

Exhibit \_\_\_\_ (GWE-3)

## George Evans

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**From:** BMorlock@otpc.com  
**Sent:** Thursday, December 02, 2010 3:18 PM  
**To:** gwe@slater-consulting.com  
**Cc:** Jon.Thurber@state.sd.us; PBeithon@otpc.com; sdratecase@otpc.com  
**Subject:** RE: SDPUC1 SCENARIO  
**Attachments:** OTP Capacity Status.xlsx

George,

Without the Luverne Wind Farm, the first capacity deficit would occur during the summer of 2015, if we could plan to the exact MW. The attached spreadsheet shows the summer season capacity status. Without the Luverne Wind Farm capacity, OTP is deficit beginning in the Summer 2015 season. While the shown deficit is only 6 MW, this is assuming perfect forecasting knowledge and perfect wind generation accreditation. In MAPP, at that time, actual wind farm accreditation was based on historical performance. OTP estimated wind farm capacity accreditation at 15% Summer and 20% winter, but it varied from site to site. Also, OTP is a highly integrated system with over 200 interconnections with other utilities. We have distribution subs served from transmission lines owned by other utilities and other utilities have distribution subs served by OTP transmission lines. Many of these sites do not have real-time metered data telemetered back to the control center, so OTP does not know its real-time load exactly. OTP also does not know exactly how much load reduction it will receive when it activates the radio load management control system, as the controllable loads vary by time-of-day, day-of-week, and temperature conditions. As a result, OTP typically planned on a 15-20 MW safety cushion because the penalty for being deficit was about \$100,000 per MW per season. And the MAPP reserve requirement is based on actual load served, with no consideration for abnormally hot or cold weather.

OTP would not have been able to do without the Luverne Wind Farm and not add some other capacity resource. The LM6000 CT that I added in 2015 in the SDPUC1 scenario would cover the deficit and the safety margin. The OTP winter seasons were all sufficient so that the Luverne Wind Farm was not a capacity issue. For this IRP OTP is Summer season capacity driven, although almost perfectly balanced for winter and summer peak demands out in the long term. The MAPP Pool (and now MISO) are heavily summer peaking so the cost and availability of purchased capacity out in that time frame is a consideration.

Bryan D. Morlock, P.E.  
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**From:** George Evans [<mailto:gwe@slater-consulting.com>]  
**Sent:** Thursday, December 02, 2010 1:22 PM  
**To:** Morlock, Bryan  
**Cc:** [Jon.Thurber@state.sd.us](mailto:Jon.Thurber@state.sd.us); Beithon, Pete; Regulatory Services\_SD Rate Case  
**Subject:** RE: SDPUC1 SCENARIO

Bryan:

It appears to me that, without the 40 MW of wind that you are removing (representing Luverne), there is no capacity need through 2020. That is, assuming your base plan additions, but without that 40 MW of wind, there is no capacity deficit in future years. Am I wrong on this?

George

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**From:** [BMorlock@otpc.com](mailto:BMorlock@otpc.com) [<mailto:BMorlock@otpc.com>]  
**Sent:** Wednesday, December 01, 2010 5:57 PM  
**To:** [gwe@slater-consulting.com](mailto:gwe@slater-consulting.com)  
**Cc:** [Jon.Thurber@state.sd.us](mailto:Jon.Thurber@state.sd.us); [PBeithon@otpc.com](mailto:PBeithon@otpc.com); [sdratecase@otpc.com](mailto:sdratecase@otpc.com)  
**Subject:** SDPUC1 SCENARIO

George,

It took me a few days to create the requested scenario to the extent that I can. The present-worth revenue requirements of the original Scenario UPNONEXT are \$3,594.96 (millions) and Scenario SDPUC1 are \$3,616.44. Scenario SDPUC1 removes 40 MW of wind generation (represented by 20 MW wind blocks FPL20G and FPL20H) from implementation in 2008. Instead, an LM6000 CT (represented by LM6-D) is installed in the year 2015 for capacity purposes. I did not fine-tune the installation of the CT for the capacity needs later in the planning period since we would not be able to have perfect timing in the real world. The attached EXCEL files has the annual revenue requirements and PW calculation.

Please note that these revenue requirements cannot be compared to any of the other scenarios that I provided since there are other changes in those scenarios.

Please let me know what information you might like to see from this run. The input files I would only provide the ones that have changed, since it requires a manual process to convert from binary to ASCII format. The output files are already in text format.

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