



Summer Preparation 2018

LIPA Oversight Committee

May 2018



Power Supply Summer Preparation - National Grid Fleet

Maintenance Activities

- Steam Units
 - Northport Unit #1/#4: Completed its annual summer prep outage including BMS Communication upgrade, OEM Boiler Inspection and MSSV Inspection. Unit #4 also completed Burner Corner Inspection .
 - Northport Unit #2: Periodic maintenance outage completed. Activities included but not limited to, Condenser Retubing Upgrade, 4KV Motor Protection Relay Upgrade, Burner Corner Inspections and repair, Fan Bearing, Inlet Damper, Expansion Joint, and Casing Inspections, MSSV Inspections, BMS Communication Upgrade, turbine/Generator DC Pump Starter Upgrades.

Unit Status

- Steam Units
 - Northport Unit #2 tripped offline at 1556 hours on May 15 due to suspected generator field ground issue. Investigation in progress.
 - All remaining steam units expected to return from maintenance outages to full operation by June 1, 2018.

Power Supply Summer Preparation - National Grid Fleet

Maintenance Activities

- Steam Units
 - Northport Unit #3: Completed its annual summer prep outage. Maintenance activities included, SWCP Variable Speed Drive Installation, Installed upgraded SWCP motors, PM A&B Fan Motors, BMS Communication Upgrade, OEM Boiler Inspection, MSSV Inspection, Nash Vacuum Pump supplemental Cooling System installation and upgrade of Nash Heat Exchange Bundle.
 - E.F. Barrett Unit #1: Currently in Annual summer prep outage.
 - E.F. Barrett Unit #2: Periodic Outage was performed and completed in March 2018. Two major projects during the outage were the replacement of the 16th stage feedwater heater and the replacement of the low temperature superheater upper

Unit Status

- Steam Units
 - All steam units expected to return from maintenance outages to full operation by June 1, 2018.

Power Supply Summer Preparation - National Grid Fleet

Maintenance Activities

- Steam Units
 - Port Jefferson Unit #4: Summer prep outage was completed in April 2018. during this outage capital work was performed to replace the attachment points between the economizer side wall tubes and the buckstays. New refractory over the economizer side wall tubing was installed and new inner casing, were welded in place. Walls were reinsulated and the existing outer casing was reinstalled.

Unit Status

- Steam Units
 - All steam units expected to return from maintenance outages to full operation by June 1, 2018.

Power Supply Summer Preparation - National Grid Fleet

Maintenance Activities

- Combustion Turbines
 - All planned inspections, testing, calibrations, and summer prep work checklist was performed on schedule.
 - E.F. Barrett Unit #2 overhaul in progress. Main driver of this overhaul was the starts based rotor assessment. Turbine section First stage Wheel was replaced due to excessive corrosion in the blade dovetail slots as a result of this assessment.
 - Glenwood Unit #4: Generator Overhaul in progress. Engine Hot section inspection completed for GT4 and GT5.

Unit Status

- Combustion Turbines
 - All Combustion Turbine units expected to return from maintenance outages to full operation by June 1, 2018.

Power Supply Summer Preparation Balance Of Fleet

Maintenance Activities

- Balance of Long Island Fleet
 - All units have undergone maintenance, inspections and repairs as required for good maintenance practices.
 - Long Island Solar Farm: Full site Preventive Maintenance: High Voltage, Inverters, DC, Racking, Data Systems, also performed inspection and testing of inverters, transformers, breakers.
 - Boiler overhauls for Huntington, Hempstead, Babylon and Islip Resource Recovery plants completed. In addition electrical inspections, testing and calibrations were completed.
 - Neptune and Cross Sound Cable completed their summer prep work and are available for operation.

Status

- Balance of Long Island Fleet
 - All FTUs and IPPs will be finishing their summer prep and will be fully operational by June 1, 2018.

Long Island Control Area 2017 vs. 2018

DEMAND (MW)

	<u>2017</u>	<u>2018</u>
	Forecast	Forecast
LICA Peak Load	5,456	5,418
Extreme Weather Load Addition	599	630
Total LI Extreme Weather Load	6,055	6,048
Load Reduction Programs	-30	-43
Net LI Extreme Weather Load	6,025	6,005

Power Capability Margin (MW)

	<u>2017</u>	<u>2018</u>
	Forecast	Forecast
Normal Weather	1,433	1,543
Extreme Weather	864	956

CAPABILITY (MW)

TRANSMISSION OPERATION

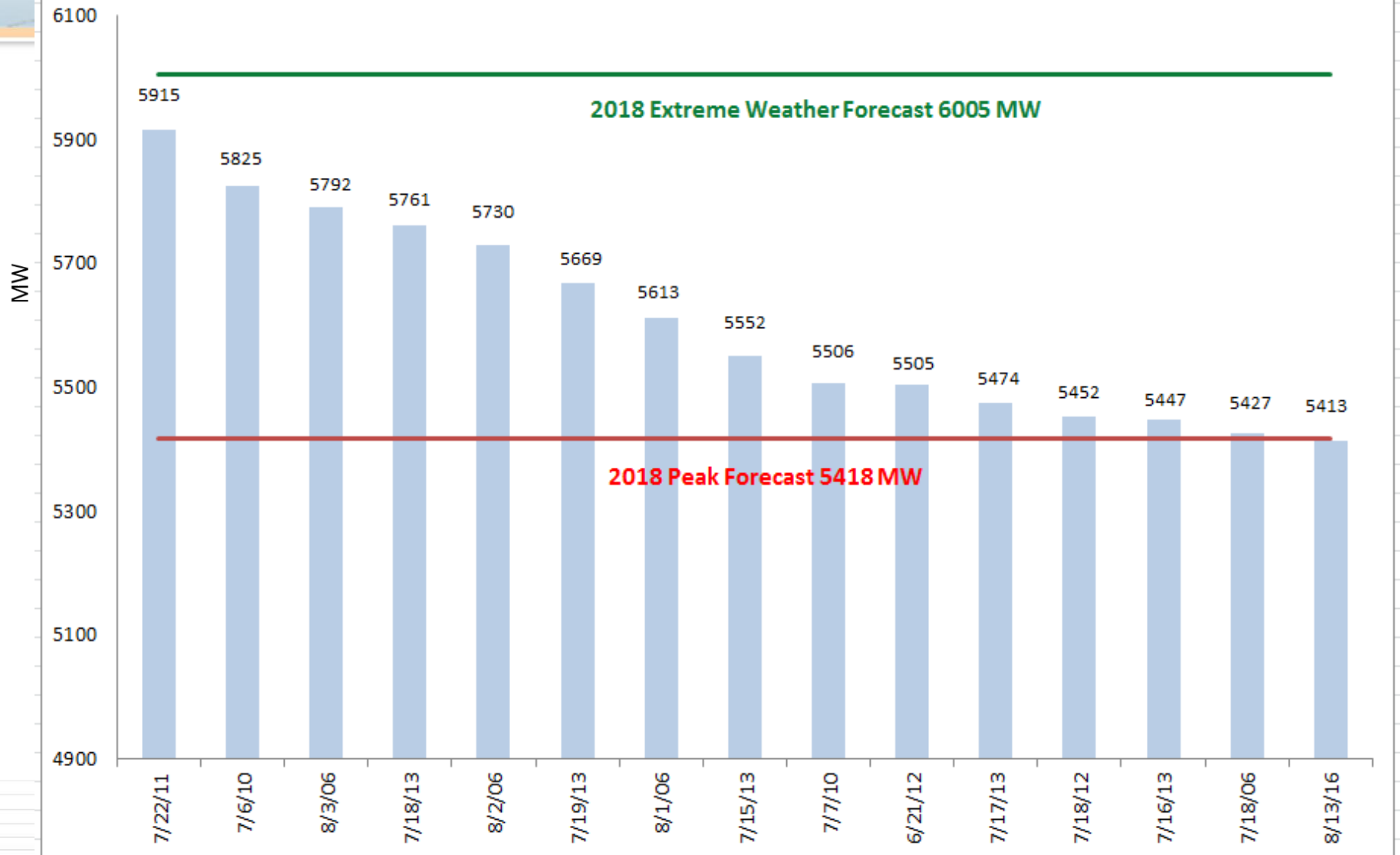
	<u>2017</u>	<u>2018*</u>
	Forecast	Forecast
Total Long Island Generation	4,764	4,844
NYISO Import	935	927
ISO-NE Import	530	530
PJM Import (Neptune)	660	660
Total LI	6,889	6,961

New York ISO Requirements (UCAP MW)

	<u>2017</u>	<u>2018</u>
	Forecast	Forecast
Long Island Forecast Peak Load	5,427	5,376
Long Island Locality Requirement (%)	97.7%	97.0%
Long Island Locality Requirement (Mw)	5,302	5,214
Total Long Island Capacity (Mw)	5,727	5,673
Capacity Margin (Mw)	424	458

* Based on 2017 NYISO Import Calculation

15 HIGHEST LONG ISLAND CONTROL AREA LOADS



Margins on Contingencies

- Sufficient margins exist for all major contingencies under 2018 forecast
- Operating procedures will be implemented, as required, to maintain system reliability during both normal and extreme weather conditions

T&D System Summer Preparation – Capital

- Major projects completed since last summer :
 - Installed or upgraded distribution circuits at the following substations:
 - Bayport
 - Berry St
 - Syosset
 - Floral Park
 - Malverne
 - Mitchell Gardens
 - Orchard
 - Park Place
 - Pulaski
 - Shelter Island
 - Upgraded the following substations:
 - Arverne
 - Barrett
 - Far Rockaway
 - Long Beach
 - Garden City Park

T&D System Summer Preparation – Maintenance

- Inspect 1500 capacitor banks and made repairs
- Trim 60% of distribution circuits
- Perform thermographic analysis of critical substations
- Make reliability improvements to prioritized circuits
- Complete pre-summer substation equipment maintenance

T&D System Summer Preparation – Emergency Generation

- South Fork:
 - Installed 6 MW of emergency generation at the Montauk substation
 - 17 MW of emergency generation at the East Hampton substation in progress

T&D System Summer Preparation - Storm Restoration

- Revised Emergency Restoration Plan (ERP) filed with NYS Department of Public Service (DPS) December 2017
- Major Emergency Response Drills/Exercises
 - Alternate Control Center (May 10)
 - Annual Hurricane Tabletop Exercise (May 16)
 - Division/Dispatch Area Operations Exercises (April/May)
 - Logistics/Foreign Crew Processing Drill (June)
 - Customer Communications Drill (TBD)
- All PSEG LI employees assigned emergency restoration role in addition to day job
 - Additional training provided to those in “non-traditional” storm roles to ensure readiness