2013/14 Winter Weekly Reserve Target Analysis

PJM Staff and the PJM Planning Committee recommend 27% as the minimum winter reserve target to be applied to the PJM RTO for the upcoming 2013/2014 winter period. This value represents a slight reduction from the current margin of 28%. The 27% target is based on unit summer ratings and is expressed as a percentage of the forecasted weekly peak load.

The determination of the Winter Reserve Target is based on Multi-Area Reliability Simulation (MARS) modeling and Monte-Carlo solution techniques. MARS has many event driven table entries which allow for a closer match to PJM operational practices.

The table below shows the results of the MARS analysis for the 2013/2014 winter period. The average reserve level over the 13 week winter period is 26.8%. This margin is slightly lower than the 27.8% calculated in last year’s study due to a reduction in the load forecast uncertainty modeled for the upcoming winter months. (Please note the actual recommended value is required to be an integer value due to computer application requirements.)

As was done in the 2012 analysis, load management resources in step 2 of the Emergency Operating Procedure Table were set to zero in the non-summer period. Load management is not subject to a specified penalty metric for non-performance outside the summer period (see Section 8.5 of PJM Manual 18). Based on this procedure and the analysis, PJM Planning staff believes that maintaining a minimum 27% reserve target for the 2013/2014 13-week winter operating period ensures that the actual winter loss of load risk is consistent with that modeled in the 2013 PJM Installed Reserve Margin Study.

With endorsement of this recommendation, the PJM Operations Department will coordinate generator maintenance scheduling over the winter period to seek to preserve a 27% margin after units on planned and maintenance outages are removed. This margin is a guide to be used by PJM Operations and is not an absolute requirement.

The 27% Winter Weekly Reserve Target was unanimously endorsed by the PJM Planning Committee at its October 10, 2013 meeting. PJM will request Operating Committee endorsement of the 27% Winter Weekly Reserve Target at its November 5, 2013 meeting.

MARS allows six Emergency Operating Procedure (EOP) levels available to report LOLE: 1) Operating reserves, 2) Load Management resources (DR), 3) 30 minute reserves, 4) Voltage reduction, 5) 10 minute reserves, and 6) Appeals for public curtailment. Reported LOLE values in the table below are after implementation of the 30 minute reserve EOP level.