



955 Jefferson Ave.  
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Norristown, PA 19403-2497

October 13, 2010

VIA ELECTRONIC TRANSMISSION

OPERATING COMMITTEE

Dear Committee Members:

2010 / 2011 PJM WINTER WEEKLY RESERVE MARGIN TARGET

Based on analysis results provided by PJM Resource Adequacy Planning Department Staff and reviewed by the Reserve Requirement Assumptions Working Group, the Planning Committee (PC) has unanimously agreed to recommend a 26% minimum winter reserve target to be applied to the PJM RTO for the upcoming 2010/2011 winter period. This reserve margin is based on unit summer ratings and is expressed as a percentage of the forecasted weekly peak load. With this recommendation, the PJM Operations Department would coordinate generator maintenance scheduling over the winter period to seek to preserve a 26% margin after units on a planned or maintenance outage are removed. Note this margin is a guide to be used by PJM Operations and is not an absolute requirement.

The recommended 26% reserve target would replace the 25% target that was in effect for the PJM RTO for the 2009 / 2010 winter period. The slight increase in the reserve target is due to a change in the modeling procedure to recognize the limited availability of load management in the winter period. This modeling change is consistent with the treatment of Demand Resources (DR) described in Section 8.5 of [Manual 18](#). Results of this year's winter weekly reserve target study are detailed on the following two pages. The study results indicate that the "one day in ten years" loss of load expectation standard can be maintained across the PJM RTO with an increase in the Winter Weekly Reserve Target to 26%.

The PC recommends that the Operating Committee (OC) endorse the use of the recommended 26% winter weekly reserve target for all planned outage scheduling activities during the 2010/2011 winter period. The PJM staff fully endorses this recommendation by the PC. If you have any questions, please contact Tom Falin at email address [falint@pjm.com](mailto:falint@pjm.com) or phone number 610-666-4683.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Herling", with a long horizontal stroke extending to the right.

Steven R. Herling  
Chairman, Planning Committee

SRH/TAF/docs 615650v1

cc: Planning Committee  
Reserve Requirement Assumptions Working Group

PJM Interconnection Staff:  
Patil Sanjay  
Dave Souder  
Ed Hoey



## Operations Related Assessments

- **Winter Weekly Reserve Target Analysis**

PJM Staff recommend 26% as the minimum winter reserve target to be applied to the PJM RTO for the upcoming 2010 / 2011 winter period. The recommended value is required to be an integer value, due to computer application requirements. This value represents an increase from the current margin of 25%. The 26% target is based on unit summer ratings and is expressed as a percentage of the forecasted weekly peak load.

Table II-9 shows the results of the MARS analysis for the 2010 / 2011 winter period. The average reserve level over the 13 week winter period is 25.8%. This margin is higher than the 24.5% calculated in last year's study, even though there is a slightly flatter PJM load shape over the winter period (see Figure II-13). A flatter load shape distributes the winter loss of load risk over a greater number of weeks and allows for a lower weekly average reserve margin. This effect, however, was offset by a change to the study procedure.

In previous years, the winter weekly reserve procedure assumed that all PJM resources were available year-round. Provided the amount of Demand Resources (DR) in PJM was a modest amount, this assumption was valid. In recent years, however, the amount of DR in PJM has increased from less than 2% of the load to almost 7% of the load. DR is not subject to a specified penalty metric for non-performance outside the summer period (see Section 8.5 of PJM Manual 18). Therefore, the study procedure was modified this year to recognize this limitation on the availability of DR. This change resulted in a slight increase in the winter reserve target from last year's value. Based on this procedure change and the analysis, PJM Planning staff believes that maintaining a minimum 26% reserve target for the 2010/2011 13-week winter operating period ensures that the actual winter loss of load risk is consistent with that modeled in the 2010 PJM RRS. This recommendation was unanimously endorsed by the RRAWG.

With this recommendation, the PJM Operations Department would coordinate generator maintenance scheduling over the winter period to seek to preserve a 26% 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.**

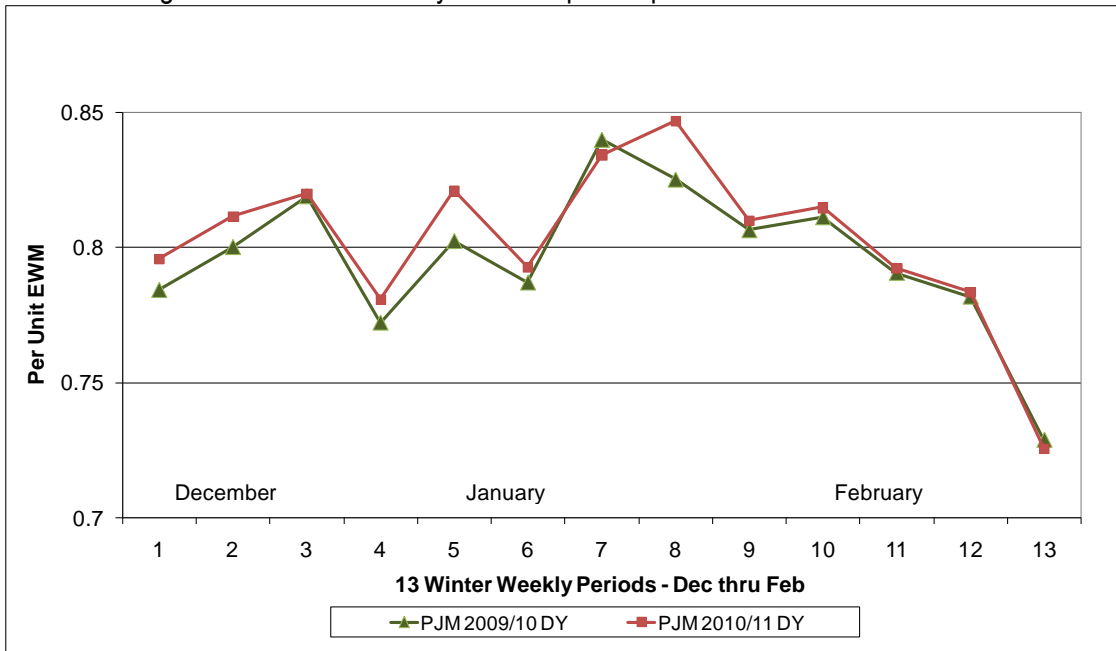
Endorsement of the 26% Winter Weekly Reserve Target from the PJM Planning Committee (PJM-PC) will be requested at the October 6, 2010 meeting. The recommendation on this item will be forwarded to the PJM Operating Committee (PJM -OC) and the PJM Operations Staff responsible for generating unit planned maintenance scheduling.

There are six Emergency Operating Procedure (EOP) levels available to report LOLE: 1) Operating reserves, 2) Load Management resources, 3) 30 minute reserves, 4) Voltage reduction, 5) 10 minute reserves, and 6) Appeals for public curtailment. The reported LOLE values are before any Voltage reductions, but do include load management curtailments. Reported values are after implementation of a given EOP level, the 30 minute reserve level.

The procedure used for this assessment uses 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 Operation's practices. The change in procedure for this assessment is to set to zero the load management resources in the step 2 values used in the Emergency Operating Procedure Table, for the non-Summer period.



Figure II - 1: Winter Weekly Load Shape comparison - 2009 and 2010 RRS



In Figure II – 13, the 2009 / 10 DY shape is from the 2009 RRS while the 2010 / 2011 DY is from the 2010 RRS model.

Table II - 1: Winter Weekly Reserve Target

Month	Calendar Week	% Weekly Reserves level for 1D/10 YR	LOLE ( 3rd Margin State )
December	49	21.30	7.85E-05
	50	20.84	9.92E-05
	51	23.47	0.00E+00
	52	31.39	0.00E+00
January	1	36.69	0.00E+00
	2	21.38	1.03E-04
	3	21.93	4.55E-05
	4	28.94	0.00E+00
February	5	28.69	0.00E+00
	6	27.26	0.00E+00
	7	21.58	1.12E-04
	8	25.35	0.00E+00
	9	26.72	0.00E+00
<b>Average Weekly Reserves</b>		<b>25.8</b>	