



# Summer 2014 Assessment

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*Operating Committee Meeting*



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# Highlights

- Capacity analysis for 50/50 load indicates adequate supply
- Capacity analysis for 90/10 load indicates implementation of Capacity Deficiency Procedure required to maintain load & reserve requirements
- Major transmission projects in Maine and western Massachusetts will have been completed since last summer
- Increased energy efficiency and installation of new renewable resources will partially offset the retirement of Salem Harbor units 3 and 4



# 2013 Summer Review

- The forecasted normal peak demand for summer 2013 was 26,690 MW
- The actual peak demand of 27,379 MW occurred July 19, hour ending 17:00
- Implementation of Operating Procedure 4 (OP 4) was required only once on Friday, July 19, during the summer operating period to manage Thirty-Minute Operating Reserve requirements following extremely high loads with hot and humid weather that lasted throughout the operating week

# Operational Capacity Analysis for Summer 2014

- Forecasting a normal summer peak demand of 26,658 MW and extreme peak demand of 28,884 MW for week beginning July 13 with a projected net margin of 1,687 MW (six percent)
  - All time ISO-NE peak summer load of 28,127 MW occurred August 2006
- Two fossil fuel units (Salem 3 and 4) totalling 585 MW in nameplate capability are scheduled to retire by June 2014
- New generation projects include two wood/refuse projects and one fuel cell plant, with nameplates totaling approximately 121 MW. All three units are considered commercial prior to the Summer 2014 Operating Period
- Over 300 MW of increased energy efficiency programs are expected in place this summer



# Summer 2014 Operable Capacity Analysis

50/50 Load Forecast (Reference)	w/b July 13, 2014 <sup>2</sup> CSO	w/b July 13, 2014 <sup>2</sup> SCC
Generator Operable Capacity MW <sup>1</sup>	29,136	30,829
OP CAP From OP-4 Real-Time Demand Response (RTDR) (+)	489	489
OP CAP From OP-4 Real-Time Emergency Generation (RTEG) (+)	211	211
Operable Capacity Generator with OP-4 DR and RTEG	29,836	31,529
Net Interchange = CSO imports minus firm capacity exports (+)	1,283	1,283
Non Commercial Capacity (+)	68	68
Non Gas-fired Planned Outage MW (-)	57	60
Allowance for Unplanned Outages (-)	2,100	2,100
Gas Generator Outages MW (-)	0	0
Generation at Risk Due to Gas Supply (-) <sup>4</sup>	0	0
Net Capacity (NET OPCAP SUPPLY MW) <sup>3</sup>	29,030	30,720
Peak Load Forecast MW (adjusted for Other Demand Resources) <sup>2</sup>	26,658	26,658
Operating Reserve Requirement MW	2,375	2,375
Operable Capacity Required (NET LOAD OBLIGATION MW)	29,033	29,033
Operable Capacity Margin <sup>3</sup>	<b>(3)</b>	<b>1,687</b>

<sup>1</sup> Generator Operable Capacity is based on data as of April 4, 2014 and does not include capacity associated with Settlement Only Generators, Passive and Active Demand Response, and external capacity

<sup>2</sup> Based on peak forecasted operating week of the summer capacity period and accounts for 1,507 MW of Passive Demand

<sup>3</sup> Includes OP4 actions associated with RTEG and RTDR

<sup>4</sup> Total of (Gas at Risk MW) – (Gas Gen Outages MW)

# Summer 2014 Operable Capacity Analysis

90/10 Load Forecast (Extreme)	w/b July 13, 2014 <sup>2</sup> CSO	w/b July 13, 2014 <sup>2</sup> SCC
Generator Operable Capacity MW <sup>1</sup>	29,136	30,829
OP CAP From OP-4 RTDR (+)	489	489
OP CAP From OP-4 RTEG (+)	211	211
Operable Capacity Generator with OP-4 DR and RTEG	29,836	31,529
Net Interchange = CSO imports minus firm capacity exports (+)	1,283	1,283
Non Commercial Capacity (+)	68	68
Non Gas-fired Planned Outage MW (-)	57	60
Allowance for Unplanned Outages (-)	2,100	2,100
Gas Generator Outages MW (-)	0	0
Generation at Risk Due to Gas Supply (-) <sup>4</sup>	0	0
Net Capacity (NET OPCAP SUPPLY MW) <sup>3</sup>	29,030	30,720
Peak Load Forecast MW (adjusted for Other Demand Resources) <sup>2</sup>	28,884	28,884
Operating Reserve Requirement MW	2,375	2,375
Operable Capacity Required (NET LOAD OBLIGATION MW)	31,259	31,259
Operable Capacity Margin <sup>3</sup>	<b>(2,229)</b>	<b>(539)</b>

<sup>1</sup> Generator Operable Capacity is based on data as of April 4, 2014 and does not include capacity associated with Settlement Only Generators, Passive and Active Demand Response, and external capacity

<sup>2</sup> Based on peak forecasted operating week of the summer capacity period and accounts for 1,507 MW of Passive Demand

<sup>3</sup> Includes OP4 actions associated with RTEG and RTDR

<sup>4</sup> Total of (Gas at Risk MW) – (Gas Gen Outages MW)

# 2013 – 2014 Summer Comparison

All Values in MW	Summer 2013	Summer 2014	Difference
50/50 Load Forecast	26,690	26,658	-32
90/10 Load Forecast	28,642	28,884	+242
System Capacity*	31,759	30,897	-862
Net Interchange**	1,103	1,283	+180
Passive Demand	1,150	1,507	+357
Active Demand	701	700	-1
Forecast Capacity Margin at 50/50 Peak	1,293	1,687	+394

\* Seasonal Claimed Capability (SCC) of New England Generation

\*\* Net interchange includes peak purchases/sales from Maritimes, Quebec and New York that have a Capacity Supply Obligation (CSO)



# Transmission System

Projects	Transmission Project	Voltage (kV)	In Service
Maine Power Reliability Program	3021 Line (Maguire Road – South Gorham)	345 kV	APRIL 2014
	Maguire Road T1 Transformer	345/115 kV	APRIL 2014
	3022 Line (Maguire Road – Eliot)	345 kV	JUNE 2014
	Livermore Substation	115 kV	JUNE 2014
	3021 Line (Maguire Road – South Gorham)	345 kV	APRIL 2014

- The Greater Springfield Reliability Project was completed fall of 2013
- All significant transmission lines, transformers and reactive resources are expected to be in service through the 2014 summer season



# Summer Points of Interest

- Natural Gas
  - Recent FERC ruling, effective January 2014, allows ISO Operations personnel to communicate unit specific information to the natural gas pipeline provider that serve particular units. This change will assist in providing a greater understanding of expected summer impact for planned pipeline outages and winter “gas-at-risk” concerns.
- Operational Readiness
  - Normal and Emergency Operating Procedures are in place to ensure New England Transmission System reliability during the summer capacity period

