

123 Main Street
White Plains, NY 10601-3170
914.681.6675
Edward.Welz@nypa.gov



Edward Welz
Chief Operating Officer

TO: NYPA BOARD OF TRUSTEES
FROM: EDWARD WELZ, CHIEF OPERATING OFFICER
DATE: JULY 10, 2013
SUBJECT: MONTHLY REPORT FOR THE BOARD OF TRUSTEES

This report covers performance of the Operations group in June 2013.

Operations

Plant Performance

Systemwide net generation¹ was 1,968,032 megawatt-hours² (MWh) for June 2013 which is above the projected net generation of 1,934,903 MWh. For the year, net generation was 11,960,116 MWh which is above the projected target of 11,765,000 MWh.

The fleet availability factor³ was 92.52 percent in June 2013 and 87.98 percent for the year. Generation market readiness factor⁴ was 99.47 percent in June, which is better than the monthly target of 99.40 percent. Year-to-date generation market readiness factor was at 99.44 percent, which is above the annual target of 99.40%.

There was one significant forced outage during June:

1. Blade damage occurred on the Pouch Terminal GT which resulted in a 6-day long outage.

Generation net revenue in June was \$27.2 million with a loss of revenue of \$0.06 million. For the year, net revenue was \$144.7 million while revenue loss was \$1.4 million.

Niagara River flows in June 2013 remained below the historical average, and are expected to be below average for at least the next two years. St. Lawrence River flows during June 2013 were also below forecast. River flows are expected to be below historical levels beyond 2013.

Transmission Performance

Transmission reliability^[i] in June was 98.88 percent, which was below the target of 99.65 percent. Year-to-date transmission reliability is 95.00 percent, below the target of 95.80 percent.

There were no significant unplanned transmission events in June to report.

Safety

The NYPA DART (Days Away, Restricted or Transferred) Rate for June 2013 is 1.54 compared to the target of 0.78. For the year, the DART Rate is 0.77.

The Operations DART Rate for June 2013 is 2.25 compared to the target of 1.08. For the year, the DART Rate is 0.93.

There were two lost time incidents in June that met the DART criteria. For the year, there have been 6 injuries that resulted in lost time and meet the DART criteria.

Environmental

There were eight reportable incidents in June 2013.

1. At Kent, a loss of 10 gallons of gas compression oil occurred when the pre-lube flange gasket failed.
2. At Astoria 500MW, there were three occurrences of R-22 refrigerant spills:
 - a. A release of approximately 120 pounds of R-22 refrigerant.
 - b. In the Administration Building, AC unit No. 5 lost full pressure which resulted in 200 pounds of coolant release.
 - c. The turbine hall roof AC unit lost approximately 3 pounds of refrigerant.
3. The Niagara Plant had two oil spills:
 - a. About 8 ounces of oil was released from the hydraulic fitting failure of a lawn mower when it hit a manhole cover.
 - b. A failed pothead seal resulted in a loss of 21 gallons of mineral oil.
4. At Clark Energy Center, oil was found above the discharge piping.
5. During the deconstruction of the Poletti Plant, 3 gallons of oil leaked with the removal of the coupling capacitor.

For the year, there have been thirteen incidents. The annual target is 32 incidents.

Relicensing – Niagara Power Project

Construction of the Frog Island Habitat Improvement Project (HIP) has commenced. Bids for the vegetation planting phase are under evaluation. Preliminary studies to support design work on the Strawberry Island HIP, which is the last of the Niagara HIPs, continue.

Support continues to be provided for the Maid of the Mist project. Planning and coordination is being provided to minimize the disturbance and interruption of use of NYPA recreational facilities that will be impacted by this undertaking.

Relicensing – St. Lawrence-FDR Power Project

Construction of the Nichols Island Controlled Level Pond HIP was delayed this Spring due to high water levels. Work is back underway with finish work being completed at the eastern end of the project.

Construction on the Little Sucker Brook HIP is back underway. Construction of the new water control structure across Rt. 37 in Waddington will begin soon.

The new Coles Creek Marina building has been completed and is open. This is the last major Relicensing project at the State Park-operated facilities.

Relicensing – Blenheim-Gilboa Project

Preparation of the preliminary licensing documents continues. At this time, no significant regulatory issues that would impact relicensing have been identified.

Life Extension and Modernization Programs

St. Lawrence LEM Upgrade

Unit 17 was taken out of service on January 2, 2013 to start unit automation work. The St. Lawrence Electrical, Mechanical, and Test departments continue to work on the demolition/installation activities including pulling and terminating cable, installation of the distribution feedback assembly, and GCS offline testing. The unit generated first power on June 27, 2013. The 2013 scheduled completion date for the LEM Program remains unchanged.

Transmission LEM

T-LEM is a multiyear program that will upgrade the Authority's existing transmission system to maintain availability, increase reliability, and ensure regulatory compliance. The Program encompasses Authority transmission assets in the Central, Northern, and Western Regions and has been divided into several projects. The Program is estimated to cost \$726 million and is comprised of several projects:

- St. Lawrence Breaker & Relay Replacement:
 - Breaker Installation: Engineering continues to design five breaker replacements and will issue an installation specification in August 2013
 - Breaker Procurement: Interim approval issued; Trustees will be requested to approve contract at the July meeting
 - Massena Substation Relay Replacement: Engineering is designing the relay installation packages ; project management and site staff are coordinating equipment outages
 - Alcoa Communications: Engineering issued new communications systems for three transmission lines MRG 1, MRG 2 & MR3
 - 100MVAR Capatitor Banks: CH2M continues to work on the conceptual design
- CEC Autotransformer Refurbishment:
 - The first autotransformer refurbishment is scheduled to conclude in July 2013
 - A kickoff with ABB Inc. for the remaining refurbishments was conducted in June 2013
- Massena Substation Reactor Refurbishment:
 - A kickoff with ABB Inc. for the reactor refurbishments was conducted in June 2013
- ADK Substation Spare Autotransformer Procurement:
 - The project team is continuing to review the proposals for the procurement of the spare auto-transformer.
- NIA, BG & CEC Relay Replacements:
 - The project teams continues to design, procure equipment and install relays
- Massena Substation Autotransformer Replacement:
 - Replacement of the spare auto-transformer at Massena Substation is in progress with equipment delivery expected in the fall of 2013.
 - Remaining auto-transformers are scheduled for delivery and installation in 2014.
- Tower Modeling:
 - Tower modeling of the weathering steel structures and gillage is in progress.
- Tower Painting
 - Tower painting will be rebid to include work on NATL starting in 2014.
- NIA, STL, CEC & BG Swithyard LEM & STL Substation LEM:
 - The project team continues to assess switchyard and substation equipment and determine the priority of equipment replacements
- PV-20 Submarine Cable Replacement:
 - Discussions ongoing with VELCO. Scope of work for preliminary engineering has been developed. Meeting being coordinated with VELCO to review proposal received.

LPGP LEM

The fabrication and the factory acceptance testing of the spare GSU was successfully completed and is scheduled to be delivered in October 2013. The assembly of the second turbine is well underway and the fabrication of the third turbine components were completed and are in transit to Hitachi's facility located in Japan for assembly. The components for the fourth turbine are in various stages of fabrication and portions of the fifth and sixth turbine components were released for fabrication.

As previously reported, a "partial stop work order" was issued to Andritz due to the issues regarding their stator coils. The "back-up plan" for the installation of the emergency spare set of stator coils that were fabricated by General Electric (GE) were also successfully installed by GE in the stator core; the entire stator has been installed in the unit. Andritz completed the installation of the new rotor poles and other ancillary work in accordance with the contract for the first unit and is in the process of installing the rotor in compliance with the unit re-assembly schedule. The first unit commissioning commenced and the unit return to service date of August 16, 2013 remains as scheduled. The LPGP LEM program is scheduled to be completed in 2020.

RMNPP Unit 13 Standardization

The outage for the standardization work commenced on September 14th, 2012. The new stator that was fabricated by Voith was successfully installed and the unit re-assembly work that is being performed by Niagara staff has been proceeding accordingly. The unit was returned to service on July 15, 2013 – four days ahead of schedule.

Technical Compliance – NERC Reliability Standards

In June, Technical Compliance continued to oversee compliance enforcement actions related to several of the NERC Reliability Standards that are applicable to NYPA's NERC registrations. There are currently active enforcement actions for six (6) self-reports of possible violations of the standards. The mitigation plans for three (3) of the self-reports have been completed and are under review by the Northeast Power Coordinating Council (NPCC) and the mitigation plans for the remainder are in progress. One (1) self-report related to the Protection and Control (PRC) standards was submitted to NPCC in June. NPCC notified NYPA that it intends to process the enforcement action for this self-report under NERC's "Find Fix and Track" process; a mitigation plan will not be required and there will be no penalty.

Technical Compliance is currently conducting investigations of five possible violations of the NERC Reliability Standards compliance that were identified by the staff, two of which were initiated in June. The compliance concerns were associated with the Voltage and Reactive (VAR), Critical Information Protection (CIP), and Protection and Control (PRC) NERC Reliability Standards. These investigations conclude with a recommendation to either self-report a possible violation to NPCC or not. This internal

process is viewed by the regulator as evidence that NYPA has a strong internal compliance program.

On June 7, NYPA received a spot check audit notice from the Northeast Power Coordinating Council (NPCC). The off-site spot check audit will be for the NERC reliability standard PRC-001-1.1 – System Protection Coordination for NYPA’s registration as a Generator Operator (GOP). The evidence for the audit must be provided to NPCC by August 1. Two of NYPA’s 2013 self-reports relate to two of the requirements of the PRC-001-1.1 standard. For those two requirements NPCC will audit the status of NYPA’s mitigation plans.

The Federal Energy Regulatory Commission (FERC) approved the new Bulk Electric System (BES) definition in an order dated December 20, 2012 and further reaffirmed its order on April 18, 2013. The new definition will require transmission assets above 100 kV to be subject to the NERC Reliability Standards. In June, NYPA staff continued to engage with National Grid, Con Edison, LIPA, and New York State Electric and Gas to address projected gaps in compliance for the Transmission Owner (TO) standards for NYPA assets that either reside in other TO’s substations or for substations owned by NYPA but that are operated and maintained by other TOs. In addition, NYPA continued to have discussions with these TOs regarding the Transmission Operator (TOP) and Transmission Planning (TP) responsibilities for NYPA’s newly identified BES assets. NYPA continues to participate in meetings with the NYISO and the NY TOs to assess new functional registration and compliance management impacts and actions pursuant to the new BES definition.

FERC issued a Notice of Proposed Rulemaking (NOPR) regarding Critical Infrastructure Protection (CIP) Version 5 standards on April 18, 2013. Industry comments were submitted to FERC in June. Based on the NOPR, Version 4 of the CIP standards will not be enforced. Version 3 will be replaced with Version 5, which will become effective July 1, 2015. The pending approval and adoption of Version 5 of the Critical Infrastructure Protection (CIP) standards will have substantive impacts on NYPA’s CIP compliance program. In June, staff continued its classification assessment of NYPA’s cyber assets that will be affected by the revised standards to determine the scope and costs of the implementation plan that will ensure NYPA’s compliance with the revised standards.

Energy Resource Management

NYISO Markets

In June, Energy Resource Management (ERM) bid 2.18 million MWh of NYPA generation into the NYISO markets, netting \$47.02 million in power supplier payments to the Authority. Year-to-date net power supplier payments are \$291.45 million.

Fuel Planning & Operations

In June, NYPA's Fuels Group transacted \$26.6 million in natural gas and oil purchases, compared with \$17.0 million in June 2012. Year-to-date natural gas and oil purchases are \$182.6 million, compared with \$95.2 million at this point in 2012. The total \$87.4 million increase is mainly due to the higher cost of fuel and fuel consumption at the Astoria Energy II Plant (\$35.7 million), Small Clean Power Plants (\$11.5 million), Richard M. Flynn Power Plant (\$6.4 million), and the 500-MW Combined Cycle Plant (\$33.8 million).

Regional Greenhouse Gas Initiative

On June 5th, Auction 20 of the Regional Greenhouse Gas Initiative was held. During the auction, RGGI allowances cleared at \$3.21/ton for Vintage 2013, which is well above the CPI-adjusted auction price floor of \$1.98/ton and also above auction 19's price of \$2.80/ton. This price increase is mainly due to an updated RGGI Model Rule enacted earlier this year which reduced the budget by 45% along with other changes. NYPA bid on 3 million allowances and was awarded 1.75 million during this second auction of 2013. Since the inception of this program, NYPA has spent almost \$35.5 million on 14.8 million RGGI allowances, or \$2.40/ton on average. For the first two auctions in 2013, NYPA has spent \$3.06/ton on average for Vintage 2013 allowances.

GLOSSARY

¹ **Net Generation** – The energy generated in a given time period by a power plant or group of plants, less the amount used at the plants themselves (station service) or for pumping in a pumped storage facility. Preliminary data in the COO report is provided by Accounting and subject to revision.

² **Megawatt-hour (MWh)** – The amount of electricity needed to light ten thousand 100-watt light bulbs for one hour. A megawatt is equal to 1,000 kilowatts and can power about 800 homes, based on national averages.

³ **Availability Factor** – The Available Hours of a generating unit over the Period Hours (hours in a reporting period when the unit was in an active state). Available Hours are the sum of Service Hours (hours of generation), Reserve Shutdown Hours (hours a unit was not running but was available) and Pump Hours (hours a pumped storage unit was pumping water instead of generating power).

⁴ **Generation Market Readiness Factor** – The availability of generating facilities for bidding into the New York Independent System Operator (NYISO) market. It factors in available hours and forced outage hours that drive the results.

⁵ **Regional Greenhouse Gas Initiative (RGGI)** – A cooperative effort by Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. These nine states have capped CO₂ emissions from the power sector, and will require a 10 percent reduction in these emissions by 2018. RGGI is composed of individual CO₂ Budget Trading Programs in each of the nine participating states. Regulated power plants can use a CO₂ allowance issued by any of the nine participating states to demonstrate compliance with the state program governing their facility. Taken together, the nine individual state programs function as a single regional compliance market for carbon emissions, the first mandatory, market-based CO₂ emissions reduction program in the United States. New Jersey was a tenth state within the RGGI program but New Jersey's governor pulled the state out of the program in 2011.

^[i] **Transmission Reliability** – A measurement of the impact of forced and scheduled outages on the statewide system's ability to transmit power.