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Missouri River Energy Services (MRES) is a municipal power agency which supplies power and energy, and energy services to sixty (60) municipal utility members throughout Iowa, Minnesota, North Dakota, and South Dakota. Each member municipal utility is owned by the customers it serves; likewise, MRES was created and is owned by the member communities that it serves. Also, like its member-owners, MRES is a not-for-profit, member-owned and member-controlled public entity. MRES is a political subdivision of the state of Iowa, and is headquartered in Sioux Falls, South Dakota. It was created under the Iowa Code Chapter 28E.

As an Iowa 28E entity, MRES must use a separate entity for financing of generation facilities or similar projects; that financing entity is Western Minnesota Municipal Power Agency (Western Minnesota). Western Minnesota is a municipal corporation and political subdivision of the State of Minnesota. Western Minnesota finances and owns the generation and transmission facilities used to serve members of MRES under the terms of power supply and transmission capacity contracts between Western Minnesota and MRES. All output and capacity of Western Minnesota facilities is dedicated exclusively to MRES.

All 60 MRES members are in Iowa, Minnesota, North Dakota, and South Dakota. Our municipal utility communities range in size from nearly 40,000 to those with populations around 200 people. The average population of MRES member communities is about 5,000. In total, our members serve a population of approximately 300,000 people, with over 150,000 customer meters. The MRES member communities are spread widely over a geographic area which is primarily rural.

Fifty-eight of the 60 MRES members have allocations of federal hydropower from Western Area Power Administration (WAPA) to supply some of their needs through 2050, and MRES serves the balance of each community's needs over and above the hydropower allocation. In addition to this hydropower, MRES members are also served by five wind energy projects located in Iowa, Minnesota, and North Dakota. These renewable energy investments mean that MRES members are served, on average, with 42 percent renewable energy.

In addition to wind energy projects, MRES relies on a single, base-load coal plant in Wheatland, Wyoming, called the Laramie River Station (LRS) to serve the needs of its members. The three units of LRS began commercial operations in 1980-1982, and generate 1,710 megawatts (MW). Western Minnesota is one of six owners of LRS, and it owns 16.5 percent of LRS, corresponding to approximately 282 MW. LRS is the only MRES resource that is within the definition of an

"affected unit" under the Clean Power Plan (CPP). Only Unit 1 of LRS is tied to the Eastern Interconnection, and it is on the far western edge of the Southwest Power Pool (SPP).

MRES has no members and no sales in Wyoming; all sales are to members in Iowa, Minnesota, North Dakota, and South Dakota. Also, all of the renewable resources that MRES has invested in for its members are also located in Iowa, Minnesota, North Dakota, and South Dakota. Therefore, if the CPP moves forward after court proceedings, state compliance plans need to allow renewable resources in one State to be used to offset greenhouse gas emissions in another.

The Department of Energy's Oak Ridge National Laboratory has recently completed an assessment of the ability of existing non-powered dams across the US to generate electricity. They have found that there are over 80,000 non-powered facilities. The study found that over 50,000 are suitable to support 12 gigawatts of clean, renewable baseload hydropower. MRES is developing one of these non-powered dams to produce electricity in Iowa.

MRES and Western Minnesota are constructing the Red Rock Hydroelectric Project (RRHP), a 36 MW hydropower plant on the existing Red Rock Dam on the Des Moines River near Pella, Iowa, (about 50 miles southeast of Des Moines). RRHP is expected to be operational in 2018. This project was mentioned in the President's Climate Action Plan in June of 2013 as being listed on the Infrastructure Permitting Dashboard to demonstrate improved permitting for hydropower projects. We were pleased to be recognized, however, we are frustrated that despite the recognition, it still will take 13 years to get this project done when it is completed in 2018. Energy legislation passed by the Senate (S.212) contains some language that begins permitting reform, however more is needed. The legislation designates the Federal Energy Regulatory Commission as the lead agency for hydropower permitting. More needs to be done to streamline hydropower permitting so facilities can be built in reasonable times.

MRES is also studying pumped storage at Gregory County Pumped Storage Project in South Dakota. This project was first studied by the State of South Dakota in the 1980's. It was initially studied at 2400 MW. MRES is working with partners in SPP to determine if the project should move forward. With more intermittent resources such as wind and solar being added to the grid, base-load resources like the Gregory County Pumped Storage project will be needed for reliability. MRES believes that the Regional Transmission Organizations (RTO) must develop appropriate ancillary services that reflect the value pumped storage would provide to the grid.

MRES is a participant in two major high-voltage transmission lines in Minnesota and Midcontinent Independent System Operator (MISO) that were energized in 2015. These are the 250-mile, 345-kilovolt Brookings County-to-Hampton line and the 240-mile, 345-kilovolt Fargo-St. Cloud-Monticello line. Both are part of the CapX 2020 effort, in which 11 utilities are building five major projects that will include more than 800 miles of new transmission facilities in the upper Midwest. CapX 2020 is the region's largest transmission expansion in more than 40 years and will cost more than two billion dollars. MRES' share is about 105 million dollars. The CapX 2020 projects have been in the works for more than a decade and promise to increase reliability and decrease congestion in the region's transmission grid. They also will provide necessary facilities for moving energy from the region's ever-increasing wind energy facilities to load centers. Jointly owned transmission projects such as CapX 2020 allowed all utilities in the region a stake in getting them built and receiving benefits of ownership. A recent report by the

University of Minnesota's Humphrey School for Public Affairs found that the energy coalition, CapX 2020, created a viable model for regional renewable energy planning. A link to the report is https://www.hhh.umn.edu/sites/hhh.umn.edu/files/capx2020_final_report.pdf. We hope MISO, SPP and state regulators will consider benefits of the CapX 2020 joint ownership model when approving who gets to construct transmission facilities in the future.

On October 1, 2015, MRES joined SPP, which is one of the nation's regional transmission organizations. The move was made necessary when WAPA joined SPP. WAPA's integrated system transmission facilities play a vital role in the delivery of power to our members, so, when those facilities were moved into the SPP market, MRES needed to join that market to enable continued energy deliveries through the SPP network. MRES now participates in two regional transmission organizations – SPP, and MISO which we joined in 2000. Twenty-seven of our members now lie in the MISO footprint, while 33 lie in the SPP footprint.

RTOs have succeeded in eliminating pancaked transmission rates. Prior to SPP and MISO, MRES members had to pay pancaked transmission rates for MRES to deliver power. Now power delivered within an RTO only requires one transmission payment. However, power delivered between MISO and SPP still requires that we pay transmission to both RTOs, pancaked transmission rates. MRES hopes that in the near future power deliveries between MISO and SPP will not have to be charged pancaked transmission. Wind development in South Dakota and North Dakota could be imported more cost effectively into MISO without having to pay pancaked transmission rates.

MISO and SPP Energy Markets are working—providing reduced costs of supplying energy to our members and their retail customers. MISO has a capacity market, SPP has no capacity market. In the MISO capacity market we are able to self-supply through a Fixed Resource Adequacy Plan (FRAP). It is essential that this self-supply option continue. We do not want a mandatory market such as the one in Pennsylvania-New Jersey-Maryland Interconnection that does not allow self-supply.

In addition to providing their citizens with reliable and low-cost electricity, nearly all MRES members also have energy efficiency programs to provide their consumer-owners with the opportunity to make the most economical use of electricity in their homes and main street businesses. MRES provides the Bright Energy Solutions® (BES) program to offer incentives to the end-use customers of our member utilities to implement many energy efficiency measures. On average, MRES members saved over 0.8 percent of annual sales per year from 2010 through 2014 by utilizing energy efficiency programs.

MRES also offers members hosted Centralized Demand Response and Advanced Metering Infrastructure (AMI) programs. A centralized system in Sioux Falls, South Dakota, reads member meters and controls their demand response programs. MRES is encouraging all members to install AMI.

MRES is a member of the American Public Power Association, the National Hydropower Association, and the Transmission Access Policy Study Group. We support comments each of these organizations has or will submit to the Department of Energy Quadrennial Energy Review.