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Edward Welz
Chief Operating Officer

TO: NYPA BOARD OF TRUSTEES
FROM: EDWARD WELZ, CHIEF OPERATING OFFICER
DATE: DECEMBER 12, 2013
SUBJECT: MONTHLY REPORT FOR THE BOARD OF TRUSTEES

This report covers performance of the Operations group in September/October 2013.

Operations

Plant Performance

Systemwide net generation¹ was 3,949,044 megawatt-hours² (MWh) for September/October which is above the projected net generation of 3,527,178 MWh for both months. For the year, net generation was 20,389,230 MWh which is above the projected target of 19,246,571 MWh.

The fleet availability factor³ was 85.44 percent in September/October and 87.67 percent for the year. Generation market readiness factor⁴ was 99.94 percent in September/October, which is better than the monthly target of 99.40 percent. Year-to-date generation market readiness factor was at 99.63 percent, which is above the annual target of 99.40%.

There were no significant forced outages⁵ in September/October.

Generation net revenue in September/October was \$56.5 million with a loss of revenue of \$0.02 million. For the year, net revenue was \$275.4 million while revenue loss remains at \$1.66 million.

Niagara River flows in October were slightly above the historical average and are expected to be near normal levels for the next two years. St. Lawrence River flows during October were at forecast. River flows are expected to be near historical levels at the beginning of 2014, then drop below average for the rest of the year.

Transmission Performance

Transmission reliability⁶ in September/October was 93.36 percent, which was slightly above the target of 93.14 percent. Year-to-date transmission reliability is 95.66 percent, below the target of 95.85 percent.

There were four significant unplanned transmission events⁷ in September/October to report:

In September, the MA-2 Line was removed from service for 10 hours on emergency to repair a broken cross arm. A failed bus connector to the Marcy AT-2 caused a forced outage of the Marcy STATCOM for 58 hours and required a 51 hour emergency outage of the Marcy Cap#1 to complete the repairs.

In October, the MA-2 Line was removed from service for 90 hours on emergency to repair a broken cross arm. Repairs were made to a pothead under a scheduled outage of the GL-3 Line for 43 hours.

Safety

The NYPA DART (Days Away, Restricted or Transferred) Rate for both September/October was 0.00 compared to the target of 0.78. For the year, the DART Rate is 0.58.

The Operations DART Rate for both September/October is 0.00 compared to the target of 1.08. For the year, the DART Rate is 0.72.

There were no lost time incidents in September/October that met the DART criteria. For the year, there have been 8 injuries that resulted in lost time and meet the DART criteria.

Environmental

There were six reportable incidents in September/October:

Two incidents occurred in September. Both occurred at Astoria 500MW:

1. There was a loss of approximately 120 lbs. of R-22 refrigerant from HVAC Unit No. 5.
2. At CT7A, Air Conditioning Unit No. 2 had a fitting leak that resulted in the loss of approximately 121 lbs. of R-22 refrigerant.

Four incidents occurred in October:

1. Three incidents occurred at Niagara:
 - a. An oil leak of 15 gallons occurred at the Unit 6 Governor tank.
 - b. A gasoline leak of 50 gallons was discovered in the containment sump of the underground gasoline tank.

- c. A SPDES permit exceedance of total suspended solid was revealed during sampling.
2. At St. Lawrence, a glycol leak was discovered at the Synchronous Condenser cooling system.

For the year, there have been twenty-seven incidents. The annual target is 32 incidents.

Relicensing – Niagara Power Project

Construction of the Frog Island Habitat Improvement Project (HIP) continues with good progress. A contract has been awarded to Applied Ecological Services for the vegetation planting phase of this project. Field work on studies to support design work for the Strawberry Island HIP are essentially complete. Design work will continue over the winter.

Support continues to be provided for the Maid of the Mist project which is progressing very well. Planning and coordination is being provided to minimize the disturbance and interruption of use of NYPA recreational facilities that are being affected by this undertaking.

Relicensing – St. Lawrence-FDR Power Project

Construction of the Nichols Island Controlled Level Pond HIP has moved quickly. Work on 3 of 4 dikes is now completed. The second and last water control structure will be placed by mid-October. Once that is in place, the last dike will be finished. Project completion should be readily accomplished this Fall.

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

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. The Program is estimated to cost \$726 million and is comprised of several projects:

- St. Lawrence Breaker & Relay Replacement:
 - STL Breaker Installation: RFQ issued with bids due December 5.
 - STL Breaker Procurement: Contract issued to HVB for procurement of circuit breakers.

- STL Station Service Upgrade Procurement: Bids received with award expected in November.
 - Massena Substation Relay Replacement: Engineering has designed the relay installation packages. RFQ issued with bids due mid-November.
 - 100MVAR Capacitor Banks: Bids received with award expected in November. CH2M is working on the final design package for submittal early 2014.
- CEC Autotransformer/Reactor Refurbishment:
 - ABB is preparing for the first reactor refurbishment (#1A) by the end of the year.
- Massena Substation Reactor Refurbishment:
 - ABB is preparing submittals to begin the first reactor refurbishment (#1A).
- ADK Substation Spare Autotransformer Procurement:
 - The project team is continuing to review the proposals for the procurement of the spare auto-transformer. Award is pending resolution of MA1&2 upgrade as to whether substation will remain 230kV or be upgraded to 345kV.
- NIA, BG & CEC Relay Replacements:
 - The project team 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 early December 2013.
 - Remaining auto-transformers are scheduled for delivery and installation in 2014.
- Tower Modeling:
 - Tower modeling of the weathering steel structures and grillage is in progress.
- Tower Painting :
 - Tower painting RFQ is currently advertised and includes work at STL and NATL starting in 2014; work has been deferred to 2015.
- NIA, STL, CEC & BG Switchyard LEM & STL Substation LEM:
 - The project team continues to assess switchyard and substation equipment and determine the priority of equipment replacements.
 - A kick-off meeting was conducted at NIA on October 25 to present the Draft Project Plan and Draft Program Schedule.
 - A kick-off meeting is scheduled for November 12 for the other STL remote substations.
- PV-20 Submarine Cable Replacement:
 - A Memorandum of Understanding (MOU) has been executed. Preliminary engineering activities will commence shortly upon release of contract to CHA.
 - Contract for preliminary engineering issued to CHA. Survey and other exploratory field activities for preliminary engineering have commenced.

- A kick-off meeting was conducted with CHA and VELCO on November 5.

LPGP LEM

The spare GSU was delivered and assembled, and will be swapped with the first new GSU in November 2013 in order to gain operation time under the warranty. The second turbine will be inspected the week of November 4th and is scheduled to arrive at LPGP in January 2014 as planned. The assembly of the third turbine commenced in Hitachi's facility located in Japan. The components for the fourth turbine are in various stages of fabrication. A new turbine blade design, "LBR3", will be incorporated into the fifth runner which is supposed to mitigate the vibration issues that were experienced with the operation of the first turbine design.

The second unit outage, Unit 5, commenced on September 15, 2013 as scheduled and disassembly is well underway, the return to service date is May 23, 2014 which is one month shorter than the first unit. The LPGP LEM program is scheduled to be completed in 2020.

Technical Compliance – NERC Reliability Standards

- Enforcement Actions – Northeast Power Coordinating Council (NPCC):
 - Nine (9) enforcement actions, related to various requirements, are open.
 - The mitigation plans for the open enforcement actions were completed and are being reviewed by the NPCC enforcement staff.
- Internal Investigation of Possible Violations:
 - In October, three new possible violation were identified and submitted to Technical Compliance for investigation.
 - Five (5) investigations, relating to various requirements, are currently in progress.
- Other Compliance Activities:
 - **Compliance Audits:** A spot check audit of NYPA's compliance with NERC reliability standard PRC-001-1 – System Protection Coordination was completed in October. There were no violations identified and no areas of concerns or corrective recommendations noted. NYPA received a draft audit report from NPCC on October 24, 2013.
 - **Self-Certifications:** NYPA self-certified compliance with the NERC reliability standard CIP-001-2a- Sabotage Reporting in October.
 - **Critical Infrastructure Protection (CIP) Standards - Version 5:** Work continued toward finalizing the list of NYPA's cyber assets that will be affected by the revised standards. Once the list is firmed up, the scope and

cost estimates for work required to demonstrate compliance with the revised standards will be updated.

- ***NERC Reliability Assurance Initiative (RAI)***: NYPA, along with other generation and transmission companies in North America, including Large Public Power Council (LPPC) and American Public Power Association (APPA) members, has been actively supporting the North American Electric Reliability Corporation (NERC) and NPCC in moving this important program forward. In particular, NYPA was selected by NPCC to participate in two pilot programs to test new compliance monitoring and enforcement tools; one is focusing on methods for assessing a company's internal controls for managing compliance and one is focusing on new tools for processing minimal risk violations of the standards.

Energy Resource Management

NYISO Markets

In October, Energy Resource Management (ERM) bid 2.1 million MWh of NYPA generation into the NYISO markets, netting \$31.6 million in power supplier payments to the Authority. Year-to-date net power supplier payments are \$483.5 million.

Fuel Planning & Operations

In October, NYPA's Fuels Group transacted \$14.3 million (schedule outages occurred at the 500 Mw, AE II and Flynn) in natural gas and oil purchases, compared with \$20.2 million in October 2012. Year-to-date natural gas and oil purchases are \$270.9 million, compared with \$176.2 million at this point in 2012. The total \$94.7 million increase is mainly due to the higher cost of fuel and fuel consumption at the Astoria Energy II Plant (\$39.2 million), Small Clean Power Plants (\$14.1 million), Richard M. Flynn Power Plant (\$4.8 million), and the 500-MW Combined Cycle Plant (\$36.6 million).

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 **Significant Unplanned Generation Events** – Those events (forced or emergency outages of individual generator units) of duration greater than 72 hours, or have a total repair cost of greater than \$75,000, or result in greater than \$50,000 of lost revenues.

⁶ **Transmission Reliability** - A measurement of the impact of forced and scheduled outages on the statewide system's ability to transmit power.

⁷ **Significant Unplanned Transmission Events** – Those events (forced or emergency outages of individual transmission lines) which directly affect the reliability of the state's transmission network, or affect the availability of any component of the state's transmission network for greater than 8 hours, or that have a repair cost greater than \$75,000.



New York Power Authority

Generating more than electricity

Board of Trustees Meeting

December 17, 2013

Chief Operating Officer Report
Edward Welz

Operations

■ Corporate-Level Performance Summary

NYPA OVERALL	Sept/Oct. 2013		YTD	
	Actual	Target	Actual	Target
Market Readiness (%)	99.94	99.40	99.63	99.40
Transmission Reliability (%)	93.36	93.14	95.66	95.85
Environmental Incidents	6	2	27	32
DART Rate	0.00	0.78	0.58	0.78

■ 2013

■ A Look Ahead



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