

**4/30/07 – DRAFT (Without Attachments) - For ICS discussion purposes only**

**Base Case Modeling Assumptions for  
2008-09 NYCA IRM Requirement Study**

<b>Parameter</b>	<b>2007 Study Modeling Assumptions</b>	<b>Recommended 2008 Study Modeling Assumptions</b>	<b>Basis for Recommended 2008 Assumptions</b>	<b>Possible Impact on IRM</b>
<b>NYCA Load Model</b>				
Peak Load	33,544 MW for NYCA, 11,775 MW for zone J, and 5478 MW for zone K	To be provided by NYISO on October 1 <sup>st</sup> .	NYISO forecast based on TO forecasts of load growth.(put nat grid ref here) Top three external Area peak days aligned with NYCA.	
Load Shape Model	2002 Load Shape	xxxx Load Shape	After evaluating 2006 data, analysis indicates xxx load shape is an appropriate representation for this analysis.	
Load Uncertainty Model	Statewide and zonal model updated to reflect current data.	Statewide and zonal model updated to reflect current data.	Updated data from LIPA, Con Ed, and NYISO.(see attachment A)	
Generating Unit Capacities	Updated DMNC test values.	Updated DMNC test values.	2007 Gold Book plus (list units that have come on line since GB).	
New Units	Gold Book (table III) units plus: Prattsburgh Wind Park - 79.5 MW (10/06), Flat Rock Wind Power (phase 2) - 100 MW (12/06)	Gold Book (table III) units plus:	2007 Gold Book and those with Interconnection agreements signed by August 1 <sup>st</sup> .	
Wind Resources	Derived from hourly wind data with average Summer Peak Hour capacity factor of 11.4%	Derived from hourly wind data with average Summer Peak Hour capacity factor of xx.x%	Based on collected hourly wind data. Summer Peak Hour capacity factor based on June 1-Aug 31, hours (beginning) 2-5 PM.	
Retirements	Huntley 65&66 (165 MW), Lovett 5 (176.2 MW) Lovett 3	Lovett 4 (160.9 MW), Russell Station (236.4 MW) Plus units	2007 Gold Book plus units indicated by Aug. 1.	

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	(46.8 MW)	indicated		
Forced & Partial Outage Rates	5-year (2001-05) GADS data. (Those units with less than five years data will use available representative data.)	5-year (2002-06) GADS data. (Those units with less than five years data will use available representative data.)	Most recent 5-year period.	
Planned Outages	Based on schedules received by NYISO & adjusted for history.	Based on schedules received by NYISO & adjusted for history.	Updated schedules.	
Summer Maintenance	Continue with approximately 150 MW after reviewing last year's data.	Continue with approximately xxx MW after reviewing last year's data.	Review of 2005 and 2006 data.	
Gas Turbines Ambient Derate	Derate expanded to include combustion turbine portion of combined cycle units.	Derate based on provided temperature correction curves adjusted for operational experience.	Operational history indicates derate in excess of temperature correction curves for some units.	
Non-NYPA Hydro Capacity Modeling	45% derating.	45% derating.	No basis for change after review of most recent data.	
Special Case Resources	1080 MW sold; modeled as 994 MW in July and August and proportional to monthly peak load in other months. Limit to 4 calls per month in July and August for DEC limited generation. (about 30 hour total)	xxxx MW sold; modeled as yyy MW in July and August and proportional to monthly peak load in other months. Limit to 4 calls per month in July and August for DEC limited generation. (about 30 hour total)	Those sold for the program, discounted to historic availability. (zz% overall) <u>and distributed according to zonal performance.</u>	
EDRP Resources	507 MW registered; modeled as 228 MW in July and Aug and proportional as above. Limit to 5 calls per month.	aaa MW registered; modeled as bbb MW in July and Aug and proportional as above. Limit to 5 calls per month.	Those registered for the program, discounted to historic availability. cc % overall)	
External Capacity	3085 MW total, 1000 from HQ, 730 from NE, 1300 from PJM, and 55 from Ontario. (see UDR	ffff MW total, gggg from HQ, hhh from NE, iiii from PJM, and jj from Ontario. (not	Based on NYISO forecast. Test to ensure contracts do not impinge on relied upon assistance.	

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	section under transmission)	counting UDRs, see UDR section under transmission)		
EOPs (other than SCR and EDRP)	See Attachment C.	See Attachment C.	Based on TO information, measured data, and NYISO forecasts	
<b>Transmission System Model</b>				
Interface Limits	Based on 2006 Operating Study, 2006 Operations Engineering Voltage Studies, 2006 Comprehensive Planning Process, and additional analysis.	Based on 2007 Operating Study, 2007 Operations Engineering Voltage Studies, 2007 Comprehensive Planning Process, and additional analysis.	NYISO engineering studies and <a href="#">NYISO planning procedure (reviewed by TPAS)</a> .	
<a href="#">New Transmission Capability</a>	<a href="#">None Known</a>	<a href="#">Introduction of Millwood Capacitor bank, Neptune including EGC to Newbridge to Ruland Road. Motthaven substation. NUSCO 1385 cable reconductoring.</a>	<a href="#">Per TO information. Neptune, Motthaven, and Athens SRIS's.</a>	
Transmission Cable Forced Outage Rate	All existing Cable EFORs updated on LI and NYC <a href="#">to reflect 5 year history.</a>	All existing Cable EFORs updated on LI and NYC <a href="#">(based on 2002-2006 availability).</a>	Based on TO analysis.	
Unforced Capacity Deliverability Rights (UDR)	Dummy zone in NY attached to zone K and NE with 330 MW tie and 330 MW of NE units in dummy zone (for CSC).	Same arrangement with PJM to zone K (thru dummy zone) for Neptune. <a href="#">Modelled Contracts</a> allow <a href="#">emergency</a> assistance when units are out.	Per recommendation from LIPA and verification from GE.	
<b>Model Version</b>	Version 2.83	Version x.xx	Per recommendation by ICS	
<b>Outside World Area Models</b>	Updated models for PJM and NE to include zonal representations.	Updated models.	Updated per information supplied by external Control Areas.	

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