EXHIBIT 319

GE

Energy

Technical Requirements for Wind Generation Interconnection and Integration

Prepared for:

ISO New England

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November 3, 2009

Task 2 Report

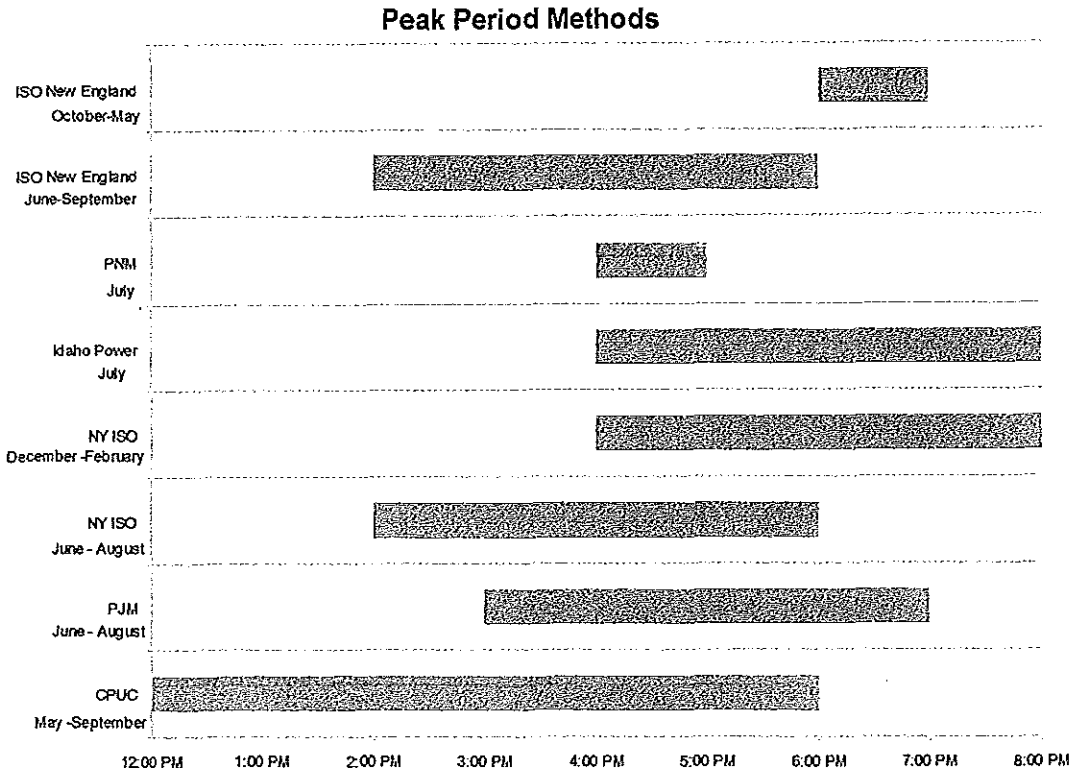

Figure 40: Summary of peak periods used in U.S. to determine wind generation capacity value. (Reference [2])

Many of the wind integration studies conducted over the past ten years have included in their scope an examination of wind generation capacity value. In these studies, the general approach has been to employ rigorous statistical techniques to calculate the change in system LOLE when wind generation is added.

Figure 41 depicts this basic method. Using chronological load profiles for a year or number of years, the LOLE is calculated without wind generation. In some cases, the amount of capacity in the study years is adjusted so that the baseline LOLE without wind generation is at the desired level, usually 1 day in 10 years. Wind is then introduced as a load modifier by simply subtracting the hourly aggregate wind generation from the corresponding load at that hour. The LOLE calculation is then re-run.

Most programs adjust the peak load around the forecast value to produce a series of LOLE results. When this is done with wind generation, a second curve is created. The Effective Load Carrying Capability (ELCC) of wind generation is defined as the incremental load serving capability at the target reliability level.

Although the computational techniques are rigorous, there are a number of shortcomings with their application to wind generation. The most significant of these is the amount and nature of chronological data required to produce a high-confidence result. Inter-annual variability will affect the ELCC calculation as well. Secondly, both wind and load have a common

meteorological driver. Therefore, the hourly profiles of load and wind generation must be drawn from the same historical year to preserve any embedded correlations due to weather. Because these calculations are almost always focused on a future year, the procedure used to scale historical hourly load profiles to reflect expected load in a future year is not a precise science. Finally, availability of adequate historical wind profile data is always an issue. Many integration studies (including the Eastern Interconnection Wind Integration and Transmission Study and the ISO-NE wind integration study begun in 2009) utilize mesoscale atmospheric simulations to re-generate data of sufficient resolution for historical years. This data has been utilized for ELCC evaluations, but in general only two or three years of data are available, which can result in widely-varying estimates of annual ELCC for wind generation.

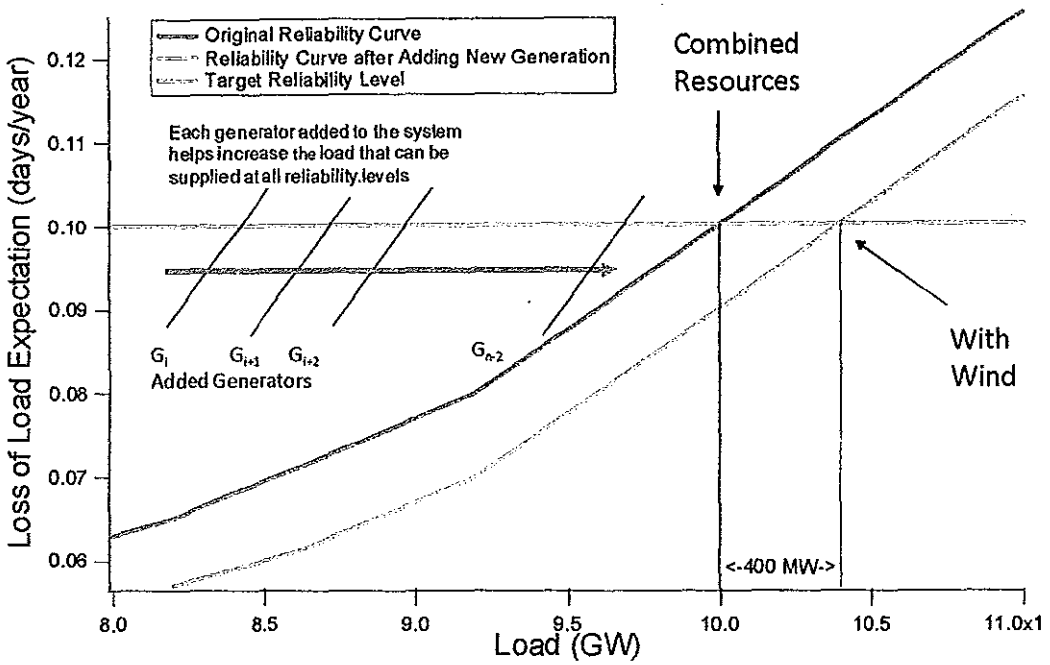

Figure 41: ELCC concept, where increase in peak load that can be served at target reliability level is assigned as the effective capacity of the resource added.

It has been suggested that at least ten years of historical data would be necessary to increase the confidence in the range of annual results. A rolling period of a decade would encompass many of the major weather drivers such as El Nino and La Nina that have recently received much greater attention. Hydro-electric utilities routinely maintain even longer data sets (e.g. 50+ years) as the basis for planning.

The recently-published report from the NERC Integrating Variable Generation Task Force weighs in on this issue. From the report:

> ***NERC Action:*** Consistent and accurate methods are needed to calculate capacity values attributable to variable generation. The NERC Planning Committee should direct the Reliability Assessment Subcommittee to collect the capacity value of variable generation based on their contribution to system capacity during high-risk hours, when performing its seasonal and long-term reliability assessments. As additional data becomes available