheit of temperature increase on peak during the summer, customer load would increase by 6 MWs.[1] Montana-Dakota's weighted average system temperature during the summer peak of 2014 was 88 degrees Fahrenheit compared to a weighted average 50/50 system peak temperature of 96.5 degrees Fahrenheit.[2] The adjusted 50/50 peak summer load for 2014 would equate to 584 MW (533 MW + 51 MW) as compared to an actual peak winter load in 2014 of 557 MW.

[1] 2015-2034 Montana-Dakota Long-Term Load Forecast. Page 31.
[2] 2015-2034 Montana-Dakota Long-Term Load Forecast. Page 32.

Q. What capacity and energy resources has Montana-Dakota added to meet its customer requirements since 1985?

A. Montana-Dakota has added the following capacity and energy generation resources since 1985:

1986	66 MW AVS II Capacity and Energy Purchase Agreement
2003	43 MW Glendive Unit II Natural Gas Combustion Turbine
2006	Expiration of 66 MW AVS II Capacity and Energy Purchase Agreement
2007	19.5 MW Diamond Willow I Wind Project
2009	5.3 MW Glen Ullin Heat Recovery Project
2010	19.5 MW Cedar Hills Wind Project
	10.5 MW Diamond Willow II Wind Project
2012	110 MW We Energies Annual Capacity Purchase Agreement
2013	115 MW We Energies Annual Capacity Purchase Agreement
2014	120 MW We Energies Annual Capacity Purchase Agreement
2014	88 MW Heskett III Natural Gas Combustion Turbine
2015	107.5 MW Thunder Spirit Wind Project (12/31/15)
	19 MW Reciprocating Engine Project (12/31/15)

Q. Would you describe the generating resource additions Montana-Dakota has installed since the expiration of the AVS II Agreement in 2006?

Montana-Dakota has made several generating resource additions since 2006 including: a 19.5 MW Wind Project named Diamond Willow I which commenced commercial operation in February of 2008, a 5.3 MW heat recovery generating station named Glen Ullin Station #6 which commenced commercial operation in July of 2009, a 19.5 MW Wind Project named Cedar Hills which commenced commercial operation on

June 6, 2010, and a 10.5 MW expansion to the Diamond Willow II Wind Project which commenced commercial operation on June 28, 2010.

Q. Please describe the Diamond Willow I and II Wind Projects.

A. Construction began on the 19.5 MW Diamond Willow I Wind Project, located southeast of Baker, Montana, in 2007. The project consists of 13 General Electric (GE) wind turbines each rated at 1.5 MW. The Diamond Willow I Wind Project began commercial operation in February of 2008 and has been serving the interconnected system customers since that time.

The Diamond Willow Wind Projects connect to Montana-Dakota's 57 kV transmission system which runs through the project site. Diamond Willow achieved an annual capacity factor of 39.6 percent in 2009 and has had an annual capacity factor of 36.1 percent since 2011.

Montana-Dakota employs two wind technicians who perform all the operation and maintenance for the Diamond Willow I and II projects.

The Diamond Willow I Project was built for $39.4 million which included the cost of the turbines, associated substation, and transmission interconnection facilities. The 10.5 MW Diamond Willow II expansion project began construction in 2009 and consists of 7 GE wind turbines each rated at 1.5 MW. The Diamond Willow II project commenced commercial operation on June 28, 2010. The cost of the Diamond Willow II project was $25.4 million which included turbine equipment, substation facilities, and transmission interconnection costs.

The interconnection substation for Diamond Willow I was expanded with a third 10 MVA transformer to accommodate the Diamond Willow II project.

Q. Please describe the Glen Ullin Station #6 heat recovery project.

A. The Glen Ullin heat recovery project, named Glen Ullin Station #6, is a 5.3 MW heat recovery generating facility located near Glen Ullin, North Dakota. The Glen Ullin generating station is interconnected with the exhaust stack of the Northern Border Compressor Station #6.

The Glen Ullin generating station takes the exhaust off the Northern Border Compressor Station and passes it through a heat exchanger located in the exhaust path of the turbine for the compressor station. This heat exchanger heats a closed loop oil system which in turn vaporizes and superheats a volatile pentane liquid which in turn drives a turbine and generator. The exhaust of the turbine is sent to an air-cooled condenser where the pentane gas is cooled and condensed back into a liquid.

The Glen Ullin generating station is capable of generating on average 5.3 MW without the combustion of any additional fuel. The only fuel combusted on-site is used to drive the Northern Border gas compressor which does not require any additional fuel to support the Montana-Dakota generating equipment. The Glen Ullin Station #6 is considered an intermittent resource because it is only capable of generating if the Northern Border compressor station is operating.

Montana-Dakota has a waste heat purchase and lease agreement with Northern Border. The term of the Northern Border agreement is for a 20 year period, with additional five year extension options available.

Ormat Technologies (Ormat) supplied the equipment and constructed the generating facilities for the Glen Ullin project under an Engineering, Procurement, and Construction Agreement. Ormat is contracted to be the operator for the Glen Ullin generating station for a five year period. Montana-Dakota is in contract negotiations with Ormat to remain the operator for the Glen Ullin Station #6 unit as the initial five year maintenance agreement has expired.

The total cost of Glen Ullin Station #6 was $16.7 million which included the cost of the generating equipment, associated substation, and transmission interconnection facilities. Glen Ullin Station has had an annual capacity factor of 81.6% percent since 2010.

Glen Ullin Station #6 connects to Montana-Dakota's 41.6kV transmission system at the Glen Ullin Rodeo Substation.

Q. Would you please describe the Cedar Hills Wind Project?

A. Cedar Hills Wind is a 19.5 MW wind project, located west of Rhame, North Dakota that Montana-Dakota developed by Montana-Dakota based on experience the Company received during the development and construction of the Diamond Willow I project.

Montana-Dakota looked to develop additional wind generation in the vicinity of Diamond Willow I for several reasons.

The Diamond Willow project demonstrated that an excellent wind resource exists around the Baker, Montana, area. As noted earlier, Diamond Willow's 2009 annual capacity factor was 39.6 percent, and its ten month 2008 capacity factor was 38.0 percent. Also impressive is a wind profile at the Diamond Willow I project that matches Montana-Dakota's customer load pattern, which is unlike most Midwest ISO wind projects generating the majority of their wind output during off-peak hours when customer demand is low.

Siting another wind project near Diamond Willow I allowed for synergies between the two projects including the sharing of personnel, facilities, tools, and parts.

The Diamond Willow I project is located on a Montana-Dakota 57kV transmission circuit which has a lower cost of interconnection compared to higher voltage facilities. Cedar Hills provides diversity from Diamond Willow by being located on a separate 57kV transmission facility than Diamond Willow.

The Federal Production Tax Credit (PTC) for wind was set to expire in 2009 when Montana-Dakota started looking to develop a new wind project. The PTC provides a tax credit of $23 per MWh of production for a ten year period for qualifying wind generating facilities. Cedar Hills and the Diamond Willow II both qualified for the PTC. The PTC's provide a significant savings to Montana-Dakota's customers.

Under the Midwest ISO transmission siting and planning practices, available transmission capacity to support new interconnects is allocated on a first come first serve basis. Utilizing the existing capabilities of the transmission system in the Baker and Rhame area, Montana-Dakota was able to efficiently and economically interconnect renewable generation sources onto the existing transmission system. Conversely, at the time of the construction of Diamond Willow I and Cedar Hills, the Midwest ISO queue had 2,700 MW of wind projects requesting interconnect onto the remainder of Montana-Dakota's transmission system, therefore likely taking up most of the available transmission interconnection capability at other locations.

The Cedar Hills Project, consisting of 13 GE wind turbines each rated at 1.5 MW, began construction in 2009 and commenced commercial operation on June 6, 2010. The cost of Cedar Hills was $47.4 million which includes turbine equipment, substation facilities, and transmission interconnection costs. Cedar Hills has had an average annual capacity factor of 34.6% since 2011.

Q. Would you explain how the generation resources you just described will be used to meet the various renewable objectives and requirements applicable in Montana-Dakota service territories?

Yes. The Cedar Hills Wind Project, Diamond Willow I and Diamond Willow II, along with the Glen Ullin project, are utilized to help the Company meet the North Dakota and South Dakota Renewable

Objectives and Montana RPS requirements. The North Dakota and South Dakota Renewable Objectives both target that ten percent of customer's energy requirements should come from renewable sources of generation by 2015. The Montana RPS requires ten percent of the electricity to serve Montana customers to come from renewable sources beginning in 2010 and 15 percent in 2015.

Montana's share of renewable energy credits (RECs) generated from Cedar Hills and Diamond Willow I and II are retired to meet Montana-Dakota's obligations under the Montana RPS. The North Dakota and South Dakota share of RECs from Cedar Hills and Diamond Willow I and II are either sold to Montana customers to meet the Montana RPS or sold to third party buyers of RECs. The Glen Ullin project RECs are all sold to third party buyers. Proceeds from the sale of North Dakota and South Dakota RECs are credited back to North Dakota and South Dakota customers through fuel and purchase costs.

Q. **How much capacity credit does Montana-Dakota receive from MISO for its renewable wind resources to meet it customer's peak demand obligations and what will the total accredited capacity be as of year-end 2015?**

A. On average, Montana-Dakota receives approximately 20 percent of nameplate capacity credit for its renewable wind resources from MISO to meet its customer's peak demand obligations. Montana-Dakota's total accredited generating capacity will be approximately 550 zonal resource credits (ZRCs) at year end 2015.

Q. Can you please describe Montana-Dakota's Integrated Resources Planning Process?

A. Montana-Dakota is required to file a bi-annual Integrated Resource Plan (IRP) every odd year in Montana and North Dakota and Montana-Dakota has provided a copy of the IRP filed in North Dakota each time to the South Dakota Commission. The IRP planning process looks at future load forecasts, supply-side resources and demand response/energy efficiency programs to develop a least cost planning process. This planning process has worked well over the years to address system changes and requirements and inform state regulators about Montana-Dakota's generation expansion plans.

Q. How have the recent IRP planning processes helped to evaluate the construction of recent generation additions for the Company?

A. As part of the 2011 IRP process, the Company evaluated the Big Stone Air Quality Control System Project (AQCS) as described by Mr. Skabo and Mr. Welte, to determine if the addition of the pollution control equipment required to continue to operate the Big Stone Station after 2017 was economically justified. The need for incremental capacity was also identified in the 2011 IRP wherein the Heskett III generator was determined to be the best cost option for meeting the identified capacity need addition. Both the Big Stone Station AQCS and Heskett III generator were included in the 2011 IRP Two Year Action Plan.

As part of the 2013 IRP, the need for up to 73 MW of internal combustion engines was identified in addition to up to 100 MW of wind energy. The 2013 IRP also supported the additions required to continue to operate the Lewis & Clark Station as a coal fired unit and described by Mr. Welte.

The 2015 IRP process continues to support the generation retrofits and additions included in this rate case, in addition to a partnership of approximately 200 MW from a large combined cycle natural gas baseload unit in the year 2020.

Q. Please describe Montana-Dakota's Heskett III Project.

A. The Heskett III Project (Heskett III) includes a natural gas-fired, 88 MW, simple cycle combustion turbine and the facilities to interconnect with Montana-Dakota's existing electric system. Heskett III is located near Mandan, North Dakota, adjacent to Montana-Dakota's R.M. Heskett Station. Heskett III is integrated into the Heskett Station operations utilizing existing plant personal, land, and water and electric infrastructure. Heskett III became operational the summer of 2014. Heskett Station added two new plant employees to its staffing to support the operations and maintenance of Heskett III.

Q. Describe the process whereby Montana-Dakota determined it was in the best interest of its customers to construct the Heskett III resource.

A. The justification for the Heskett III resource was part of the Company's 2011 Integrated Resource Plan. The need for the Heskett III resource was driven by customer load growth and the expiration date of a three year capacity purchase agreement with We Energies to purchase between 110 MW to 120 MW of annual purchased capacity which was part of the Company's 2009 Integrated Resource plan. This purchased capacity agreement with We Energies expired on May 31, 2015.

On June 1, 2010, Montana-Dakota issued a request for proposal (2010 RFP) for all capacity and energy resources beginning on June 1, 2015 totaling between 25 and 225 MW. The analysis of bids received as part of the 2010 RFP and supply side resources available to the Company as part of its 2011 Integrated Resource Plan led to the selection of the 88 MW Heskett III combustion turbine as the best cost resource for Montana-Dakota and its customers.

Q. If Heskett III was best cost does that mean that other alternatives were least cost?

A. As part of its 2010 RFP process, Montana-Dakota received a lower cost alternative from an existing simple cycle combustion turbine project located in Illinois under a 20 year power purchase agreement. For various reasons including location, capacity portability issues, additional transmission service requests, and differences in energy costs to serve Montana-Dakota's customer load, this project was deemed to not be in the best interest of the Company and its customers as a long-term capacity and energy resource.

Q. How will the new 88 MW Heskett III project be used to serve customer needs?

A. The 88 MW Heskett III project will be used to serve customer peak demand requirements and reduce the dependency on third party capacity purchases as well as supplying energy when the energy cost of the unit is less than the next marginal cost unit available to the market.

Q. Please describe the Lewis & Clark RICE Project.

The Lewis & Clark RICE project is an 18.6 MW natural-gas fired reciprocating engine project comprised of two 9.3 MW Wartsilla 20V34SG generating units. The Lewis & Clark RICE project will be located on land owned by the Company and adjacent to the Lewis & Clark coal-fired generating system near Sidney, Montana. The project is scheduled to be completed in the fall of 2015 with an installed cost of approximately $43 million.

The Lewis & Clark RICE project will interconnect into the existing Lewis & Clark 115kV substation and receive natural gas from the existing WBI Energy pipeline serving the Lewis & Clark Station. With the continued development of new natural gas sources and pipelines in the Bakken area, Montana-Dakota is able to contract with WBI Energy for firm natural gas transportation at Lewis & Clark Station which was previously unavailable.

The layout for the Lewis & Clark RICE project will be designed for the potential expansion of two additional 9.3 MW Wartsilla 20V34SG generating units in the future. Co-locating the RICE project at the existing Lewis & Clark Station provides many synergies and cost savings with the utilization of existing company property and facilities including land, natural gas pipeline, and electric transmission and substations. Locating next to the existing Lewis & Clark Station also allows the operation of the RICE project with minimal employee additions.

Montana-Dakota has received all necessary permits and approvals for the construction of the project. Corval Group, Inc. has been selected as the contractor for the project and Sargent & Lundy is providing engineering and construction managements services.

Construction of the project began in March of 2015 and the project is expected to be completed in late 2015.

Q. Can you describe the need for the Lewis & Clark RICE Project?

A. The need for the Lewis & Clark RICE project was demonstrated as part of the Company's 2013 IRP[3] and the project will be used to meet the Company's growing peak load requirements as well as provide another generating resource in the transmission constrained Williston Load Pocket area of northeastern Montana and northwestern North Dakota. The

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[3] 2013 Montana-Dakota Utilities Co. Integrated Resource Plan. Attachment C – Supply-Side & Integration Documentation. Page 21.

construction of the Lewis & Clark RICE improves system reliability and offsets the need to construct more expensive new electric transmission facilities into the area.

Upon the expiration of the 120 MW We Energies capacity purchase agreement on May 31, 2015, and the addition of the 88 MW Heskett III generating resource, Montana-Dakota will have a capacity deficit of 16.6 MW for the 2015-2016 MISO Planning Year and will be in need of additional capacity resources for the future.

The Lewis & Clark RICE project will be used as a rapid start generating resource to economically respond to customer energy needs and provide another system support resource if transmission outages and curtailments occur in the transmission constrained areas of eastern Montana and western North Dakota. The past three years the Company has contracted with Basin Electric Power Cooperative (Basin Electric) for seasonal generation redispatch of their resources to mitigate potential curtailment and customer load reduction requests from Western Area Power Administration. Basin Electric has offered this redispatch service on an as-available basis with all Basin Electric owned generation resources servicing Basin Electric member customers first and Montana-Dakota customers if additional generation is available. Basin Electric generally has had excess resources available to fulfill this need but only on a seasonal and as-available basis.

Basin Electric is in the process of constructing a new 345kV transmission line from Antelope Valley Station near Beulah, ND to Williston, ND and Tioga, ND (AVS-Nesset). The first phase of the project, AVS to Williston, is scheduled to be completed by the fall of 2015.

Q. What will happen if Basin Electric's AVS to Williston 345kV transmission line is not completed by this fall?

A. If Basin Electric is unable to complete its AVS to Williston 345kV transmission line, the Bakken load serving area may be transmission limited to serve the entire load in the area under peak load system intact conditions.[4] The region will also be transmission limited under more restrictive first contingency conditions. Montana-Dakota generation and demand respond programs will be critical to ensure the Company's ability to serve all of the customer loads in the region. Basin Electric has an aggressive construction schedule to complete the AVS to Williston 345kV transmission line by the fall of 2015.

Q. Why doesn't Montana-Dakota build its own transmission instead of depending on WAPA and Basin Electric in the Williston area?

Montana-Dakota has received less than ten percent of all the new load growth associated with the Bakken Oil Field development with Basin Electric and its members serving the majority of the new load additions.

Montana-Dakota is transmission dependent on WAPA and Basin Electric in the Bakken Region for bulk power delivery facilities. Montana-

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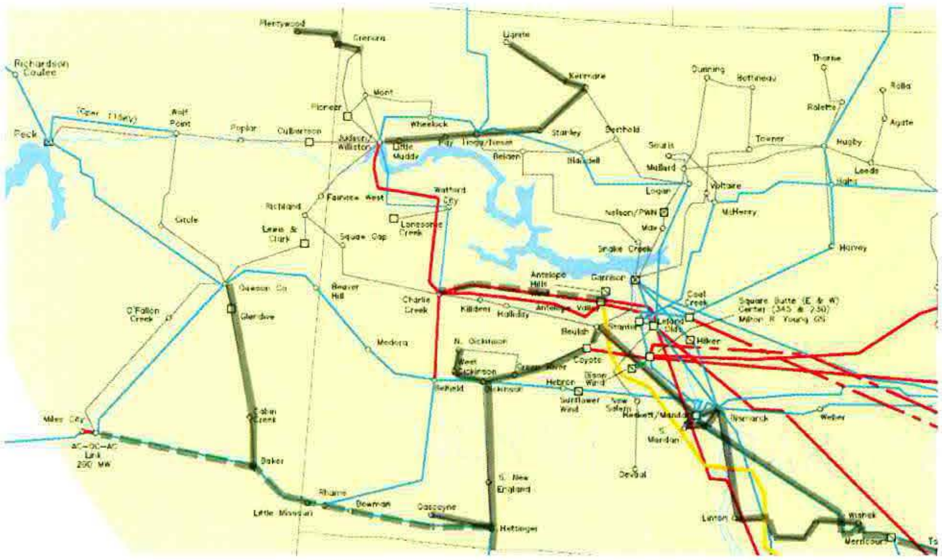
[4] Bakken Update. July 2014. Page 13.
http://www.oasis.oati.com/WAPA/WAPAdocs/Bakken_Update_July_2014.pdf

Dakota currently serves about 150 MW of peak load in the Bakken region while Basin and WAPA serve 700 MW of peak load.

The following map highlights in grey the high-voltage transmission lines (>100kV) that Montana-Dakota owns in Montana and North Dakota. Dashed grey lines indicate the high-voltage transmission lines that the Company co-owns with WAPA and Basin Electric.



For Montana-Dakota to build its own Midcontinent Independent System Operator (MISO) transmission facilities into the region it would have to construct transmission facilities from Beulah, ND, or Dickinson, ND, into the Williston, ND, area which is cost prohibitive as compared to continuing to take transmission service from WAPA and Basin. New high voltage transmission generally costs between $1 million to $2 million per mile to construct and a new transmission line from either Beulah or Dickinson to Williston would cost over $100 million and take over three years to complete.

Q. Please describe the Thunder Spirit Wind Project.

A. Thunder Spirit Wind (Thunder Spirit) is a 107.5 megawatt (MW) wind project under construction in Adams County, North Dakota, northeast of the City of Hettinger. Thunder Spirit will be comprised of 43 Nordex N100/2500 (2.5 MW) wind turbines erected on 80 meter towers. Thunder Spirit is expected to be online by the end of 2015. With a capacity factor of 45.2 percent, the average annual output of Thunder Spirit is projected at 426,000 megawatt-hours per year.

Adams County is in southwestern North Dakota in one of the best wind areas in the region based upon actual site wind data and wind assessment studies conducted for Thunder Spirit. Thunder Spirit has received all of its major permits and agreements including a generation interconnection agreement with MISO and a turbine supply agreement with Nordex USA, Inc.

Thunder Spirit will interconnect at the adjacent Montana-Dakota Hettinger 230 kilovolt (kV) Junction Substation. Thunder Spirit has all of the necessary land agreements and interconnection rights to expand the site to accommodate a project with a total size of 150 MW.

Q. How did Montana-Dakota originally select and contract for Thunder Spirit?

A. A comparable sized wind project was selected as a least cost resource in the Company's 2013 Integrated Resources Plan. Following a review of responses to a request for proposal (RFP) for all capacity and energy resources issued on March 25, 2013, Montana-Dakota selected

Thunder Spirit over several other potential wind projects offered to the Company. Thunder Spirit was selected as the best opportunity for an energy resource based upon its price, contract terms, and location.

In October 2013, Montana-Dakota entered into a 25 year PPA with Thunder Spirit Wind, LLC (TSW) to purchase the output of 107.5 MW Thunder Spirit at an attractive price. In addition to the attractive price, Montana-Dakota viewed the site as favorable as it could easily be interconnected to the Company's Hettinger 230 kV Junction Substation with few transmission upgrades. On-site measured data and long-term wind assessment studies demonstrated the area has an excellent wind regime. No other wind projects are currently located in the Hettinger area making the likelihood for project output curtailments to be small compared to other project opportunities that Montana-Dakota reviewed in other parts of the state which have higher curtailment risks. Most Power Purchase Agreements (PPA's) require the buyer to take on curtailment risks and include make-whole payments - PPA price plus tax adjusted Federal Production Tax Credits (PTCs) - to the seller. Because of the minimal likelihood of curtailment events, TSW was willing to take on all curtailment risks except for economic and buyer requested curtailments.

Q. Why is the Company now planning to own Thunder Spirit as opposed to buying the output through a PPA?

A. The Thunder Spirit project was scheduled to be completed by December 31, 2015, in order to qualify for PTCs. Montana-Dakota's obligations under the PPA were conditioned on TSW obtaining project financing by February 28, 2014. Despite extensions to the financing deadline granted by Montana-Dakota and interest in Thunder Spirit shown by several investors, it became apparent TSW could not obtain financing without price increases and other amendments to the PPA. With the uncertainty of TSW's ability to timely obtain financing, even with increased PPA prices and other concessions requested by TSW, Montana-Dakota determined it was advantageous and in the best interest of its customers to consider owning and operating Thunder Spirit as an alternative to the PPA arrangement.

Ownership provides Montana-Dakota with control of the project site and equipment along with the ability to capture additional value from Thunder Spirit after the expiration of a PPA. All of the wind energy purchased under the PPA is at the contract price and if Thunder Spirit generates more energy than the P50 wind forecast (50/50 historic wind potential) the Company still pays the contract price for all of the energy above the P50 output level. Under an ownership scenario, customers receive the benefits of this additional generation at no additional cost. Ownership also provides Montana-Dakota with the ability to expand the site in the future, if needed, to meet its customers' energy requirements while capturing the economies of scale offered by a larger project site.

Ownership also provides the ability to manage the uncertainty of inflation and future maintenance costs in the later years of the project. The uncertainty of maintenance and inflation costs in the later years of a wind PPA tends to increase its contracted price to ensure the asset owner will recover sufficient revenue at the end of the contract to cover its costs plus a profit. Ownership allows recovery of actual costs from customers and eliminates the need for uncertainty and additional profit adders.

Thunder Spirit is a low cost generation resource opportunity for Montana-Dakota that provides numerous benefits including price protection against future MISO energy prices, price protection against increases in future natural gas prices, greater fuel source diversity in the Company's generation mix, and the ability to capture significant value from federal and state tax incentives.

Q. Would you please describe the current development arrangement for the Thunder Spirit Wind Project?

A. In September 2014, Montana-Dakota contacted Allete Clean Energy (ACE), a subsidiary of Allete, Inc., which has developed other wind projects in North Dakota, to determine if ACE would consider acquiring the Thunder Spirit Wind Project, completing its development, and selling the completed Project to Montana-Dakota. ACE reviewed the Thunder Spirit Wind Project and determined that it was willing to develop the Thunder Spirit Wind Project and either sell the output or the completed project to Montana-Dakota. ACE acquired TSW from the developers and contemporaneously TSW and Montana-Dakota entered into both an amended PPA and a conditional asset purchase agreement for Thunder

Spirit. Pursuant to the agreements, Montana-Dakota agreed to purchase Thunder Spirit after completion and prior to its commercial operations date conditioned upon approval by the North Dakota Public Service Commission of a Certificate of Public Convenience and Necessity and an Advance Determination of Prudence for the purchase in North Dakota. Alternatively, Montana-Dakota agreed to purchase the Thunder Spirit output under the terms of the amended PPA if Montana-Dakota's applications for a Certificate of Public Convenience and Necessity and Advance Determination of Prudence with the North Dakota Public Service Commission were not approved. Both the asset purchase agreement and the amended PPA were signed on November 20, 2014. This arrangement allows Montana-Dakota to eventually own the project without having to add additional staff to manage the design and construction of the project.

Q. How will Montana-Dakota utilize Thunder Spirit to meet customer needs?

A. Thunder Spirit will help keep energy prices to Montana-Dakota's customers as low as possible. Since the expiration of the 66 MW Antelope Valley Station Unit II PPA with Basin Electric in 2006, Montana-Dakota has been a net purchaser of energy from others to meet its customers' energy requirements. The Company's most recent long-term forecast indicates customer energy requirements will be increasing by 4.6 percent per year for the next five years.[5] The amount of energy that Montana-Dakota purchases from the MISO energy market has grown from

[5] 2015-2034 Montana-Dakota Long-Term Load Forecast. Page 27.

10 percent, or 308,000 MWhs, in 2007 to over 20 percent, or 906,516 MWhs, in 2014 despite the addition of generation resources during the same time period. Without the addition of a new energy supply resource like Thunder Spirit, this number is forecasted to increase to almost 40 percent by 2016 based upon Plexos generation and market dispatch simulation runs. Even with Thunder Spirit, Montana-Dakota's energy purchases from MISO are still expected to be almost 20 percent of its customers' annual energy requirements in 2016.

Q. How will Thunder Spirit qualify for the Federal Production Tax Credits (PTC)?

A. When Montana-Dakota negotiated the Purchase and Sale agreement for Thunder Spirit, qualification for PTCs required that construction of the project have commenced prior to December 31, 2013 and that "continuous efforts" be made toward its completion. Under Internal Revenue Service guidelines, the first part of this test could be met by the project incurring five percent of the project costs prior to December 31, 2013. Thunder Spirit met this part of the test by the acquisition of certain turbine parts and other preliminary project work during 2013. IRS guidelines provided the second part of the test is deemed to have been met if the project is completed by a 'safe harbor' date of December 31, 2015. If the project is completed after December 31, 2015, the taxpayer must be prepared to show by "facts and circumstances" that continuous efforts were made in 2014 and 2015 to complete the project.

To provide for delivery of the wind turbine equipment in the summer and fall of 2015 to meet a December 31, 2015, completion date, TSW issued a notice to proceed and made a sizeable down payment to the turbine supplier on November 20, 2014. The delivery schedule for the turbine equipment allows for erection and commissioning of the turbines to meet the December 31, 2015, safe harbor completion date.

On December 19, 2014, the deadlines by which construction of a facility must begin to qualify for PTC's, were extended by one year under the Tax Increase Prevention Act of 2014, Pub. L. No. 113-295, 128 Stat. 4010. On March 11, 2015, the IRS released an advanced version of Notice 2015-25 updating prior guidance to incorporate the enactment of the "tax extender" legislation. In particular, the Notice extends by one year the date by which a facility must be placed in service to satisfy the Continuous Efforts Test. Accordingly, if the facility is placed into service before January 1, 2017, the facility will be considered to satisfy the safe harbor of the Continuous Efforts Test. The Notice also states the IRS will not issue private letter rulings regarding application of the Notice. With the enactment of the Tax Increase Prevention Act of 2014 and the guidance provided by IRS Notice 2015-25, Montana-Dakota does not believe there is any meaningful risk that Thunder Spirit will not qualify for PTCs.

Q. What is the status of the major Thunder Spirit contracts and agreements?

A. TSW, in its efforts as developer, completed the necessary project studies and agreements to develop a wind project capable of achieving commercial operation by December 31, 2015. The turbine supply agreement with Nordex includes a five year turbine operation and maintenance agreement with a five year extension option available at the buyer's request.

TSW signed a large generator interconnection agreement with MISO and Montana-Dakota for a 150 MW interconnection into Montana-Dakota's Hettinger 230 kV Junction Substation located near Hettinger, North Dakota. The network upgrades under this interconnection agreement are expected to be less than $1.5 million and include the addition of a 230 kV breaker bay, isolation switches, and necessary protective relaying, which will be paid by TSW and are included in the asset purchase price to Montana-Dakota. As part of a MISO transmission service request for firm point-to-point transmission service under the PPA, Montana-Dakota also needs to reconductor the five miles of Montana-Dakota's 115kV line between the Coyote and Beulah Junction Substations to increase its facility rating to accommodate the transmission service request. The cost of this reconductoring, as well as the cost of some other minor transmission upgrades that Montana-Dakota will incur, are estimated to be less than $1 million.

TSW has obtained all of the necessary local and state siting permits for the 150 MW project site. It has the necessary FAA determinations along with the necessary fish and wildlife and cultural resource study results. TSW has secured wind energy leases and easements to support a 150 MW project through lease and easement agreements with over 40 landowners.

TSW contracted with Wanzek Construction (Wanzek) to perform the engineering, procurement, and construction activities. Wanzek completed the necessary engineering for the project during the winter of 2014-2015 along with procurement of long lead-time equipment for timely delivery in the summer of 2015. Wanzek will also be responsible for the construction of the substation and 230kV interconnection line, less than one mile in length, between the Thunder Spirit substation and Montana-Dakota's Hettinger 230kV Junction Substation.Wanzek began mobilizing its construction crews to the site at the end of April 2015 with the start of roads and civil construction. Finally, Wanzek will be responsible for the turbine erection. Nordex will provide for the turbine commissioning.

Q. What is the Thunder Spirit construction schedule for 2015?

A. Nordex began delivery of equipment to the site with foundation inserts in May and padmount transformers in June. Turbine equipment is scheduled to begin arriving on-site in July and installation is to be completed the end of September. Work on the electrical interconnection will start in June and be complete by the end of September. Turbine commissioning will begin in September and continue through the end of

November, assuming no delays or issues with the construction schedule or equipment deliveries occur.

Q. Who has ownership of the RECs generated by Thunder Spirit?

A. Montana-Dakota will have ownership of RECs and capacity credits whether it owns Thunder Spirit or purchases the output under a PPA arrangement. Currently seven percent of Montana-Dakota's customer energy requirements come from renewable generation including Diamond Willow I and II, Cedar Hills, and the Glen Ullin heat recovery generator. With the addition of Thunder Spirit, 20 percent of Montana-Dakota's 2016 customer energy requirements will come from cost effective renewable generation.

Q. Please describe the asset purchase arrangement Montana-Dakota has with ACE Wind LLC.

A. Under the Asset Purchase Agreement with ACE Wind LLC, Allete Clean Energy will construct Thunder Spirit and sell to Montana-Dakota, prior to commercial operation, a complete project capable of fulfilling the requirements of the Amended and Restated Power Purchase Agreement between the Parties.

The total investment for the Thunder Spirit Wind Project is $220 million which includes the project purchase from ACE Wind LLC along with project financing and Montana-Dakota's owner costs.

In the event an Advance Determination of Prudence and Certificate of Public Convenience and Necessity are not approved for the purchase of the Project in North Dakota, Allete will remain the owner and sell the output to Montana-Dakota under a 20 or 25 year PPA.

Q. Who will provide the turbine and balance of plant operations and maintenance for Thunder Spirit?

A. As previously stated, Nordex will provide, under a maintenance service arrangement (MSA), for the initial operation and maintenance (O&M) of the project wind turbines excluding major components like turbine blades, generators, gearboxes, bedplates, and tower sections at an initial cost of $1.8 million per year. The turbine supply agreement provides for two years of equipment warranty coverage after which Montana-Dakota will need to supply spare parts. Nordex will continue to supply consumables, excluding gearbox oil changes, under the MSA. Following the initial five years of the MSA, Montana-Dakota has the option to contract with Nordex for an additional five years of O&M under similar terms and conditions as the initial five year term including future negotiated price adjustments.

Montana-Dakota will be responsible for the O&M of Thunder Spirit's balance of plant equipment which includes all equipment from the turbine padmount transformers through the collector system and back to the point of interconnection at Montana-Dakota's Hettinger 230kV Junction Substation. Montana-Dakota will be responsible for all requirements under the wind lease and easement agreements with local landowners at an annual cost of $500,000 per year. Montana-Dakota will be responsible for all agreements and permits including the interconnection agreement with MISO. Montana-Dakota anticipates hiring two new employees for the balance of plant O&M activities.

Q. **Can you describe the economic modeling that went into the decision to purchase Thunder Spirit?**

Montana-Dakota conducted additional modeling runs using the 2013 IRP EGEAS model as part of its evaluation process. The additional model runs included a 107.5 MW PPA at the purchase price contained in the amended and restated power purchase agreement with ACE along with a twenty percent capacity credit that could be used to meet Montana-Dakota's MISO resource adequacy requirements. The purchase option used a financial model to develop the revenue requirement cost to Montana-Dakota based upon: (a) the terms of the asset purchase agreement, (b) the Nordex maintenance supply agreement, and (c) the applicability of the current Federal PTC for new wind generation as PTCs will reduce Thunder Spirit's total cost by approximately 40 percent over its life. The revenue requirement for the purchase option was then entered into the 2013 IRP EGEAS model as a future resource alternative.

Both the amended and restated PPA and the purchase option were selected as least cost alternatives for Montana-Dakota's customers with the purchase option resulting in a lower net present value revenue requirement of approximately $30 million over the PPA option over the 20 year expected life of the wind project. Exhibit No.___(DJN-2), provides a summary of the Net Present Value of the revenue requirement for all resources under the Optimal Resource Case originally submitted in the 2013 IRP and the Net Present Value of the Revenue Requirement under: 1) Optimal Resource Plans assuming the energy produced by the Project is purchased under a PPA and 2) Montana-Dakota owns and operates Thunder Spirit. As shown, the ownership option provides the least cost plan and does not affect the other future resources identified in the 2013 IRP. An additional scenario 3) is also included whereby the wind PPA and purchase option were removed from the 2013 IRP Optimal Resource Case which resulted in an increase in the NPV revenue requirement of over $100 million as compared to the purchase option.

The levelized cost of the overall Project over a twenty year period is $31.96 per MWh under the purchase arrangement.

Q. Did the Company review the acquisition price of the Thunder Spirit Wind Project as part of the development of its 2015 Integrated Resource Plan?

A. Yes, as part of the 2015 Integrated Resource Plan (2015 IRP), Montana-Dakota considered the Thunder Spirit project as a new supply side resource available for selection under the least cost plan. The final 2015 IRP report selects the Thunder Spirit Wind project as a least cost resource under all scenarios.

Montana-Dakota also utilized a preliminary 2015 IRP model to see if the Thunder Spirit Wind project would be considered a least cost resource over other alternatives, including the Amended and Restated PPA and no wind addition scenarios. The following table summarizes the results of these addition studies.

2015 Preliminary Base Case (PBC) includes owning Thunder Spirit

2015	10 MW Purchase Power	
	Big Stone AQCS Project	
2016	107.5 MW Thunder Spirit Owned	
	Lewis & Clark MATS Project	
	Lewis & Clark Reciprocating Engines	
2017	37.3 MW of combustion turbine	
2018		
2019	10 MW Purchase Power	
	20MW self-built wind	
2020	200 MW of Combined Cycle	
	NPV	$4,589 million

*Resources in **bold** are committed in the model. The NPV from the 2015 PBC differs from the 2015 IRP Base Case due to updates in forecasted natural gas forecast prices between the models.

1) 2015 PBC with 107.5 MW Amended and Restated TSW PPA Pricing

2015	10 MW Purchase Power	
	Big Stone AQCS Project	
2016	107.5 MW Thunder Spirit PPA	
	Lewis & Clark MATS Project	
	Lewis & Clark Reciprocating Engines	
2017	37.3 MW of combustion turbine	
2018		
2019	10 MW Purchase Power	
	20MW self-built wind	
2020	200 MW of Combined Cycle	
	NPV	$4,610 million

2) 2015 PBC with no new wind

2015	10 MW Purchase Power	
	Big Stone AQCS Project	
2016	20 MW Purchase Power	
	Lewis & Clark MATS Project	
	Lewis & Clark Reciprocating Engines	
2017	37.3 MW of combustion turbine	
2018	28 MW of reciprocating engines	
2019	10 MW Purchase Power	
2020	200 MW of Combined Cycle	
	NPV	$4,712 million

The following table outlines the difference in the annual revenue requirements from the preliminary 2015 IRP model between the 1) Own Thunder Spirit Wind option versus the 2) No Wind option.

Annual Revenue Requirement (In Millions of Dollars)			
	1) Own TSW	2) No wind	Option 1) less 2)
2016	$165.34	$159.46	$5.88
2017	164.49	167.38	(2.89)
2018	167.36	174.53	(7.17)
2019	176.80	182.69	(5.90)
2020	201.84	210.15	(8.32)
2021	205.37	215.70	(10.33)
2022	211.63	223.54	(11.91)
2023	218.38	231.81	(13.43)
2024	225.32	240.04	(14.72)
2025	234.72	251.46	(16.74)

Q. What approvals and conditions are required under the Asset Purchase Agreement with TSW and ACE Wind LLC?

A. The only approvals needed by Montana-Dakota under the Asset Purchase Agreement with TSW and ACE Wind LLC are the North Dakota Public Service Commission Advance Determination of Prudence, Certificate of Public Convenience and Necessity and FERC approval of the ownership transfer under Section 203 of the Federal Power Act.

Q. Why doesn't Montana-Dakota rely entirely on the market to supply future capacity and energy resources?

A. Market prices fluctuate up and down but over time the general trend is that market prices increase with inflation and changes in supply and demand. In 2015, without the addition of Heskett III, Montana-Dakota would be purchasing 25 percent of its capacity resources from others to serve peak customer demand requirements.

The value of direct purchased capacity is tied to an actual resources cost, which includes its net book value and fixed operations and maintenance costs. For markets, the value of capacity is tied to competition in supply resources and the cost of new entry (CONE) resources. MISO annually calculates the value of CONE, which is the revenue requirement of a new simple cycle combustion turbine, and establishes a penalty to those entities that are short capacity resource requirements based on the current value of CONE. As the amount of excess capacity in the current market decreases, either through load growth or unit retirements, the market value of capacity will approach the value of CONE. The cost of new entry resources or CONE increases over time with inflation and new equipment costs. Long-term price stability is maintained either through ownership of new resources or entry into long-term capacity purchase agreements.

Q. Why doesn't Montana-Dakota consider the MISO capacity market as a long-term option for meeting its resource adequacy requirements?

Market purchases may be appealing in the short-term but over time they will correct themselves with changes in supply and demand or market rules. Prior to Heskett III, Montana-Dakota had not added a large capacity resource to its generation portfolio since the Glendive Unit II combustion turbine was built in 2003. A power purchase agreement with Basin Electric Power Cooperative for 66 MW of baseload capacity from the Antelope Valley Station Unit II expired in November 2006, which left Montana-Dakota dependent on capacity purchase agreements and market energy prices. Montana-Dakota was unable to acquire additional baseload resources when the Big Stone II project was abandoned.

Montana-Dakota has used the MISO capacity auction for short-term capacity needs where its makes economic sense to do so as evidence by the recent purchase of 16.6 MW of capacity from the MISO capacity market for the 2015-2016 MISO planning year.

Continued reliance on market purchases subjects customers to unknown future prices of capacity and energy. At the expiration of purchased power agreements, there are no remaining assets for continued customer benefit and customers are subjected to the cost impacts of replacement agreements with future market resources.

Q. Can you describe the development of the organized MISO Energy Market including Montana-Dakota participation?

A. The Midcontinent Independent System Operator (MISO) originally formed as a regional transmission organization in 2002 for the operation, planning, and sharing of transmission facilities under a common open access tariff. Montana-Dakota was one of the original transmission owning members of MISO.

The MISO energy market began operation in 2005 and the ancillary service portion of the MISO energy market started in 2009.

As a MISO market participant, Montana-Dakota forecasts its day ahead load and submits its load forecast into the day ahead market each morning. Montana-Dakota also submits its day ahead generation pricing offers and available output levels to the market each morning. MISO, on a day ahead basis, balances and awards all load requirements and generation outputs on a most economic and reliable basis through an economic constrained dispatch. Actual differences in day ahead loads and generation awards to real-time loads and generation output is settled in the real-time market and at real-time pricing.

The development of the MISO energy market has provided many benefits to Montana-Dakota and its customers. The MISO energy market has greatly reduced the market price fluctuations that Montana-Dakota historically experienced during peak load conditions and during generation outages.

Q. Can you describe Montana-Dakota's future demand-side and supply-side energy resource plans?

A. The following is the summary of the Company's two year action plan for demand and supply side resources from its 2015 Integrated Resource Plan[6]:

Demand-Side Resources

- Montana-Dakota expects to continue to expand the number of interruptible rate customers to achieve a total of 16 MW by 2017.
- Montana-Dakota expects to achieve 15 MW of commercial demand response by the summer of 2017.
- Montana-Dakota expects to implement a residential air conditioning (AC) Cycling program by 2017 to achieve a total of 10 MW in the program by 2021.

Supply-Side Activities

- Montana-Dakota will continue with the installation of the Big Stone AQCS project to be online by the end of 2015.
- Montana-Dakota will continue with its purchase of the 107.5 MW Thunder Spirit Wind project to be online by the end of 2015.
- Montana-Dakota will continue with the installation of the Lewis & Clark MATS project to be online by the end of 2015.

[6] Montana-Dakota Utilities Co. 2015 Integrated Resource Planning dated July 1, 2015. Main Report. Chapter 7 - Two Year Action Plan.

- Montana-Dakota will continue with the installation of the 18.6 MW Lewis & Clark II simple-cycle reciprocating internal combustion engine project to be online the fall of 2015.
- Montana-Dakota will continue to study the need to install local generation projects throughout its service area to support load growth and mitigate transmission constraints.
- Montana-Dakota will explore the opportunity of partnering with others on the design and construction of a large combined cycle combustion turbine facility with an in-service date in or after 2020 with a 200 MW commitment from Montana-Dakota.
- Montana-Dakota will continue to monitor the availability and price of energy and short-term capacity in the MISO market or through bi-lateral arrangements and will purchase additional capacity as needed to meet customer demand when economic to do so.
- Montana-Dakota will continue to monitor the development of final rules and implementation strategies for EPA Clean Power Plan greenhouse control rules for existing sources, and influence the outcomes where possible.

Q. What is the status of the Western Area Power Administration Transmission Service Agreement?

A. Montana-Dakota's electric service customers in the Interconnected System will see increased transmission service charges with the termination of the Company's reciprocal usage Transmission Services

Agreement (TSA) with Western Area Power Administration (WAPA) on December 31, 2015, along with the announcement that WAPA and Basin Electric will be joining Southwest Power Pool (SPP) as a transmission owning member on October 1, 2015.

Q. Can you describe the history of the WAPA TSA?

A. Montana-Dakota and WAPA have a long history of sharing transmission facilities and providing service across each other's systems using a reciprocal wheeling arrangement. This agreement has provided cost savings for Montana-Dakota's customers. The current WAPA TSA will expire on December 31, 2015. Montana-Dakota has attempted to enter into negotiations with WAPA to extend the TSA, but WAPA has indicated that it is unable to extend the TSA.

WAPA and Basin Electric have announced their intention to join SPP as a transmission owning member on October 1, 2015, and as such, transmission service across their facilities will be covered under the SPP Tariff. With the expiration of the WAPA TSA, Montana-Dakota will be required to take Network Integrated Transmission Service (NITS) under the SPP Tariff for service that it currently receives under the WAPA TSA.

Q. Where will Montana-Dakota be required to take transmission service from SPP following the expiration of the WAPA TSA?

A. It is anticipated that with the termination of the WAPA TSA, all Montana-Dakota transmission service received under the WAPA TSA will now be subject to the SPP Tariff if Montana-Dakota is unable to provide adequate transmission without support from the SPP transmission system. The area where Montana-Dakota is needing to take transmission service from SPP is basically all customer loads west of Beulah, ND, and Glenham, SD, as Montana-Dakota only has a single 115kV transmission path west of Beulah to provide a transmission path to the rest of Montana-Dakota's interconnected service territory and the broader MISO transmission system.

Montana-Dakota will keep all of its customer load and generation in the MISO energy market and take transmission service from SPP where it does not have sufficient transmission facilities to serve its customer loads.

Q. Why doesn't Montana-Dakota exit MISO and join SPP?

A. Montana-Dakota continues to see greater value in remaining a MISO transmission owning member as compared to exiting MISO and joining SPP. The greater MISO value is largely related to a difference in resource adequacy requirements between MISO and SPP. SPP requires each load serving entity to carry capacity resources for their full forecasted customer load plus a planning reserve margin while MISO includes a diversity factor as not all MISO customer load peaks at the same time and MISO load serving entities are only required to demonstrate their peak load requirements coincident to MISO's annual summer system peak. Montana-Dakota receives a significant benefit from being the western most transmission owning member in MISO, as Montana-Dakota only needs to currently supply 80.3% of their full capacity requirements plus planning reserve margin. If Montana-Dakota were to join SPP, Montana-Dakota would have to add 130 MW of additional capacity resources to its generation supply mix to meet the resource adequacy requirements under the SPP Tariff which equates to incremental required investments of at least $114 million for another Heskett III like resource based upon 2015 IRP pricing.

Q. **What is the cost impact to Montana-Dakota's customers of taking transmission tariff service from both SPP and MISO for the same load?**

A. Based on Montana-Dakota's average customer load in 2014, Montana-Dakota would have been required to secure approximately 325 MW of NITS service from the IS Tariff at $2.96 per kW-month or approximately $11,544,000 per year. The UMZ (WAPA/ Basin Electric load zone) rate under SPP Tariff is still unknown and Montana-Dakota is estimating the rate to be close to $4.00 per kW-month ($15,600,000 per year) with the inclusion of SPP's regional highway / byway cost allocation included.

Montana-Dakota is working with SPP, WAPA, and Basin Electric to minimize the SPP transmission bill to its customers via the receipt of Section 30.9 Facility Credits under the SPP Tariff. Facility credits are available under the SPP and MISO tariffs for non-transmission owners whose facilities are integrated into the operation of the respective tariff service area and provide benefits similar to a transmission owner under the tariff. Montana-Dakota would have sought facility credits under the WAPA-IS Tariff if WAPA and Basin Electric would not have elected to join SPP. Montana-Dakota is currently in FERC settlement negotiations with SPP, WAPA, and Basin Electric on the requirements for receipt of SPP Section 30.9 Facility Credits which Montana-Dakota hopes will offset a significant portion of its SPP transmission bill.

Even with the facility credit offsets, Montana-Dakota is still estimating an increased transmission service charge of $4.0 million at the expiration of the WAPA TSA over the current WAPA and Basin Electric transmission charges that Montana-Dakota is assessed today. In the 2013 Montana IRP, Montana-Dakota estimated the cost impact of the expiration of the WAPA TSA on Montana-Dakota customers to be as high as $6.7 million per year without offsets.[7]

Q. How will Montana-Dakota provide energy service to its customers if it is taking transmission service from both MISO and SPP?

A. All of Montana-Dakota's load and generation will remain in the MISO energy market. That way, all Montana-Dakota load continues to receive the benefits of MISO's resource adequacy requirements versus SPP's resource adequacy requirements. Although Montana-Dakota will be subject to a pancake of transmission services charges under the MISO and SPP Tariffs related to taking transmission service from both RTOs for the same load, the benefit of having all load remain in the MISO energy

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[7] 2013 Montana-Dakota Utilities Co. Integrated Resource Plan. Volume IV. Attachment J – Future Transmission Service Charge Impacts. Page 1.

market outweighs the pancaked transmission service charges that will be mitigated by the receipt of SPP Section 30.9 Facility Credits.

Q. **What happens if SPP changes its resource adequacy requirements in the future to be similar to MISO's resource adequacy requirements?**

A. SPP has started the process to review diversification benefits across its footprint as not all customer loads peak at the same time, but SPP has not announced or approved any changes yet to its resource adequacy requirements. Any changes to SPP's resource adequacy requirements is probably at least two years away.

If SPP would change its resource adequacy requirements and Montana-Dakota sees similar benefits as MISO, Montana-Dakota would reevaluate its position of remaining a MISO transmission owning member and compare it against the cost of withdrawing from MISO and joining SPP.

Q. What other MISO transmission charges are Montana-Dakota's customers subject to regarding cost sharing from others?

A. The MISO RECB I (Regional Expansion Criteria and Benefits) cost allocations allow for the cost sharing of approved network transmission facilities with the benefiting transmission owners or with the entire MISO footprint.

Contained in MISO's Federal Energy Regulatory Commission (FERC) Order 1000 compliance filing was the removal to cost share future MISO RECB I projects, also referred to as baseline reliability projects, from the MISO Tariff beginning with the MISO Transmission Expansion Plan (MTEP) 2014. Previously approved MISO RECB I projects will continue to be cost shared as before.

As previously approved MISO RECB I and II projects are completed, Montana-Dakota's customers will see an increase in MISO Schedule 26 charges. Schedule 26 allocations are directly assigned revenue requirements for approved MTEP projects to an individual Transmission Owner or all MISO load through a system-wide postage-stamp rate. The CapX2020 Alexandria to Fargo 345 kV transmission line was approved in 2008 as a baseline reliability project eligible for cost sharing under the MISO Tariff. The Alexandria to Fargo 345kV transmission line was placed into service in April 2, 2015. As defined in RECB I, eighty percent (80%) of the revenue requirements for this project are allocated under a line outage distribution factor (LODF) calculation to determine beneficiaries, and the remaining twenty percent (20%) are allocated to all MISO load through a post-stamp rate. Montana-Dakota's allocated investment share of the Alexandria to Fargo 345 kV line is expected to be around $6.6 million.

Annual revenue requirements for all RECB I projects allocated to Montana-Dakota's transmission pricing zone in MISO are forecasted to equal $3,101,419 dollars in 2016 which includes the cost of the Mandan 230 kV Junction Substation.[8]

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[8] MISO Indicative Annual charges for approved Baseline Reliability Projects (Schedule 26). https://www.misoenergy.org/Planning/TransmissionExpansionPlanning/Pages/MTEPStudies.aspx

Q. How are MISO Multi-Value Projects cost allocated?

A. On December 17, 2010, the FERC approved a joint application filing by the MISO and various MISO Transmission Owners to create a new cost allocation methodology for qualifying multi-value high-voltage transmission facilities called Multi-Value Projects (MVPs). MVPs are one or more network transmission upgrades that, when considered as part of a portfolio, provide widespread regional benefits, respond to documented public policy requirements, and/or provide multiple benefits such as reliability and economic value. Network transmission projects classified as MVPs will be cost-shared on a one hundred percent (100%) basis to all MISO load.

MTEP 2011 approved $5.6 billion for 17 Multi-Value Projects that were selected as part of a regional portfolio to improve reliability of the transmission system, meet public policy targets, and distribute economic benefits across the entire MISO footprint.[9] The MTEP 2011 Report identified potential benefits of at least 1.6 to 2.8 times their cost for all MISO Local Resource Zones. The MTEP 2014 MVP Triennial Review Report calculates potential benefits from the 2011 MVP Portfolio of at least 2.3 to 2.8 times their cost for all MISO Local Resource Zones.[10]

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[9] MISO Transmission Expansion Plan 2011.
https://www.midwestiso.org/Library/Repository/Study/MTEP/MTEP11/MTEP11%20Report.pdf

[10] MISO 2014 MVP Triennial Review Report.
https://www.misoenergy.org/Library/Repository/Study/Candidate%20MVP%20Analysis/MTEP14%20MVP%20Triennial%20Review%20Report.pdf. Page 8. Figure E-3.

The 2019 forecasted MISO Schedule 26-A (MVP Cost Adder) charge is $1.60 per MWh.[11] Assuming a 2019 Total Energy Requirements of 4,366,313 MWh, this would result in a total charge of $6,986,100 to Montana-Dakota's customers.

Montana-Dakota's cost allocation share of all MVP investments is approximately one percent.

Q. What happens to Montana-Dakota's responsibility to pay for RECB and MVP costs allocations if Montana-Dakota decided to ultimately withdraw from MISO?

A. If Montana-Dakota were to withdraw from MISO it would continue to be obligated to pay for all MTEP Appendix A cost shared projects approved for construction prior to its withdraw. This would include all of the Schedule 26 and 26A cost allocated projects discussed already in my testimony or approximately $7 million per year.

Q. Does this conclude your direct testimony?

A. Yes, it does.

[11] MISO Indicative Annual charges for approved Multi-Value Projects (Schedule 26-A). https://www.misoenergy.org/Planning/TransmissionExpansionPlanning/Pages/MTEPStudies.aspx