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TO: NYPA BOARD OF TRUSTEES
FROM: GIL C. QUINIONES, CHIEF OPERATING OFFICER
DATE: SEPTEMBER 28, 2010
SUBJECT: MONTHLY REPORT FOR THE BOARD OF TRUSTEES

This report includes highlights from the Operations Group over July and August. The highlight of the period was that the Flynn Plant, which had been shut down for a maintenance outage in May, was returned to service on August 7.

Power Supply

Plant Performance

Systemwide net generation¹ in July was 2,094,787 megawatt-hours² (MWh), compared to projected net generation of 2,172,486 MWh. In August, systemwide net generation was 2,065,665 MWh compared to projected net generation of 2,116,198 MWh in August. For the year, actual net generation is 16,278,297 MWh, which is below the year-to-date net generation target of 17,085,463 MWh, primarily due to low water levels on the Niagara and St. Lawrence rivers.

The fleet availability factor³ was 96.7 percent during July, 98.9 percent during August, and is 94.7 percent for the year. The generation market readiness factor⁴ was 99.6 percent in July, which was above the monthly target of 99.4 percent, and 100 percent in August, also above the monthly target. For the year, generation market readiness is 99.8 percent.

There was one significant unplanned generation event⁵ in July – the Hell Gate Plant was out of service for two weeks due to a failed pothead⁶, resulting in a lost opportunity cost of \$0.17 million. The total lost opportunity cost of all unscheduled outages⁷ in July was less than \$0.20 million, compared with generation revenue of \$223.7 million. There were no significant unplanned generation events in August, and the total lost opportunity cost of all unscheduled outages in August was also less than \$0.20 million, compared with generation revenue of \$193.2

million. The year-to-date lost opportunity cost is \$0.51 million compared to generation revenue of \$1,350 million.

River flows at the Niagara project were below historical averages in July and August, and are forecasted to be well below normal for the next several months due to low precipitation in the Great Lakes Basin that has continued since December 2009. At the St. Lawrence-FDR project, flows were below forecast in July and August and are expected to be below historical averages for the rest of the year.

The Flynn Plant was returned to service on August 7. It had been shut down for a maintenance outage⁸ on May 7 due to problems with the combustion turbine generator rotor⁹. The event was considered a maintenance outage by the New York Independent System Operator¹⁰ (NYISO) because the unit was removed from service upon approval of the system operator and did not fail while in-service. Siemens and NYPA are currently engaged in extensive technical analysis to determine the root cause of the rotor failure. The estimated revenue impact to NYPA is a loss ranging between \$8 million to \$9 million, spread over 2011 – 2012. Repair expenses are estimated to be about \$3 million, of which \$2.3 million will be capital costs.

Transmission Performance

Transmission reliability¹¹ in July was 99.44 percent, which was above the target of 98.70 percent, and 98.96 percent in August, which was below the target of 99.81 percent. The year-to-date actual reliability is 95.79 percent, below the target of 96.41 percent. Performance has been affected by some outages not anticipated in 2010, several forced outages¹², and some scheduled outages¹³ that have taken longer than expected.

There were three forced outages in July for a total of 373 hours. One outage was a significant unplanned transmission event¹⁴. The Marcy Capacitor Bank #2 was out of service for 370 hours due to catastrophic equipment failure; the cause is yet to be determined but under investigation. The Massena-Utica and Massena-Chateaugay lines were out of service for 1.5 hours each due to circuit breaker failure at Marcy.

There were two significant unplanned transmission events in August for a total of 40 hours. The Massena-Utica line was out of service for 25 hours and the Massena-Chateaugay lines was out for 15 hours, both due to line emergencies when a disconnect switch¹⁵ did not close correctly and failed. The switch was repaired and the lines were restored to service.

Life Extension and Modernization Programs

On September 21, the 13th of the 16 units at the St. Lawrence-FDR project was returned to service, as part of the project's Life Extension and Modernization¹⁶ (LEM) program. As reported in the June COO Report, the unit's original return to service date of July 30 was delayed as the result of conditions not encountered with any of the previous 12 units including deficient original manufacturing of parts that require upgrading as well as other issues. The 2013 scheduled completion date for the LEM project remains unchanged.

Transmission Initiative

NYPA is continuing to work with National Grid, Con Edison, and the Long Island Power Authority (LIPA), regarding a proposed transmission line that would deliver power from Canada and upstate renewable energy projects to New York City.

In July, PA Consulting briefed senior management at NYPA and National Grid on its draft analysis comparing load-weighted zonal electricity prices, production costs, generator costs, and emissions in the Base Case and the Transmission Initiative Case. Subsequently, PA prepared sensitivity analyses considering several scenarios including Hudson Transmission Partners' proposed PJM-NYC line, a range of natural gas prices, and 400 MW of off-shore wind. Results indicated a net benefit in state-wide production costs and a reduction of emissions with the construction of the Transmission Initiative. A presentation of the sensitivity analyses was made to Con Edison and LIPA staff in July. Representatives from Con Edison and LIPA accepted the analyses, and Con Edison agreed to an executive-level meeting between NYPA, National Grid, Con Edison and LIPA to further discuss the Transmission Initiative. The meeting is anticipated for October.

SUNY-Canton Project

NYPA is working with the State University of New York at Canton (SUNY-Canton) on assessing options to relocate the section of the Moses-Adirondack¹⁷ line on their campus to accommodate athletic fields. In July, NYPA and Commonwealth Associates presented SUNY-Canton an interim report on routing options. Commonwealth Associates was asked to research additional costs of the routing options and prepare a new report, which will be presented to Senior Management with staff recommendations in October.

Blenheim-Gilboa Project Relicensing

The Trustees will be briefed in September and October on the relicensing process for the Blenheim-Gilboa Pumped Storage Power Project. It is anticipated that by the end of 2010, the Trustees will be requested to authorize the start of this relicensing effort and a capital budget in preparation for relicensing. The Trustees will also be asked to approve an award of a contract for the development and implementation of a comprehensive information management system to support the relicensing effort.

The Federal Energy Regulatory Commission¹⁸ (FERC) license for Blenheim-Gilboa expires in April 2019. It is anticipated that, as with the relicensing efforts for the St. Lawrence-FDR and Niagara projects – which required seven to nine years and involved extensive studies as well as significant participation by and negotiation with stakeholders – there will be two phases of work for obtaining a new license for Blenheim-Gilboa. The first phase will involve preparation for relicensing and the second phase will be the formal FERC relicensing process. Preparation for relicensing includes preparing the necessary relicensing documents to begin the formal relicensing process in 2013.

Organizational Realignment

The assessment of potential operational interfaces between the Power Generation and Transmission groups has been issued and is being reviewed internally. A presentation of the results of the study will be made to the COO and the EVP of Power Supply in September. The final report is now scheduled to be completed in the fourth quarter of 2010.

Smart Grid Demonstration Transmission Project

In July, NYPA and the Electric Power Research Institute¹⁹ (EPRI) signed an agreement and held a kick-off meeting to organize the project implementation plan of a project funded in part through an award from the American Recovery and Reinvestment Act for its proposed “Evaluation of Instrumentation and Dynamic Thermal Ratings for Overhead Lines”, a Smart Grid Demonstration Project. The project will evaluate a suite of emerging technologies and applications that measure dynamic thermal capacity ratings²⁰ of overhead transmission lines, and NYPA will test a hypothesis that higher wind speeds, which generate more wind power, simultaneously cool transmission lines and thereby increase their capability to deliver power. EPRI issued purchase orders for the equipment, which is scheduled to be installed by NYPA later this year, followed by a two-year data collection and analyses project period.

Environmental

There were two environmental events in July. At the Poletti Power Project, a previously unidentified release of oil was discovered while excavating for a replacement potable water line. At the Hell Gate Plant, approximately 15 gallons of cable oil was released from the failed pothead that caused the unit to be placed out of service.

There was one environmental event in August. At the Gregory B. Jarvis Small Hydro facility, a loss of power at the sump pumps resulted in minor flooding. When power was restored to the sump pumps, a quart of oil was released, resulting in an oil sheen on the surface of Canada Creek. Spill response measures were initiated and the released oil was recovered.

The total year-to-date number of recordable environmental incidents is 18. The 2010 maximum target for recordable environmental incidents is 25.

Technical Compliance – NERC Reliability Standards

As discussed in March’s COO report, NYPA reported potential non-compliance and submitted mitigation plans to the Northeast Power Coordinating Council²¹ (NPCC) for two standards that apply to facility ratings methodology²² and data for NYPA’s generation and transmission assets, and two standards that apply to NYPA’s Critical Infrastructure Protection²³ program. All three of these standards are in the North American Electric Reliability Council’s²⁴ (NERC) top ten of the most violated standards in the industry. NYPA continued to engage with NPCC in July regarding the six mitigation plans associated with these self reports. By the end of July, NPCC approved all six mitigation plans and submitted them to NERC for approval, and by the end of August NERC approved the plans and submitted them to FERC.

On July 2, NYPA reported five additional potential violations of standards that apply to NYPA's Critical Infrastructure Protection (CIP) program. These relate to the "Physical Security of Critical Cyber Assets" (CIP-006) and the "Cyber Security – Systems Security Management" (CIP-007) standards. Mitigation plans for these self reports are being prepared and will be submitted to the NPCC in September.

Also discussed in the March report, NYPA responded to a Compliance Inquiry letter from the NPCC in late February requesting information and documentation regarding a system event that occurred at the Niagara Power Project on February 1 that took a 345 kV transmission line to Ontario, Canada, out of service. On August 25, NPCC sent NYPA a request from FERC to clarify whether the NYPA operators involved in the restoration were NERC-certified. The response was sent to NPCC on August 27 – NYPA's operator at the Energy Control Center in Marcy, NY, was certified; the operator at Niagara was not. This Compliance Inquiry is still open.

On August 16, NPCC requested NYPA respond to a set of 13 questions that are used to evaluate a registered entity's internal compliance program. NPCC will use the response to gauge mitigating or aggravating factors in the determination of potential penalties related to NYPA's self-reports of potential violations of the standards. NYPA filed its response with NPCC on August 26.

In August, Power Supply completed its assessment of the organizational and staffing requirements for managing compliance to NERC's Reliability Standards, and issued its final report. Also, Power Supply continued a six-month project (initiated in July) to prepare the organization for an expected 2011 NERC audit of 123 standards applicable to NYPA. Two of the four assessments of the compliance evidence for about 20 standards were conducted through August. This assessment identified several actions that must be taken in preparation for the audit. Power Supply continued Phase II of a project (also initiated in July) to update and improve the organization's NERC-related governance structure, including policies and procedures. The objective of these initiatives is to enhance NYPA's NERC reliability standards compliance posture. Both of these projects will be completed in 2010.

A NERC Reliability Standards Compliance awareness training program was developed in the second quarter of 2010. Delivery of the training to all NYPA employees began in June and was completed in August. The objective of this training was to raise the awareness of the employees about the standards and requirements and NYPA's obligations to comply with them.

Energy Resource Management

NYISO Markets

In July, Energy Resource Management (ERM) bid more than 2.0 million MWh of NYPA generation into the NYISO markets, netting \$71.0 million in power supplier payments to the Authority. In August, ERM bid more than 2.0 million MWh, netting \$53.0 million. ERM has

bid more than 15.9 million MWh year-to-date netting \$348.9 million in power supplier payments.

Production at the Niagara and St. Lawrence-FDR projects is still below expectations due to lower river flows. Production is 10 percent lower than what was experienced at the same time last year. It is expected that flows will remain lower than forecasted, contributing to the net revenue shortfall. Energy prices are significantly higher relative to last year, but still approximately \$10/MWh below historical average, which also has negatively impacted net revenue.

At Blenheim-Gilboa, July and August production and revenues are higher due to growing peak and off-peak differentials, but peak is expected to lower in the Fall, meaning production and revenue will also decrease.

The Small Clean Power Plants and the 500-MW Combined Cycle Plant are exceeding year-to-date forecasted net income. Slightly lower than forecasted capacity revenue is more than offset by higher than forecasted energy revenues.

Fuel Planning & Operations

In July, NYPA's Fuels Group transacted \$20 million in natural gas and oil purchases, compared with \$33 million in July 2009. In August, the Fuels Group transacted \$20 million in natural gas and oil purchases, compared with \$34 million in August 2009. Year-to-date natural gas and oil purchases are \$155 million compared with \$250 million year-to-date in August 2009. Total year-to-date reduction of \$95 million is mainly attributed to cessation of operation at Poletti (-\$55 million year-over-year) and lower cost of fuel to meet higher generating output for the 500MW unit (-\$45 million). Decreased costs at Flynn (-\$10 million) due to outage were offset by higher costs associated with increased generation at the SSCP's (+\$15 million).

Regional Greenhouse Gas Initiative

On September 8, NYPA participated in Auction 9 of the Regional Greenhouse Gas Initiative²⁵ (RGGI) CO₂ Budget Trading Program. The price of RGGI allowances cleared at \$1.86/ton for vintage year 2010 in Auction 9, which is the price floor established by the program. That is the lowest RGGI auction price to date, the record high being \$3.51/ton cleared during the March 2009 auction. Lower energy demand and lower natural gas prices due to the current economic recession have been identified as major contributors to the decline in RGGI prices. However, recent setbacks to the institution of a federal program that would incorporate an exchange rate for existing allowances have played a role in depressing prices as well.

Eastern Interconnection Planning Collaborative

The Eastern Interconnection Planning Collaborative (EIPC) includes representation from 24 Planning Authorities across the interconnection, including the NYISO and other ISO/RTO's, and transmission owners. The EIPC received \$16 million through the American Recovery and Reinvestment Act for interconnection-level transmission expansion studies that integrate

regional transmission modeling and expansion plans into interconnection-level planning, through an open and transparent stakeholder process that must be designed from the ground-up.

The EIPC established a Stakeholder Steering Committee (SSC) with 29 representatives from consumer and environmental groups, state and federal policy makers, transmission and generation owners, public power, and other suppliers in 40 eastern states and Canada. A member of NYPA's Energy Resource Management Staff was elected to the SSC by the public power organizations in the eastern interconnection.

The SSC's charge is to develop future resource and transmission scenarios to be studied by the EIPC's analysis team and consultants. The scenarios consider potential future changes in the economy, fuel prices, technologies, and policies with regard to renewable energy and emissions among other factors, and the impact of those changes on consumption and resource needs. The SSC formed work groups to review the existing regional planning models that will be integrated to form the basis for the EIPC studies. A report on Phase I of the project, developing resource expansion scenarios, is due to the US Department of Energy (DOE) in October 2011, and a report on Phase II, developing transmission build-out options for the eastern interconnection, is due to DOE in October 2012.

Office of the Chief Operating Officer

Sustainability Action Plan

NYPA continues to make progress on implementing the 41 action items laid out in the Sustainability Action Plan. Recent accomplishments include: completing a rate re-design study for governmental customers that encourages demand side management; formalizing NYPA's green power program, which will streamline access to renewable power for NYPA customers; completing the first phase of bid reviews for the Great Lakes Offshore Wind project; completing the initial technical and economic feasibility evaluation for the Transmission Initiative; completing the LEM project at Blenheim-Gilboa; and launching a study of NYPA's Information Technology infrastructure to identify potential energy and cost savings.

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 pump storage unit was pumping water instead of generating power).

⁴ **Generation Market Readiness** – The availability of generating facilities for bidding into the NYISO market. It factors in available hours and forced outage hours which drive the results.

⁵ **Significant Unplanned Generation Events** – Forced or emergency outages of individual generator units of duration greater than 72 hours, or with a total repair cost of greater than \$75,000, or resulting in greater than \$50,000 of lost revenues.

⁶ **Pothead** – A type of insulator with a bell or pot-like shape used to connect underground electrical cables to overhead lines. It serves to separate the bunched-up conductors from one another in the cable to the much wider separation in the overhead line. It also seals the cable end from the weather.

⁷ **Outage** – An outage exists whenever a unit is not synchronized to the grid system and not in a Reserve Shutdown state. An outage starts when the unit is either desynchronized from the grid or when it moves from one unit state to another (for example, goes from a reserve shutdown to a maintenance outage.) The outage ends when the unit is synchronized to the grid or moves to another unit state. An outage is Planned if it was submitted in advance for a predetermined duration. An outage is Scheduled if it was either submitted in advance (Planned) or can be delayed a few days (Maintenance).

⁸ **Maintenance Outage** – An outage that can be deferred beyond the end of the next weekend (Sunday at 2400 hours), but requires that the unit be removed from service, another NERC-defined outage classification, or Reserve Shutdown state before the next Planned Outage (PO). Characteristically, a maintenance outage can occur any time during the year, has a flexible start date, may or may not have a predetermined duration, and is usually much shorter than a PO. Maintenance Outages are considered Unplanned but Scheduled Outages.

⁹ **Combustion Turbine Generator Rotor** – A combustion turbine generator includes an electrical generator and a combustion turbine for driving the generator. The generator includes a rotor, which is a shaft with blades attached. The shaft is turned by an expansion of hot gas within the turbine – air enters an inlet, is compressed by an air compressor, and then supplied to a combustor where fuel (i.e. natural gas) is burned to produce hot gas. The hot gas travels through the turbine where the expanding gas acts on the blades to turn the rotor, electrical power being generated as the rotor turns within a stator, which is a stationary electromagnetic coil surrounding the rotor.

¹⁰ **New York Independent System Operator (NYISO)** – A not-for-profit organization that operates New York State’s transmission system, administers the state’s wholesale electricity markets and engages in planning to ensure the future reliability of the statewide power system.

¹¹ **Transmission reliability** – A measurement of the impact of forced and scheduled outages on the statewide system’s ability to transmit power.

¹² **Forced Outages** – An outage that requires immediate removal of a unit from service. This outage is considered Unplanned and Unscheduled.

¹³ **Scheduled Outages** – An outage is Scheduled if it was either submitted in advance (Planned) or can be delayed a few days (Maintenance).

¹⁴ **Significant Unplanned Transmission 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.

¹⁵ **Disconnect Switch** – A high-voltage switch used to isolate line equipment. It is needed for safety reasons.

¹⁶ **Life Extension and Modernization programs**—Major undertakings in which all the turbines at the St. Lawrence-Franklin D. Roosevelt and Blenheim-Gilboa projects are being replaced and the generators and other components significantly refurbished. The programs are intended to ensure that the projects operate at maximum efficiency far into the future.

¹⁷ **Moses-Adirondack line** – Two 230 kV circuits, MA1 and MA2, that connect the Robert Moses Power Dam at the St. Lawrence-FDR Power Project in Massena, NY, to the Adirondack substation in Lewis County.

¹⁸ **Federal Energy Regulatory Commission (FERC)** – An independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas (LNG) terminals and interstate natural gas pipelines as well as licensing hydropower projects.

¹⁹ **Electric Power Research Institute (EPRI)** – An independent, nonprofit organization that conducts research and development relating to the generation, delivery and use of electricity for

the benefit of the public. EPRI brings together its scientists and engineers as well as experts from academia and industry to help address challenges in electricity, including reliability, efficiency, health, safety and the environment. EPRI also provides technology, policy and economic analyses to drive long-range research and development planning, and supports research in emerging technologies.

²⁰ **Dynamic Thermal Capacity Ratings** – The load that produces the maximum safe conductor operating temperature and power handling capability of an overhead transmission line, as measured using instruments that provide real-time data on load, conductor temperature, ambient temperature, and wind speed and direction. Line capacity is limited in part by the temperature at which the line can safely handle load.

²¹ **Northeast Power Coordinating Council (NPCC)** - The Northeast Power Coordinating Council, Inc. (NPCC) is the cross-border regional entity and criteria services corporation for Northeastern North America. NPCC’s mission is to promote and enhance the reliable and efficient operation of the international, interconnected bulk power system in Northeastern North America pursuant to an agreement with the Electric Reliability Organization (ERO) which designates NPCC as a regional entity and delegates authority from the U.S. Federal Energy Regulatory Commission (FERC), and by Memoranda of Understanding with applicable Canadian Provincial regulatory and/or governmental authorities. The ERO to which NPCC reports is the North American Electric Reliability Corporation (NERC).

²² **Facilities Ratings Methodology** – NERC standard FAC-008-1, titled “Facilities Ratings Methodology”, ensures that Facility Ratings used in the reliable planning and operation of the Bulk Electric System are determined based on an established methodology or methodologies. The Transmission or Generator owner must document its methodology or methodologies for developing facility ratings according to NERC requirements, make these documents available to transmission operators and planners, reliability coordinators, and planning authorities, and respond to any written comments on the documents.

²³ **Critical Infrastructure Protection (CIP)** – The Critical Infrastructure Protection (CIP) program coordinates all of the North American Electricity Reliability Corporation’s (NERC) efforts to improve physical and cyber security for the bulk power system of North America, as it relates to reliability. These efforts include standards development, compliance enforcement, assessments of risk and preparedness, disseminating critical information via alerts to industry, and raising awareness of key issues.

²⁴ **North American Electric Reliability Corporation (NERC)**—The organization that develops and enforces mandatory reliability standards for the bulk power system in the United States, issues long-term and seasonal reliability forecasts and monitors the power system. (NERC standards are also mandatory and enforceable in parts of Canada.)

²⁵ **Regional Greenhouse Gas Initiative (RGGI)** – A cooperative effort by Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. These ten 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 ten participating states. Regulated power plants can use a CO₂ allowance issued by any of the ten participating states to demonstrate compliance with the state program governing their facility. Taken together, the ten 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.