

OTTER TAIL POWER COMPANY

Docket No: E017-RP-21-339

Response to: Clean Energy Organization

Analyst: Amelia Vohs

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Responding Witness: Nathan Jensen, Manager, Resource Planning - (218) 739-8989

Information Request:

Has OTP discussed or explored with the co-owners of Coyote and Big Stone any alternative commitment and dispatch arrangements or compensation arrangements that would reduce losses to the majority owners in MISO when market price differentials drive commitment based on SPP market price?

- a. If yes, explain what alternatives have been discussed.
- b. If no, explain why no such conversations have been had.

Attachments: 0

Response:

Yes. Otter Tail has worked to develop and propose alternative offer, commitment, dispatch, modeling, and compensation arrangements to potentially enhance performance.

Total Plant Offer Optimization Plan

Otter Tail has considered an alternative co-owner offer strategy, paired with corresponding make whole payments, which could potentially improve overall plant financial performance. In July of 2021, Otter Tail shared this alternative offer concept (described below) with the other Big Stone and Coyote co-owners.

The alternative offer strategy is unavoidably complex to implement and operate. In view of this complexity and much stronger forward market expectations the co-owners have not pursued further development of this alternative offer concept at this time.

The following outlines the alternative co-owner offer strategy. During low MISO pricing periods, Otter Tail/MDU/MPC would request NWE to increase their offer high enough to discourage SPP from committing Big Stone and/or Coyote (or decommit if currently online). The increase to the NWE offer would need to be within the bounds of an acceptable offer range per SPP market rules. In theory, an increased NWE offer would reduce the likelihood of commitment within the SPP market. Reduced SPP commitments would limit instances where

MISO co-owners would be forced into an uneconomic MISO market. In the event the MISO co-owner request resulted in lost opportunity costs to NWE, the MISO co-owners would be obligated to provide make-whole payments NWE. All make-whole payments would be made outside of the regular market settlement processes. Settlements and co-owner coordination under this alternative approach are challenging. Issues to address include the following:

1. Per the co-owner joint operating agreement, no co-owner is under any obligation to participate in an alternative offer strategy.
2. Settlements for make-whole payments become very complicated across both markets. It would be impossible to know how the market would have cleared under a standard NWE energy offer. Co-owners would need to agree to some form of settlement estimation.
3. MISO co-owners would need to agree when to request an increased NWE offer and how high that offer should be increased. NWE would retain the right to decline the requested offer increase.
4. Regulatory approvals would likely be required, e.g., MISO co-owners' state commissions may need to approve payments to SPP co-owners for not operating their share of the plant.
5. Review of market manipulation associated with artificially increased offers would need to be conducted.
6. Utilization of the described alternative offer strategy would only be applied in limited situations, namely when one market results in operational benefits while the other market results in operational costs.
7. It should be noted the reverse could also be developed and implemented, where NWE requests inflated MISO offers to deter MISO commitment during low SPP market conditions. In practice this is unlikely due to the ownership share of NWE and the resulting make-whole payments to the MISO co-owners.

Otter Tail continue to refine this possible alternative offer strategy and discuss the same with the co-owners.

Combined Modeling of MISO Co-Owner Generation Shares:

In addition to the Total Plant Offer Optimization Plan noted above, Otter Tail has also approached the other MISO member plant co-owners and recommended implementation of combined modeling to potentially improve overall economic performance. To be clear, the combined modeling of MISO co-owner generation shares would not reduce losses when commitment occurs based on SPP market price, but it would have the potential to optimize financial benefits for MISO co-owners under a MISO commitment.

Currently all co-owner shares of both Big Stone and Coyote are modeled as separate and distinct generators within the MISO and SPP commercial models. This means MISO and SPP, from a modeling, commitment, and dispatch perspective, view the co-owner shares as independent generators, not as one single generator. The SPP and MISO markets do not coordinate the commitment nor the dispatch of jointly owned units. Often under an economic offer, only a portion of the entire unit will be committed and dispatched at any given time. Co-owner shares that are not committed are required to self-commit their share of the plant to match the physical

reality of a single plant and to meet co-owner joint operating agreement obligations. Under self-commitment, MISO and SPP are not obligated to make a generating unit whole to their offer costs. Those self-committed units become price takers in the market. In the case of separately modeled Big Stone and Coyote co-owner shares, partial commitment and dispatch of only a single co-owner share can result in under-recovery of startup and make whole payments to the co-owners whose shares were not committed or dispatched. From a practical standpoint, since the plant is one physical generator, commitment of a single owner's share of the plant will result in the commitment of all owners' shares of the plant.

The MISO market does allow for an alternative modeling format (combined modeling) that could reduce some unrecovered costs associated with commitment of a single co-owner share of the plant. Combined modeling allows for all co-owner shares of a plant to be modeled as a single unit. Under combined modeling, if MISO chose to commit and dispatch any portion of a MISO co-owner's share of the plant, all MISO co-owners' shares of the plant would also be committed and dispatched. MISO would then be obligated to make all MISO co-owner shares whole to the MISO combined unit's offer price (start-up, no-load, variable energy). While combined modeling offers this as a notable benefit, it also introduces additional complexities and requires the following:

1. Only one market participant is able to manage (submit offers and receive settlements) the combined MISO co-owner shares. The other co-owners lose their ability to offer their shares into the market and receive settlements from MISO.
2. Combined modeling co-owners would need to agree upon offer parameters for energy injected into the MISO market.
3. After-the-fact bilateral settlements, outside of the MISO energy market, would be required between the MISO co-owners. MISO would only provide market settlements to the market participant "managing" the combined unit offer.
4. Combined modeling would not solve cross market SPP/MISO commitment and dispatch mismatches.

Otter Tail has recommended implementation of the combined modeling plan to the other MISO co-owners. Since the implementation of economic offer capability at Big Stone and Coyote, most cold start economic commitments are the result of the SPP market, which limits the financial benefits of MISO combined modeling. Given the limited financial benefits, the other MISO-member co-owners have declined Otter Tail's recommendation of moving to a combined modeling format, which would require relinquishing their ability to independently offer their share of the unit into the market and increase settlement complexity. Implementation of MISO combined modeling could become more attractive if MISO was to increase calls for economic commitment.