



INTERIM REVIEW

OF

RESOURCE ADEQUACY

COVERING THE

NEW YORK CONTROL AREA

For the years 2009 - 2011

October 2008

EXECUTIVE SUMMARY

This is the New York Independent System Operator (NYISO) 2008 Annual Interim Assessment of its 2006 Area Review of Resource Adequacy, which covered 2007 through 2011. This assessment is conducted to comply with the Reliability Assessment Program established by the Northeast Power Coordinating Council (NPCC). This assessment follows the resource adequacy review guidelines as outlined in the NPCC B-8 Document, “Guidelines for Area Review of Resource Adequacy.”

Results of this interim assessment show that the New York Control Area (NYCA) will comply with the NPCC resource adequacy reliability criterion under the Base Load Forecast. Under the High Load Forecast, the NYCA will be in violation of the NPCC resource adequacy criterion in 2010 and 2011 if no further actions are taken. However, resources that are presently due to become available by 2010 will ensure that compliance with the NPCC criterion will be maintained should the High Load Forecast eventuate.

The NYCA has locational Installed Capacity (ICAP) requirements for the Long Island (LI) and New York City (NYC) zones established by the NYISO. Existing and planned capacity is sufficient to meet Long Island’s current 94% locational requirement over the period. NYC will meet the current locational capacity requirement of 80% of the local peak load in every year as well.¹

INTRODUCTION

This is the second update of the New York 2006 Comprehensive Review of Resource Adequacy which was approved in November, 2006.

ASSUMPTION CHANGES

NYISO Resource Plan

Since the 2006 New York Comprehensive Review was approved, the Board of Directors has approved the NYISO’s third Comprehensive Reliability Plan (CRP). A Reliability Needs Assessment (RNA), the first phase of the CRP Process, determined that additional resources would be needed over the 2008 – 2017 period to ensure compliance with the NPCC reliability criteria described in Section 3.0 of NPCC Document A-2. However, no resources were needed until 2012, the first year after the horizon of the 2006 Comprehensive Review to which this Interim Review is an update.

The CRP contains recommendations to meet the reliability needs of the NYISO for two five year intervals, 2008 – 2012 and 2013 – 2017. It is the first of these intervals that this

¹ Comprehensive Reliability Plan, Table 5.2.10, pg. 5.13. At http://www.nyiso.com/public/webdocs/newsroom/press_releases/2008/2008_Comprehensive_Reliability_Plan_Final_Report_07152008.pdf

Interim Assessment addresses. Market Solutions and updated plans submitted by designated NYCA Transmission Owners (TOs) were sufficient to meet reliability needs identified for 2008 – 2012 and 2013 - 2017.

The plan consists of the following:

1. Developing at least 2,350 MW of the 3,380 MW of Market Solutions submitted, approximately 1,000 MW of which should be located in New York City and 1,050 MW of which should be located in the lower Hudson River valley.
2. Maintaining the in-service date for the Consolidated Edison M29 transmission project.
3. Implementing the designated Transmission Owner Plans
4. Maintaining voltage performance at the bulk power system level.

Comparison with 2006 Comprehensive Review

Resources

The 2006 Comprehensive Review assumed a total of 563 MW of net new capacity additions by the year 2011. As of August 2008, capacity resources totaled 40,240 MW vs. the 41,866 identified in the 2006 Comprehensive Review. That number will increase further to 43,204 MW by the summer of 2011.

To be consistent with studies conducted for the New York State Reliability Council (NYSRC), firm purchases are not included as resources for this assessment. In July of 2008, for example, there were 2,925 MW of external ICAP purchases accepted in the NYCA market.

The installed capacity comparisons between the 2006 Review and this Interim Review are shown in Table 1. The Comprehensive Review includes 1000 MW of Special Case Resources (SCRs) and the Interim Review, 1323 MW. SCRs include load that can reduce their demand when called up by the NYISO and small unmetered generation. SCRS are derated by their five year average EFORD of 8.9% in reliability studies.

Table 1. Resource Comparison

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Year	2006 Comprehensive Review (MW)	2008 Interim Review (MW) ²	Difference (MW)
2008	41,866	40,240	-1,626
2009	41,431	40,270	-1,161
2010	41,431	41,334	-97
2011	41,431	43,204	1,773

Load

Table 2. Reference Peak Load Forecast Comparison

Table 2 compares the NYCA Base and High Load Forecasts used in this assessment with those used in the 2006 Comprehensive Review. (A new forecast has been issued in the 2008 NYISO Load and Capacity Report which is approximately 480 MW lower in 2011 than the 2008 Interim Review forecast in Table 1.)

Table 2. Peak Load Forecast Comparison				
	Base Case Load Forecast		High Load Forecast	
Year	2006 Comprehensive Review (MW)	2008 Interim Review (MW)³	2006 Comprehensive Review (MW)	2008 Interim Review (MW)⁴
2008	34,314	33,871	34,595	34,887
2009	34,688	34,300	35,049	35,603
2010	35,042	34,734	35,496	36,267
2011	35,348	35,141	35,904	36,702

The Base Case Forecast is from 443 MW to 207 MW lower in the Interim Review. The High Load Forecasts are not directly comparable. In the Comprehensive Review, the High Load Forecast has a 20% probability of being exceeded. In the Interim Review, the High Load Forecast's probability of being exceeded is only 5%. Therefore, it represents a more extreme scenario than that reflected in the Comprehensive Review's High Load Forecast.

Transfer Limits

The sub-area representation modeled in the 2008 Interim Review has been modified when compared to the 2006 Comprehensive Review. The effects of the transmission system upgrades described in the 2008 CRP result in improved transfer capability into New York City and Long Island, the load areas that account for most of the reliability risk in the New York Control Area.

Tables 3a and 3b show the transfer limits for the critical NYCA interfaces that were used in the 2006 Comprehensive Review and this Interim Review:

Table 3a. Key Transmission Interface Limits – 2006 Comprehensive Review (MW)

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Year	F-G	UPNY-SENY	I-J	I-K
2008	3,450	5,150	3,700	1,270
2009	3,450	5,150	3,700	1,270
2010	3,450	5,150	3,700	1,270
2011	3,450	5,150	3,700	1,270

Table 3b. Key Transmission Interface Limits – 2008 Interim Review (MW)

Table 3b. Key Transmission Interface Limits – 2008 Interim Review (MW)⁵				
Year	F-G	UPNY-SENY	I-J	I-K
2008	3,475	5,150	3,925	1,290
2009	3,475	5,150	4,000	1,290
2010	3,475	5,150	4,400	1,290
2011	3,475	5,150	4,400	1,290

The Interim Review also reflects the installation of a controllable DC cable between Long Island and New Jersey (660 MW). This was not modeled in the 2006 Comprehensive Review.

Fuel Supply Diversity

The NYISO currently enjoys the benefits of a diverse fuel supply for its capacity resources. Future resources are projected to be fueled primarily by renewables and natural gas. Natural gas units in critical areas, such as New York City, are required to have a back-up fuel supply available. Further, since the NYCA is a summer peaking Area and the availability of gas supply is adequate during summer months, the NYISO does not foresee shortages or potential interruptions as problematic over this study period.

The NYISO currently has approximately 3300 MW of renewable resources scheduled to be in-service by the end of 2011. This equates to 194% of expected load growth. Wind resources are expected to contribute only 10% of their rated capacity towards meeting the NYCA summer peak.

New Market Rules

The NYISO and its stakeholders have implemented the CRP Process, which was approved by FERC in 2004. This Process is the focal point of long-term reliability analysis and planning. It enables the NYISO to identify reliability needs, obligates TOs to develop plans to address them, solicits market-based solutions and develops regulatory backstop solutions should others not appear adequate.

The Comprehensive Reliability Planning Process (CRPP) provides a single procedure through which long-term reliability needs are identified and addressed, coordinating the several individual processes which existed previously.

Locational Requirements

Locational requirements are set annually by the NYISO and currently exist at 80% for NYC and 94% for LI. NYC and LI are both projected to have enough capacity to meet their locational requirement through 2011.

RESULTS AND CONTINGENCY PLAN

With resources that have been added since the Comprehensive Review, and Transmission Owner plans to enhance transmission interface transfer limits, the NYSIO is now projecting its LOLE to be 0.0 through 2011.

The RNA, the initial part of the CRPP, identified that under a High Load Forecast scenario, the NYCA would not meet the NPCC LOLE criterion in 2010 and 2011. This is illustrated in Table 4:

Year	Base Case Load Forecast		High Load Forecast	
	2006 Comprehensive	2008 Interim ⁶	2006 Comprehensive	2008 Interim ⁷
2008	0.0050	0.0000	0.0090	0.0400
2009	0.0280	0.0000	0.0510	0.0600
2010	0.0530	0.0000	0.0910	0.4600
2011	0.0850	0.0000	0.1520	0.4600

However, the RNA did not reflect the resources which the CRP identified. These resources provide 1,616 MW of additional capacity in 2010 and 3,485 MW in 2011. And, as previously mentioned, the 2008 Interim Review high load forecast now represents a much less likely scenario than that in the 2006 Comprehensive Review.

Table 5 shows the Base Load Forecast reserve margins for the Comprehensive and Interim Reviews.

Table 5. Base Case Load Forecast Reserve Margins				
Year	2006		2008	
	Comprehensive Review		Interim Review	
	MW	%	MW	%
2008	7,552	22.0%	6,369	18.8%
2009	6,743	19.4%	5,970	17.4%
2010	6,389	18.2%	6,600	19.0%
2011	6,083	17.2%	8,063	22.9%

Should a violation of reliability criteria appear likely, the NYISO Board of Directors has the authority to direct the responsible TOs to implement a gap solution that will address the problem in a timely manner. The gap solution may include DSM, operating procedures or other short-lead time measures, as needed.

The adoption of a lower load forecast in the recently begun planning cycle indicates that the High Load Forecast scenario is less likely.

CONCLUSION

The NYCA will meet the NPCC Resource Adequacy Criterion under both Base Case and High Load Forecast assumptions through the year 2009. Under the High Load Forecast scenario, it will not meet the criterion in 2010 and 2011.

The NYISO market design has resulted in more than 2,900 MW of external resources participating in the New York capacity market on an ongoing basis. Even though participation is expected to continue, this report does not include these resources in its projections or findings.