

Electricity Output from the Maple Ridge Windplant

July, August, September 2006

Tug Hill (Lewis County)

New York, USA

(rated at 240MW, about 160 1.5MW turbines)

— data collected and graphed by

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“Energy producers are not required to file actual energy production figures for their plant, but are required to file hourly financial transaction information with FERC [“The Federal Energy Regulatory Commission is an independent regulatory agency within the Department of Energy that, among other energy-related tasks, licenses and inspects private, municipal and state hydroelectric projects.”]. With energy deregulation came the ever present potential for Enron-style abuses and this is one of the measures, among others, instituted to ensure accountability. It is, I believe, possible to get a temporal (“time”) picture of the energy production because of the hourly reporting requirement, though this is perhaps somewhat fuzzy due to other contractual factors that may be present ... in the transaction. For example, the FERC data shows no time period when at least some energy wasn't sold, yet there are many instances during the 3-month reporting period [July, August, September 2006] when the wind doesn't blow at all and the wind farm is dead.

I think the Cum Output (based on transaction data) vs. Time graph (attached) gives a more meaningful depiction of the Maple Ridge farm than the conventional Output vs. Time graph often posted by the wind company, similar to the 2nd graph below. That type of graph shows many hourly variations and spikes and does not depict useful information. Also, the mathematical mean output is heavily contaminated by large spike fluctuations which may give a misleading Actual Capacity Factor value—too high.

Maple Ridge has a nameplate capacity factor of 240 MW, but from the graph we see that for 40% of the quarter [July, August, September 2006] (1883 hrs), the wind farm produced a paltry 0-30 MW, or 0-12.5% of nameplate capacity. At no time did the output sustain full 240 MW. Indeed, the output was only above half the rated output 15% of the time. Bear in mind that this graph is based on transaction information.

It's hard to escape the conclusion that Maple Ridge is a very pathetic energy producer, at least for the 3Q06 [third quarter of 2006] examined, when compared with any other industrial scale plant (hydro or thermal). Recall that 3Q06 [July, August, September 2006] saw record demand for electrical energy in NY due to the hot summer weather that year."

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