

MONTANA-DAKOTA UTILITIES CO.
SOUTH DAKOTA PUBLIC UTILITIES COMMISSION
DATA REQUEST
DATED AUGUST 1, 2016
DOCKET NO. EL16-026

- 1-5. Refer to 18 CFR 292.304 (e). Explain and/or demonstrate how MDU's determination of the avoided costs take into consideration factors (1), (2), (3), and (4).**

Response:

Montana-Dakota's avoided cost rate schedules 95, 96 and 97 were first authorized by the South Dakota Public Utilities Commission (Commission) on January 3, 1985 in Docket No. F-3365 (*In the Matter of the Investigation of the Implementation of Certain Requirements of Title II of the Public Utilities Regulatory Policies Act of 1978 Regarding Cogeneration and Small Power Production*). The determination of avoided costs for generators with a design capacity of 100 kW or less remains the same as the tariffs authorized in 1985 that were determined by the Commission to address the requirements of PURPA with minor exceptions as noted below.

In summary, the PLEXOS model is used to simulate marginal energy costs, fuel plus variable O&M, of the last generation unit dispatched or the MISO energy price whichever was dispatched last. The marginal energy price reflects the cost of the marginal unit or MISO market price that a QF resource would displace. This process is the same process utilized in 1985 albeit using a different but comparable model and reflecting MAPP purchases rather than MISO market purchases.

Avoided capacity costs were deemed to be the cost of a combustion turbine for contracts less than 10 years and a baseload resource for contracts 10 years or greater in Docket F-3365 which is the basis used today. A tariff change was made in 2013 in EL13-023 to reflect the application of MISO BPM-011 to assign capacity values for a QF resource which takes into account the demonstrated reliability of a generating unit by resource type. Prior to the advent of MISO, a specific calculation was provided in the tariff to account for the capacity payment determination. Factors iii and iv of 292.304 (e) (2) would be covered in a contract agreement for a QF similar to other power purchase agreements that the Company enters into which would include obligations, products, pricing, term, termination, penalties for non-performance, reporting, disputes, etc. Aggregating facilities is allowed if they are behind the same revenue meter else the facilities will be considered as individual facilities.

A direct relationship between the availability of energy or capacity from a QF to the ability of Montana-Dakota to avoid certain energy and capacity costs, suggested in Paragraph (3) did not exist in 1985 nor does it today. However, the tariffs authorized in F-3365 were determined by the

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Commission to establish just and reasonable rates for the purchase and sale of electrical energy and capacity between Montana-Dakota and a QF. With Montana-Dakota's participation in the MISO Market, the purchase obligation from a QF will require MDU to sell the energy from the QF into the MISO Market at either a profit or loss depending on the actual MISO Energy price and the contract price for the QF's energy. A QF does have the ability to sell its energy into the MISO Market and receive the same value that MDU receives for its energy. Capacity purchase from a QF only offsets future resource requirements for the Company if it displaces a resources or delays its need date. Capacity purchases from a QF can also reduce the amount of capacity that the Company purchases from others if the amount of QF capacity is known at the time that it enters into agreements with others. Whereas, excess capacity that the Company possesses is either sold to others through bi-lateral contracts or through the MISO Capacity Market at current market clearing price which is almost always below the value of capacity that the Company would pay to a QF. A QF now has the ability to directly participate in the MISO Capacity Market and receive the same prices that the Company would receive.

Finally, in regard to line losses addressed in Paragraph (4), Montana-Dakota does not calculate or provide additional cost benefits to a QF associated with potential reduced line losses as this was not a requirement established by the Commission. Montana-Dakota agrees that it would not be appropriate to do so as any potential savings from line losses are dependent on the actual location of the QF to other load. On average, MDU's entire system electrical losses are around eight percent. This includes both transmission and distribution losses. A detailed study would be required to determine any loss benefits which are likely small in nature and subject to change over time.