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

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October 28, 2014

Executive Secretary
North Dakota Public Service Commission
State Capitol Building
Bismarck, ND 58505-0480

Re: Order Directing Response to Certain Questions Case No. AD-14-736

Montana-Dakota Utilities Co. (Montana-Dakota) a Division of MDU Resources Group, Inc., herewith provides its responses to the North Dakota Public Service Commission's (Commission) Order Directing Response to Certain Questions issued on October 8, 2014. Below each question is repeated with the Company's response following.

Question a. Do you agree or disagree with the methodology EPA used to calculate North Dakota's proposed emissions reduction goal?

Response:

Montana-Dakota understands this question to be asking whether Montana-Dakota agrees or disagrees with EPA's calculation of state-specific numeric emission reduction goals based on four "building blocks."[1] Montana-Dakota disagrees with this methodology.

First, EPA's authority under Section 111(d) of the Clean Air Act (the Act) is limited to regulating sources that would be regulated under Section 111(b) of the Act if they were "new" sources.[2] The source category subject to regulation under Section 111 is coal-fired electric generating units. EPA's methodology sets emission reduction targets based on reductions purportedly achievable through redispatch from coal to gas (Block 2), development of renewable energy (Block 3), and implementation of energy efficiency measures (Block 4). These reductions cannot be achieved by actions taken at sources within the source category at issue and, thus, should not be considered in determining

[1] *See* 79 Fed. Reg. 34,830, at 34,836 (June 18, 2014)("Proposed Rule").
[2] *See* 42 U.S.C.A § 7411(d)(1) ("The Administrator shall prescribe regulations which shall establish a procedure…under which each State shall…establish[] standards of performance for any existing source…to which a standard of performance under this section would apply if such existing source were a new source…").

the best system of emission reductions or as the basis for State-specific emission goals under Section 111(d).

Second, EPA's methodology does not permit States to adequately take into consideration the "remaining useful life" of existing sources and "other factors" in setting performance standards as required by Section 111(d). EPA contends that the structure of its rule allows States flexibility to consider remaining useful life for individual sources in the context of developing their State 111(d) plans.[3] However, to the extent a State makes an adjustment to the standard of performance for an individual source, EPA requires states to make "compensating emission reductions"[4] from other sources; States would not be able to deviate from the proposed emission rate goals. This requirement is unprecedented and imposes improper constraints on the authority reserved to the states under Section 111(d) of the Act.

The practical implication of EPA's "compensation" requirement and the accelerated compliance timeline imposed by the proposed "interim goals"[5] is that states may be forced to retire generating units ten or more years before the end of their remaining useful life, and, as a result, strand millions of dollars of assets that are dispatch-reliable, and implement costly short term solutions in order to meet customers' energy requirements. As discussed in more detail below, the Proposed Rule may force the premature retirement of the Big Stone Plant in South Dakota. Big Stone is in the process of installing a $400 million Air Quality Control System (AQCS) required by an EPA rule establishing Regional Haze Program requirements for South Dakota. The State of South Dakota determined that the AQCS project was cost-effective for Big Stone considering that Big Stone is expected to operate for at least another 30 years.[6] However, because Big Stone is the only coal-fired electric generating unit located in South Dakota, it is unlikely that the State could make "compensating emission reductions" to account for continued operation of Big Stone. Montana-Dakota's ownership share of Big Stone Plant is significant, representing nearly 28 percent of its capacity resources. This is important for the Commission to consider as the majority of Montana-Dakota's customers are in North Dakota and rely on Big Stone.

Finally, Montana-Dakota disagrees with EPA's application of its methodology. In particular, Montana-Dakota disagrees with EPA's assumption under "Block 1" that existing coal-fired electric generating units can achieve a six percent heat rate improvement through the "adoption of best practices" and "equipment upgrades."[7] EPA's analysis is outdated. The vast majority of existing units already have implemented best practices and made the equipment upgrades identified by EPA. At

[3] Proposed Rule, at 34,925.
[4] Proposed Rule, at 34,925-26.
[5] EPA is proposing interim goals that would require states to achieve substantial emission reductions early in the compliance 2020-2029 compliance period. *See* Proposed Rule, at 24,845
[6] *See* South Dakota's Regional Haze State Implementation Plan, revised August 18, 2011, at 87 and 93
[7] Proposed Rule, at 34, 856.

these plants, it is not technologically feasible to achieve a six percent heat rate improvement from best practices and equipment upgrades. EPA's assumption especially penalizes units designed to burn lignite coal, like many units located in North Dakota. The carbon intensity of lignite is approximately ten percent higher than the carbon intensity of other coals. Thus, it is significantly more difficult for lignite-fired units to achieve heat rate improvements.

Question b. Do you agree or disagree that the statewide "goal" established by EPA for North Dakota is really an enforceable requirement, if finalized?

Response:

Montana-Dakota disagrees that EPA has the authority to enforce emission rate goals at individual affected sources. The Act reserves to the States the authority to establish, implement, and enforce standards of performance at individual affected sources.[8] EPA only has the authority to "prescribe" and "enforce" a State plan when a State fails to submit a "satisfactory" plan.[9]

In the event North Dakota does not submit a "satisfactory" Section 111(d) plan, it is unclear at this time how EPA will mandate the required reductions through a federal implementation plan. The North Dakota emission rate goal is based on measures that are beyond the scope of EPA's authority to implement in a federal plan under the Act. If EPA were to promulgate a federal implementation plan requiring all reductions be made by affected sources, even though the emission reduction goals are not based on actions that may be taken at affected sources, such a plan would be arbitrary and capricious. It would require wide-spread shutdown of coal-fired units and cripple the electric generating industry.

Question c. Do you agree or disagree EPA's Proposed Rule is not consistent with Section 111(d) of the federal Clean Air Act and North Dakota statutes because it would take away the state's primary authority for setting the emission standard?

Response:

Montana-Dakota agrees that the Proposed Rule usurps authority delegated to North Dakota under Section 111(d) of the Act. Section 111(d) requires EPA to "establish a procedure...under which each State shall submit to the Administrator a plan which...establishes standards of performance for any existing source...tak[ing] into consideration, among other factors, the remaining useful life of the existing source to

[8] 42 U.S.C.A. § 7411(d)(1)(A),(B).
[9] 42 U.S.C.A. §7411(d)(2)(A),(B).

which such standard applies."[10] As explained in Response to Question a., above, the Proposed Rule does not permit States to consider the "remaining useful life" of the existing sources and "other factors" in setting performance standards for existing, affected sources as required by Section 111(d).

Question d. Do you agree or disagree that the Proposed Rule conflicts with the Commission's statutorily-defined rate-setting and resource planning objectives?

Response:

Montana-Dakota believes that the Proposed Rule will affect the Commission's statutorily-defined rate-setting and resource planning objectives. EPA has interpreted its authority under the Section 111(d) of the Act to require emission reductions from "virtually any 'set of things' that reduce emissions."[11] Under this interpretation, "anything that reduces emissions" includes "measures that replace production or generation at the affected sources and thereby reduce emissions from those sources."[12] EPA has applied this interpretation to set State-specific emission goals at levels that likely would force existing source retirements and the redistribution of electric generation from higher emitting, more affordable supply-side sources to lower emitting, higher cost supply-side sources. These changes almost certainly would result in increased public utility rates and changes to utility resource plans. See also Montana-Dakota's response to Question a.

Question e. Do you agree or disagree that the Proposed Rule would override the resource planning authority and discretion of the Commission?

Response:

Montana-Dakota believes that the Proposed Rule has the potential to override the resource planning authority and discretion of the Commission.

First, the Proposed Rule likely would alter Montana-Dakota's future resource planning activities because the Proposed Rule would limit the availability of certain electric generating resources. As proposed, it is likely that the Proposed Rule would force the premature retirement and replacement of existing generating resources and require the implementation of renewable energy and costly energy efficiency standards. [13] Thus, Montana-Dakota may be required to change its current plans for serving its customers.

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[10] 42 U.S.C.A. § 7411(d)(1).
[11] EPA Legal Memorandum, at 51.
[12] EPA Legal Memorandum, at 52.
[13] Montana-Dakota estimates that the energy efficiency standards identified by EPA in "Block 4" of its methodology would require Montana-Dakota to make significant and escalating investments in energy

Second, the Proposed Rule likely would increase electricity rates for Montana-Dakota's North Dakota ratepayers. As previously discussed, the Proposed Rule may require utilities to reduce utilization and/or prematurely retire existing units, like Big Stone, that are used and useful to ratepayers. These consequences would override the Commission's discretion and planning authority of utility generation resources. Montana-Dakota estimates that it would require a $43.6 million revenue increase in 2020 for Montana-Dakota to replace Big Stone with a comparable size natural gas combined cycle unit. In these circumstances, the Proposed Rule would result in a 10 percent rate increase for Montana-Dakota's North Dakota ratepayers, in addition to the 15 percent rate increase associated with the AQCS project.

Question f. Do you agree or disagree that the Proposed Rule raises concerns about electric reliability in North Dakota?

Response:

Montana-Dakota agrees that the Proposed Rule raises concerns about electric reliability in North Dakota. Montana-Dakota has significant concerns regarding the timing for implementation of the Proposed Rule. The Proposed Rule does not provide companies sufficient time to evaluate potential compliance options and, if necessary, construct new generating resources and transmission facilities. To ensure grid stability and reliability, EPA must provide electric generation companies with sufficient time to evaluate and implement potential compliance options.

Montana-Dakota is a member of the Midcontinent Independent System Operator (MISO). MISO is an independent system operator and regional transmission operator that provides open-access transmission service and monitors the transmission system through much of the United States and portions of Canada. MISO dispatches electricity regionally on a least-cost basis throughout the region. Accordingly, Montana-Dakota, and by extension North Dakota, will be affected by changes in the MISO region.

Montana-Dakota is particularly concerned by the potential retirement of the Big Stone Plant. Big Stone is located in South Dakota and participates in MISO. The Proposed Rule anticipates a significant redispatch of generation from Big Stone to Basin Electric Cooperative's Deer Creek Station, which is the only natural gas combined cycle unit in South Dakota. Deer Creek and Big Stone are separately owned, serve different territories, and participate in different markets (Big Stone is in MISO, while Deer Creek will join the Southwest Power Pool in 2015).

Because Deer Creek was under construction during most of 2012, it operated very little and was assigned a one percent annual capacity factor when EPA calculated the emission rate goal for South Dakota. EPA incorrectly assumed that the capacity factor

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efficiency programs. By 2029, Montana-Dakota estimates that it would have to invest $14 million annually in energy efficiency programs.

for Deer Creek could be increased from one percent to 70 percent. Based on this misapplication of Deer Creek's 2012 capacity factor, the Proposed Rule inappropriately anticipates that 1,965,000 MWh of generation would shift from Big Stone to Deer Creek. If this shift occurred, Big Stone would operate at just 23 percent of its capacity. Because Big Stone's minimum operating load is approximately 40 percent of maximum load, running the plant at 23 percent of its capacity would require the plant to be off-line for at least half of the year. In these circumstances, it is likely that the plant would be retired.

If EPA does not adjust the emission rate goal for South Dakota to correct the capacity factor for Deer Creek, Big Stone likely would be required to reduce generation beginning in 2020 in order for South Dakota to meet its proposed interim emission rate goal. It is unlikely that the owners of the Big Stone Plant, including Montana-Dakota, would have sufficient time to construct new generation to replace the shortfall from Big Stone.[14] The generation gap that would be caused by the premature retirement of Big Stone could raise reliability concerns for North Dakota.

Question g. Do you agree or disagree that the Proposed Rule has a significant impact on North Dakota's ability to continue to use lignite and other coals as a low cost electricity generation option?

Response:

Montana-Dakota agrees that the Proposed Rule likely would affect the continued operation of coal-fired generating units in North Dakota. The Proposed Rule is designed to reduce utilization of sources with high-carbon intensity, which includes coal-fired generation. The continued operation of coal-fired generating units in North Dakota is contingent on whether there is sufficient demand for electricity and available renewable generation to allow North Dakota to meet its emission rate goal.

Please refer all inquiries regarding this response to:

[14] EPA plans to issue a final rule in 2015, which means 2017 likely is the earliest a state would have an approved implementation plan and affected sources would have a clear understanding of their compliance obligations.

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

Sincerely,

Garret Senger

Garret Senger
Vice President of Regulatory Affairs and
Chief Accounting Officer

C: Abbie Krebsbach
Dan Kuntz