Energy Probe Interrogatory #51

Interrogatory

Reference:
Exhibit E2, Tab 1, Schedule 1, page 12

Please explain the method of forecasting the forced loss rate. Please show sample calculations.

Response

Each station's forecast Forced Loss Rate is a target set during the annual business planning process. It is developed by assessing a number of contributing factors as discussed at Ex. E2-1-1, pp. 12-14, and Ex. F2-1-1, pp. 15-19 including:

- An assessment of the FLR historical trending performance
- An assessment of the latest industry benchmarking results
- An assessment of Equipment Reliability Index and Plant System Health, looking at historical trends and expected future equipment condition, including fuel handling equipment reliability
- A review of maintenance backlogs, both historical trends and expected future performance
- An assessment of human performance, both historical trends and expected future performance
- An assessment of capital and OM&A project investments, and the timing of specific project availability for service
- Any known improvements or plant material condition issues

An example of a sample calculation would be a generation forecast that assumes a single 100 day outage at Unit X in its yearly plan. OPG does not forecast unplanned extensions to planned outages (i.e., assumes zero). Based on the contributing factors identified above, OPG forecasts an expected 2.65 days of lost generation during that year at Unit X due to unplanned production losses.

Mathematically, FLR is derived as follows:

$$Unit\ FLR = \frac{OFEL}{REG - (PEL + UEPEL)} * 100\%$$

Where:

OFEL: Operating period unplanned forced energy losses REG: Reference energy generation for that period PEL: Planned energy losses for that period (such as planned outages or derates) UEPEL: Unplanned extensions of planned outages for that period

Based on the above assumptions, the calculated unit yearly FLR at Unit X would be 1.0%:

$$Unit\ FLR = \frac{2.65}{365 - (100 + 0)} * 100\%$$