

## Base Case Modeling Assumptions for 2013-2014 NYCA IRM Horizon Year Study

Parameter	2009 Study Modeling Assumptions	Recommended 2013 Study Modeling Assumptions	Basis for Recommended 2013 Assumptions
Peak Load	33,730 MW for NYCA, 11,955 MW for zone J, and 5460 MW for zone K.	2009 RNA forecast	This forecast takes into account a portion of the '15x15' load forecast.
Load Shape Model	2002 Load Shape	2002 Load Shape	No Change
Load Uncertainty Model	Statewide and zonal model updated to reflect current data.	Statewide and zonal model updated to reflect current data.	No Change
Existing Generating Unit Capacities	Updated DMNC test values plus Noble Wind Units; Bliss 101 MW, Ellenburg 81 MW, and Clinton 100.5 MW. Also, 30 MW increase in rating of Gilboa Unit #1	2009 IRM base case assumption plus those units that have come on since completion of IRM study.	Reflect units that have materialized.
Proposed New Units	Those listed on 2009 IRM assumptions matrix attachments B and B1.	Those units identified in the 2009 RNA as being in service by the summer of 2013.	Horizon year study scope.
Wind Resource Modeling	Derived from hourly wind data with average Summer Peak Hour capacity factor of approximately 11 %.	Derived from hourly wind data with average Summer Peak Hour capacity factor of approximately 11 %.	No Change
Retirements	None known for 2009 Capability Year.	Those identified in the 2009 RNA by 2013.	Horizon year study scope.
Forced & Partial Outage Rates	5-year (2003-07) GADS data. (Those units with less than five years data will use available representative data.)	5-year (2004-08) GADS data. (Those units with less than five years data will use available representative data.)	Most recent 5-year period (Note: data may have not been fully reviewed by the NYISO)

<b>Parameter</b>	<b>2009 Study Modeling Assumptions</b>	<b>Recommended 2013 Study Modeling Assumptions</b>	<b>Basis for Recommended 2013 Assumptions</b>
Planned Outages	Based on schedules received by NYISO & adjusted for history.	Based on schedules received by NYISO & adjusted for history.	No Change
Summer Maintenance	Continue with approximately 150 MW after reviewing last year's data.	Continue with approximately 150 MW after reviewing last year's data.	No Change
Gas Turbines Ambient Derate	Derate based on provided temperature correction curves.	Derate based on provided temperature correction curves.	No Change
<a href="#">Environmental Impacts</a>	No reliability impact due to RGGI in basecase. Sensitivies studies to address range of potential cases.	Update or adopt the scenarios for Environmental impacts in the 2009 RNA.	ICS should consider using the latest environmental information as of a certain date (April 8, 2009?).
Non-NYPA Hydro Capacity Modeling	45% derating.	45% derating.	No Change
Special Case Resources	2107 MW (July 09) based on 3 year historical growth rate. Monthly variation based on historical experience. Limit to 4 calls per month in July and August for DEC limited generation. (about 30 hour total). See SCR determinations in Attachment G.	2107 MW (July 09) based on 3 year historical growth rate. Monthly variation based on historical experience. Limit to 4 calls per month in July and August for DEC limited generation. (about 30 hour total). See SCR determinations in Attachment G.	No Change
EDRP Resources	365 MW registered; modeled as 160 MWs in July and Aug and proportional to monthly peak load in other months. Limit to 5 calls per month.	365 MW registered; modeled as 160 MWs in July and Aug and proportional to monthly peak load in other months. Limit to 5 calls per month.	No Change

<b>Parameter</b>	<b>2009 Study Modeling Assumptions</b>	<b>Recommended 2013 Study Modeling Assumptions</b>	<b>Basis for Recommended 2013 Assumptions</b>
<a href="#">External Capacity - Purchases</a>	3,046 MW total, 1200 from HQ, 50 from NE, 1280 from PJM, 350 MW from Ontario (HQ wheel through Ontario), and 166 MW from Cedars.	2,916 MW total, 1095 from HQ, 50 from NE, 1255 from PJM, 350 MW from Ontario (HQ wheel through Ontario), and 166 MW from Cedars.	Based on NYISO forecast. Forecast incorporates new external limits set by the NYISO and expressed in Attachment B of the ICAP Manual.
EOPs (other than SCR and EDRP)	See Attachment D.	See Attachment D.	No Change
<a href="#">Interface Limits</a>	Based on 2008 Operating Study, 2008 Operations Engineering Voltage Studies, 2008 Comprehensive Planning Process, and additional analysis.	Those shown and expressed in the 2009 RNA.	Horizon year study scope.
<a href="#">New Transmission Capability</a>	None Identified as new for this study.	Those changes as identified in the 2009 RNA including the Linden VFT project.	Horizon year study scope.
Transmission Cable Forced Outage Rate	All existing Cable EFORs updated on LI and NYC to reflect 5 year history.	All existing Cable EFORs updated on LI and NYC to reflect 5 year history.	No Change
<a href="#">Unforced Capacity Deliverability Rights (UDR)</a>	LIPA has notified the NYISO that the amount of UDR's for the Neptune Cable and Cross Sound Cable is confidential data.	Those changes incorporated in the 2009 RNA study.	Horizon year study scope..
<b><a href="#">Model Version</a></b>	Version 2.92	Version 2.97	Per testing and recommendation by ICS. (change needed to accommodate modeling Linden VFT)

<b>Parameter</b>	<b>2009 Study Modeling Assumptions</b>	<b>Recommended 2013 Study Modeling Assumptions</b>	<b>Basis for Recommended 2013 Assumptions</b>
<b>Outside World Area Models</b>	Single Area representations for Ontario and Quebec. Three zones modeled for PJM. Five zones modeled for New England derived from 14 zones provided.	Single Area representations for Ontario and Quebec. Three zones modeled for PJM. Five zones modeled for New England derived from 14 zones provided.	No Change
Reserve Sharing between Areas	Canadian Provinces have indicated that they will share reserves equally among all.	Canadian Provinces have indicated that they will share reserves equally among all.	No Change