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Xcel Energy			
Case No.:	EL15-014		
Response To:	South Dakota Public Utilities Commission	Data Request No.	2-6
Requestor:	Karen Cremer		
Date Received:	June 17, 2015		

Question:

Beyond preventing potential non-compliance charges from MISO and elaborating on Xcel's response to data request 1-6, please describe (and estimate) the value, or benefits, firm general service customers could realize as a result of Xcel firming up the quantity of curtailable capacity and energy for bidding into the MISO market or using curtailable capacity as part of Xcel's planning reserve margin.

Response:

Weather, plant maintenance and unforeseen factors can impact the supply and demand for electricity. The utility tries to maintain an adequate reserve margin to fulfill its obligation to deliver power to its customers regardless of unforeseen factors impacting generation supplies. Interruptible loads can provide the Company with a lower cost way to meet its reserve requirements compared to acquiring or building additional physical generation capacity. Acquiring or building additional generation would result in costs recovered by all customers. To put this in perspective, the interruptible load in South Dakota in addition to the interruptible load in North Dakota, Minnesota and Wisconsin equals over 600 MW; this is equivalent to approximately 2.4 medium-sized power plants.

This benefit of interruptible resources to our customers can be defined as the avoidance of a fixed generation asset. A fixed resource impacts customers through capital investment costs, fixed and variable maintenance costs, and the fuel used to operate in place of the interruptible resource (list not inclusive).

These resources, within MISO, allow the Company to more economically meet its resource adequacy requirements. It is important to note that interruptible resources have value for their potential benefit regardless of their active use. Further, load management adds reliability to the grid and allows the Company to better manage the electric system. As the EPA moves forward with more stringent regulations on fossil fuels, resource margins will tighten, therefore the relative value and use of load modifying resources will likely increase.

By "firming" up our interruptible load, the Company is maintaining quantity of curtailable capacity and energy to assure the program is operating as designed. Program participants have received incentives for providing the stand-by service of load reduction. The Company uses the MW impact of these aggregated participants for the purpose of capacity planning. If the customer is no longer able or willing to participate as intended, the waiver will update our records to indicate corrected load projections. This will remove previous planned capacity utilized towards MISO requirements, and correct the incentive amount paid to reflect the demand-response amount on stand-by service.

There are two monetary risks for the Company if a demand response obligation is unfulfilled.

1) MISO's Penalty Assessment could range from $80 to $200/MWh, depending on the Locational Marginal Pricing (LMP) at the time of the event.
2) MISO's Established costs for acquisition of replacement capacity:
    a. 1st Event - MISO Auction Clearing Price (ACP) = $3.48/MW-Day
    b. 2nd Event - MISO Cost on New Entry (CONE) = $245.21/MW-Day

In order to put these penalties in perspective, we have identified the monetary impact associated with these risks below. For purposes of this example, the risk is estimated for 100 MW of unfulfilled demand response obligation, for a period of 4 hours, on July 10.

MISO Assessments	Year 1 Impact	Year 2 Impact
Penalty Assessment (LMP * Size * Duration)	$150/MWh * 100 MW * 4 Hours = $60,000	NA
1st Event Capacity Acquisition Assessment (ACP Capacity Cost * Size)	$3.48/MW-Day * 100 MW * (365-40)Days = $113,100	NA
2nd Event Capacity Acquisition Assessment (CONE Capacity Cost * Size)	NA	$245.21/MW-Day * 100 MW = $8,950,000
Total Assessments	$173,100	$8,950,000

Assumptions:

- LMP value = $150/MWh
- July 10th is the 40th day of the MISO year (June 1- May 31)
- Some values may be rounded.

- Revenue Sufficiency Guarantee (RSG) charges are not accounted for in penalty calculation.
- 1st Event Capacity Cost is the Auction Clearing Price (ACP) for the current planning year. MISO could assess fees up to the Cost of New Entry, which equals $245.21/MW-day.
- 2nd Event Capacity Cost is the Cost of New Entry (CONE) for the current planning year.
- MISO qualifies a 2nd event as having occurred more than 24 hours following the 1st event.

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