Response to Information Request SD-OTP-18
Page 1 of 1

OTTER TAIL POWER COMPANY
Docket No: EL10-011

Response to: Otter Tail Power Company
Analyst: Bryan D. Morlock
Date Received: 02/25/2011
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Date of Response:
Responding Witness:

Question No. : SD-OTP-18

On page 15 of your testimony (lines 23 to 26) you state that Strategist has the ability to model wind generation as non-firm. Please provide documents that indicate exactly the modeling technique used by Strategist when it is modeling wind as non-firm and describe in detail how that technique is different from the modeling used by OTP in IRP-Manager. Please provide every IRP developed by any utility that you are aware of that describes the non-firm modeling of wind by Strategist model runs used for that utility's IRP.

RESPONSE:

Strategist includes an input data item for transactions (purchases or sales) that allows each transaction to be firm or non-firm. In addition, Strategist has an input data flag which specifies whether a purchase contributes to the company's commitment requirements. Modeling wind as a transaction in Strategist, the user can specify that the wind is non-firm and does not contribute to the company's commitment requirements. Documents concerning this modeling technique are considered proprietary by the vendor.

In IRP-Manager, wind is considered a firm resource that reduces customer load. That is, the wind energy is completely dependable and the dispatchable resources only need to cover the customer load reduced by the wind generation and the reserve requirements necessary for the customer load reduced by the wind generation. This technique is completely incorrect. In actual practice, not only do the dispatchable resources have to cover the customer load not reduced by the wind generation, they must also cover the possibility that the wind generation will not materialize and the reserve requirements of the customer load plus the wind generation.

The modeling available in Strategist allows wind to be considered non-firm, and forces the dispatchable resources to cover the customer load not reduced by the wind generation. The reserve requirements may also be increased to include the reserve necessary to cover the intermittent nature of the wind generation.

See the response to SD-OTP-06 for descriptions of the non-firm modeling of wind in other IRPs.