NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Meeting Notes
Generator Verification SDT — Project 2007-09

August 4–6, 2008
Portland, OR

Monday | 1–5 p.m.

1. **Reviewed Antitrust Compliance Policy**

2. **Reviewed MOD-026 and MOD-027**

MOD-026 Notes:

a. Sister unit concept was discussed and generally accepted by the full team in attendance.
b. R4. of MOD-026: removed static limiter setting data as not applicable. Should include it in PRC-019.
c. MOD-026 does not specify a tolerance for minimum step in voltage percentage (1% to 2% voltage steps). This is a different approach than in MOD-027. The full team decided to leave MOD-026 as written and to seek industry feedback on the approach. Both MOD-026 and MOD-027 should be posted simultaneously.

MOD-027 Notes:

1. Remove reference to +/- 0.05Hertz in R1.1. and R1.3.
2. Should this standard include requirements for staged testing of generators?
3. If this standard pertains only to use of ambient monitoring for the purpose of verifying governor model, then why is a periodicity relevant?
4. How do we get around the "base-load" note?
5. Should the Reliability Coordinator play a role in deciding adequacy of unit performance to frequency disturbances? Is this in scope?
6. "Marching Orders"
   a. Transmission Planner offers list of Turbine/Governor and Load Control system models to Generator Owner.
   b. Generator Owner selects a model.
   c. Generator Owner performs baseline test to determine the model parameters (time constants, etc.).
   d. Generator Owner submits model with parameters to Transmission Planner to run.

e. Transmission Planner runs model in its software.
f. If Transmission Planner cannot run submitted model, Generator Operator shall provide a written response.
g. RESOLUTION process…
h. Periodically verify that model response matches actual response during a system disturbance (using ambient monitoring) within a XX year period.

Tuesday | 8 a.m.–5 p.m.

3. Review of Next Posting Steps for MOD-024 — Bob Millard

4. Discussion of MOD-025 and PRC-019

a. Include static limiter setting data in PRC-019 (removed from MOD-026).
b. Consider merging with MOD-025; team is split on this issue. More support separate standards than merging them.
c. Consider test procedures from ERCOT as input to the standard (Rick Terrill).
d. Address issue of "real and/or perceived" limitation concerns on part of nuclear plants.
e. Donald Davies suggested requiring submitting a Reactive Capability Curve as part of MOD-025 standard. D-curve discussion:
    i. Refer to e-mail sent by Les Hejagos.
    ii. A generator D-curve is not representative of the actual capability of a unit which is usually inside the generator D-curve in practice (Ed Wingard).
    iii. ERCOT generators currently supply a "corrected" D-curve to RC (Rick Terrill).
f. Discussed the need for 4 data-points.
    i. FERC directed multiple points.
    ii. Some team members expressed opposition to 4 points, asserting diminished benefits and increased cost to provide the fourth data point.
    iii. Ed Wingard suggests allowing for exemptions to the 4 points requirement under certain conditions. Suggestion was made to utilize capacity factor as a threshold for exempting base loaded units from verifying reactive capability.
    iv. The only point that necessitates a one hour steady load condition is the over-excited at >95% output data-point. Other points may be verified as operational opportunity arises within a 5 year period.
g. Reigh commented that reactive capability is dependent upon voltage in practice.
h. Lee Taylor asked the sub team to consider coordinating the periodicity schedule requirements between PRC-019 and MOD-025 as well as the use of tracked data.

i. Vlad Stanisic commented that hydro-electric should be exempt due to insignificant auxiliary loads. He questioned whether the Facility Rating standard may overlap the capability verification standard.

5. Adjourn