

2015-2016 NYCA IRM Requirement Study

Base Case Model Assumptions

Load Parameters

Parameter	2014 Model Assumptions	2015 Model Assumptions Recommended	Basis for Recommendation	Model Change	Possible IRM Impact*
Preliminary Peak Load (for preliminary base case study and sensitivities)	2013 Gold Book: NYCA: 33,725 MW NYC: 11,658 MW Long Island: 5,566 MW	2014 Gold Book: NYCA: aaa,aa MW NYC: bb,bbb MW Long Island: c,ccc MW Zones G-J: dd,ddd MW	This peak load forecast is utilized for the parametric results.	N	
Peak Load	October 1 , 2013 forecast NYCA: 33,655 MW NYC: 11,740 MW Long Island 5,461 MW	October 1 , 2014 forecast NYCA: xx,xxx MW NYC: yy,yyy MW Long Island z,zzz MW	Forecast based on examination of 2014 weather normalized peaks. Top three external Area peak days aligned with NYCA	N	
Load Shape	Multiple Load Shapes Model using years 2002, 2006, and 2007	Multiple Load Shapes Model using years xxxx, yyyy..., and zzzz	Evaluation of load shapes per previous white paper	N	
Load Forecast Uncertainty	Zonal model updated to reflect current data	Zonal model updated to reflect current data	Based on collected data and input from LIPA, Con	N	

			Ed, and NYISO. (See attachment A)		
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Capacity Parameters - Generation

Parameter	2014 Model Assumptions	2015 Model Assumptions Recommended	Basis for Recommendation	Model Change	Possible IRM Impact*
Existing Generating Unit Capacities	2013 Gold Book values. Use min (DMNC vs. CRIS) capacity value	2014 Gold Book values. Use min (DMNC vs. CRIS) capacity value	2014 Gold Book publication	N	
Proposed New Non-Wind Units	76.9 MW of capacity was repowered or returned to service	yyy MW of new non-wind resources (see Attachment B)	Units built since the 2014 Gold Book and those non-renewable units with Interconnection Agreements signed by August 1.	N	
Retirements	164 MW retirements reported	xxx MW retirements reported See Attachment B3	Policy 5 guidelines on retirement disposition in IRM studies	N	
Forced and Partial Outage Rates	Five-year (2008-2012) GADS data for each unit represented. Those units with less than five years – use representative data.	Five-year (2009-2013) GADS data for each unit represented. Those units with less than five years – use representative data. See attachments C and C1	T. Rates representing the Equivalent Forced Outage Rates (EFORd) during demand periods over the most recent five-year period (2009-2013)	N	
Planned Outages	Based on schedules received by the NYISO and adjusted for history	Based on schedules received by the NYISO and adjusted for history	Updated schedules	N	

Summer Maintenance	Nominal 50 MWs – divided equally between upstate and downstate	Nominal 50 MWs – divided equally between upstate and downstate	Review of most recent data	N	
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Capacity Parameters – Generation (continued)

Parameter	2014 Model Assumptions	2015 Model Assumptions Recommended	Basis for Recommendation	Model Change	Possible IRM Impact*
Combustion Turbine Derates	Derate based on temperature correction curves provided	Derate based on temperature correction curves provided	Operational history indicates the derates are in-line with manufacturer's curves	N	
Proposed New Wind Units	No new wind	xxx MW of new wind See Attachment B1	Renewable units based on RPS agreements, interconnection Queue and ICS input	N	
Wind Resources	Wind Capacity – 1366.6 MWs	Wind Capacity yyyy MWs		N	
Wind Shape	Actual hourly plant output of the 2012 calendar year. Summer Peak Hour availability of 17%	Actual hourly plant output of the 2013 calendar year. Summer Peak Hour availability of yy%	Production data	N	
Solar Resources	Solar Capacity of 31.5 MW plus 12.5 MW of new units. See Attachment B-2	Solar Capacity of xx MW plus yy MW of new units. See Attachment B-2	Based on collected hourly solar data Summer Peak Hour capacity factor based on June 1 – Aug 31, hours HB14 – HB18	N	
Non-NYPA Hydro Resources	Derate by 45%	Derate by xx%	Review of unit production and hydrological conditions including recognized forecasts (i.e. NOAA)	N	

Capacity Parameters – Import and Exports

Parameter	2014 Model Assumptions	2015 Model Assumptions Recommended	Basis for Recommendation	Model Change	Possible IRM Impact *
Capacity Purchases	Grandfathered amounts: PJM – 1080 MW HQ – 1090 MW All contracts model as equivalent contracts	Grandfathered amounts: PJM – 1080 MW HQ – 1090 MW All contracts model as equivalent contracts	Grandfathered Rights, ETCNL, and other FERC identified rights	N	
Capacity Sales	Long Term firm sales (279 MW)	Long Term firm sales (yyy MW)	These are long term federally monitored contracts	N	
New UDRs	No new UDRs	No new UDRs		N	

Topology Parameters

Parameter	2014 Model Assumptions	2015 Model Assumptions Recommended	Basis for Recommendation	Model Change	Possible IRM Impact*
Interface Limits	All changes reviewed and commented on by TPAS See Attachment E	All changes reviewed and commented on by TPAS See Attachment E	Based on 2014 Operating Study, 2014 Operations Engineering Voltage Studies, 2014 Comprehensive Planning Process, and additional analysis including interregional planning initiatives	N	
New Transmission	None Identified	None Identified (?)	Based on TO provided models and NYISO review	N	
Cable Forced Outage Rates	All existing Cable EFORs updated for NYC and LI to reflect most recent five-year history	All existing Cable EFORs updated for NYC and LI to reflect most recent five-year history	Based on TO analysis	N	

Emergency Operating Procedure Parameters

Parameter	2014 Model Assumptions	2015 Model Assumptions Recommended	Basis for Recommendation	Model Change	Possible IRM Impact*
Special Case Resources	July 2013 – 1195 MW based on registrations and modeled as 758 MW of effective capacity. Monthly variation based on historical experience (no Limit on number of calls)	July 2014 – xxxx MW based on registrations and modeled as yyy MW of effective capacity. Monthly variation based on historical experience (no Limit on number of calls)	Those sold for the program discounted to historic availability. Summer values calculated from July 2014 registrations (see attachment F).	N	
EDRP Resources	July 2013 – 93.9 MW registered model as 12.8 MW in July and proportional to monthly peak load in other months. Limit to five calls per month	July 2014 – uuu MW registered model as rr MW in July and proportional to monthly peak load in other months. Limit to five calls per month	Those sold for the program discounted to historic availability. Summer values calculated from July 2014 registrations and forecast growth.	N	
Other EOPs	721 MW of non-SCR/non-EDRP resources See Attachment D	vvv MW of non-SCR/non-EDRP resources See Attachment D	Based on TO information, measured data, and NYISO forecasts	N	

External Control Areas Parameters

Parameter	2014 Model Assumptions	2015 Model Assumptions Recommended	Basis for Recommendation	Model Change	Possible IRM Impact*
PJM	Load and Capacity data provided by PJM/NPCC CP-8 Data may be adjusted per NYSRC Policy 5 See Attachment E	Load and Capacity data provided by PJM/NPCC CP-8 Some EOPs allowed. Data may be adjusted per NYSRC Policy 5 See Attachment E	Initial review performed by the NPCC CP-8 WG. Additional analysis per White Paper.	Y	Low (-)
ISONE	Load and Capacity data provided by ISONE/NPCC CP-8 Data may be adjusted per NYSRC Policy 5 See Attachment E	Load and Capacity data provided by ISONE/NPCC CP-8 Data may be adjusted per NYSRC Policy 5 See Attachment E	Initial review performed by the NPCC CP-8 WG prior to Policy 5 changes.	N	
HQ	Load and Capacity data provided by HQ/NPCC CP-8 Data may be adjusted per NYSRC Policy 5 See Attachment E	Load and Capacity data provided by HQ/NPCC CP-8 Data may be adjusted per NYSRC Policy 5 See Attachment E	Initial review performed by the NPCC CP-8 WG prior to Policy 5 changes.	N	
IESO	Load and Capacity data provided by IESO/NPCC CP-8 data may be adjusted per NYSRC Policy 5	Load and Capacity data provided by IESO/NPCC CP-8 data may be adjusted per NYSRC Policy 5	Initial review performed by the NPCC CP-8 WG prior to Policy 5 changes.	N	

	See Attachment E	See Attachment E			
Reserve Sharing	All NPCC Control Areas and PJM interconnection indicate that they will share reserves equally among all members	All NPCC Control Areas and PJM interconnection indicate that they will share reserves equally among all members	Per NPCC CP-8 WG	N	

Miscellaneous Parameters

Parameter	2014 Model Assumptions	2015 Model Assumptions Recommended	Basis for Recommendation	Model Change	Possible IRM Impact*
MARS Model Version	Version 3.16.5	Version 3.18.x	Per benchmark testing and ICS recommendation	N	
Environmental Initiatives	No estimated impacts based on review of existing rules and retirement trends	No estimated impacts based on review of existing rules and retirement trends	Impacts mitigated by operational procedure during peak hours	N	