

SCOPE TO ANALYZE EFORD TRENDS

PURPOSE

With the advent of the NYISO in 1999 and its replacement of the NYPP in performing reliability studies, the NYSRC was formed to ensure the reliability of the bulk power system in New York State. In 2004, the NYSRC changed its method of calculating the EFORDs used in IRM studies. The change reduced the period for calculating historical forced outage rates from 10 years to five years of data. The forced outage rate trend over the past years has been moving downward until 2006. In 2007, a significant increase in forced outage rates was observed. The NYISO, who collects and reports outage rates from units, indicated that some of the change was possibly the result of past reporting corrections going back 4 years and the tightening of acceptance criteria before submitted data can be added to the outage database.

The purpose of this study is to recommend an appropriate historical period to use when calculating forced outage rates to use in IRM studies. To accomplish this by June of 2009, so it can be used in the 2010-2011 IRM study, emphasis will be placed on analyzing the last five years of cause data and then look at unit ratings and older data.

This study is being done in response to recommendation 7 of the Reliability Compliance Monitoring Subcommittee November 26, 2008 Report to the NYSRC Executive Committee.

METHODOLOGY

To accomplish this goal the Installed Capacity Subcommittee of the NYSRC will look at and compare NYISO outage rates and outage data received from other sources. To represent forced outage rates, trends will be developed and analyzed by type, age, and location of units to recommend a process.

The outage analysis must be performed on all unit types and sizes location and age by using all outage designations (ex. U1 through U4, D1 through D4, SF, RS, MO, PO, etc) and cost codes.

The following is a list of the things that the study will look at:

1. Look at two periods, the last five years, and the pre ISO time frame of 1995-1999. Units that have retired would be eliminated from the second group. This analysis will validate the correctness of moving from analyzing 10 years of data to 5 years of data.
2. Units in Zones J, K, Rest Of State (ROS), and all of NYCA will be analyzed on a month by month basis will be analyzed for the last five years and then 1995-1999 five years will be analyzed. The data will be further analyzed by unit type and size.
3. Results will be analyzed in the same way NERC does. The total hours available for each month will also be tracked.

4. The data required for all units will be presented by type; type and size; type, size and age; and type, size, age and location for all non-productive hours. Reserve Shutdowns (RS), Forced Outages (U codes 1-4, Derates (D codes 1 -4), Start-Up failures (SU)) individually charted on a monthly basis for the last 5 years. The results will be presented graphically. The purpose of these trends will show if there is an increasing or decreasing pattern to the codes relative to one another.
5. In order to benchmark the trends, both the original and corrected data analyzed for the 30 to 40 units mentioned in the RCMS report by the same methods mentioned above will be required.
6. There is a need to check what unit ratings are used for the MARS data and compare that data to what is reported in the gold book.
7. Are NEC-GADS net available capacity (NAC) ratings the same as the DMNC rating?
 - a. Has there been a data dump and a checking of the data from the two sources?
 - b. The results should be compared to the ICAP-UCAP conversion factors.
8. Ask ISO for the procedures (including changes through time) used to screen data for accuracy.

RESULTS

After analyzing the data, a recommendation will be made on how to determine the forces outage rates that are used in IRM studies.

1. It is hoped that a determination of whether an increasing outage rate trend is occurring, or there is only a one year anomaly in the data.
2. Possible recommendations could be:
 - a) Continue to use the five year historical average.
 - b) Continue to use the five year historical average but give more weight to recent years.
 - c) Use more years.
 - d) Project trends in outages rates based on history.