

**MONTANA-DAKOTA UTILITIES CO.
SOUTH DAKOTA PUBLIC UTILITIES COMMISSION
SET 1 - DATA REQUESTS
ISSUED JANUARY 9, 2019
DOCKET NO. EL18-062**

- 1.3. Provide a list of all inputs and assumptions used in the model to determine the avoided energy costs. Also, provide the source/basis for each input/assumption and indicate any that are required by other jurisdictions. Please outline any new sources or major inputs that have been made by MDU in the past year.**

Response:

Customer load forecast	2018-2037 MDU Load Forecast with updates for 2019
Typical hourly load profile	2011 MDU customer load profile
MDU Owned generating resources	Actual information
Committed generating resources	Thunder Spirit Wind Expansion (2018)
Power Purchase Agreements	None
Generating unit heat rates	Generator performance data
Generating unit O&M costs	MDU forecast
Generator outage schedules	MDU outage forecast
Coal fuel pricing	MDU Power Production Forecast
Natural Gas fuel pricing	MDU Gas Supply forecast – with 3% escalator
Fuel oil pricing	Current pricing
Hourly wind production	2017 data for each wind project ¹
MISO Market Energy Purchases	Hourly max of 200 MW
MISO Energy Market price	MDU forecast - 3 year historic avg with 3% escalator ²

¹ Previous models used a 2009 Diamond Willow output shape for all wind projects

² Previous models used a 5 year historic average