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Chief Operating Officer

TO: NYPA BOARD OF TRUSTEES  
FROM: GIL C. QUINIONES, CHIEF OPERATING OFFICER  
DATE: JULY 26, 2011  
SUBJECT: MONTHLY REPORT FOR THE BOARD OF TRUSTEES

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This report covers the performance of the Operations group in June. NYPA's generation assets continued a high level of market readiness in June, enabling the Authority to take advantage of above average flows on the Niagara and St. Lawrence rivers. Net generation has outpaced projections for four months in a row. On July 1, the 575 MW Astoria Energy II combined cycle power plant entered into commercial operation. Output from the plant will be included in the projected and actual net generation figures beginning in July.

### Power Supply

#### *Plant Performance*

Systemwide net generation<sup>1</sup> was 2,375,394 megawatt-hours<sup>2</sup> (MWh) in June, compared to projected net generation of 2,156,496 MWh. Year-to-date net generation is 12,754,795 MWh, compared to the net generation target of 12,289,925 MWh.

The fleet availability factor<sup>3</sup> was 93.1 percent in June and is 95.5 percent for the year. Generation market readiness factor<sup>4</sup> was 99.9 percent, compared with the monthly target of 99.4 percent. Year-to-date generation market readiness factor is also 99.9 percent.

There was one significant unplanned generation event<sup>5</sup> in June. At the Brentwood Gas Turbine Facility, a gas compressor<sup>6</sup> tripped due to low lube oil pressure; the resulting outage lasted eight days.

Generation revenue in June was \$176.8 million, with \$0.3 million revenue lost from unscheduled outages. Year-to-date lost opportunity cost is \$1.5 million, about 0.17 percent of year-to-date generation revenue of \$891.5 million.

River flows at the Niagara Power Project were above forecast in June and are forecast to be normal or above average through the beginning of 2012. At the St. Lawrence-FDR Power Project, flows were also above forecast and are expected to be above average through 2011 before returning to historical average in 2012.

#### *Transmission Performance*

Transmission reliability<sup>7</sup> in June was 99.61 percent, which was above the target of 99.42 percent. Year-to-date transmission reliability is 99.10 percent, above the target of 98.37 percent.

There were no significant unplanned transmission events<sup>8</sup> in June.

#### *Life Extension and Modernization Program*

Work on Unit 24 at the St. Lawrence-FDR Power Project, the 14<sup>th</sup> of the 16 units, was completed as part of the Project's Life Extension and Modernization<sup>9</sup> (LEM) program. Unit 24 was returned to service on June 20. Due to higher than expected water flows and the potential for increased generation revenue, it was decided to delay the outage of the next unit (Unit 19) by one month. The 2013 scheduled completion date for the LEM project remains unchanged.

#### *Environmental*

There were two reportable events in June. At the Niagara Power Project, an air conditioning unit leaked approximately 1.4 pounds of R-22 refrigerant<sup>10</sup>, exceeding the NYS Department of Environmental Conservation Reportable Quantity limit (1 pound). At the Hell Gate Gas Turbine Facility, a transformer fire resulted in a spill of approximately 100 gallons of oil. All of the oil was contained and a contractor was hired to remove the resulting mixture of oil and water.

Year-to-date number of recordable environmental incidents is 20; the 2011 target is 25.

#### *Transmission Initiative*

NYPA continues 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 and Long Island.

Since June 2010, PA Consulting has conducted a series of economic analyses for the project that generally indicated that there was a net benefit and a reduction in emissions with the construction of the Transmission Initiative. However, recent developments including the decision to proceed with the HTP project and a forecast of lower demand and energy prices have had a significant negative impact on the economics of a project that terminates in New York City

and Long Island. Those developments and the cost of additional reinforcements within New York City that might be required by the New York Independent System Operator<sup>11</sup> (NYISO) make the current project configuration uneconomic.

Staff is developing alternative project configurations that would terminate in either Westchester County or further north of New York City. These configurations could be more cost effective and could address many New York State energy issues.

#### *Technical Compliance – NERC Reliability Standards*

In June, NYPA staff continued to prepare for and participate in two scheduled audits of its compliance with North American Electric Reliability Corporation<sup>12</sup> (NERC) Mandatory Reliability Standards. NYPA's compliance documentation for the on-site Federal Energy Regulatory Commission<sup>13</sup> (FERC) Order 706 audit for Critical Infrastructure Protection<sup>14</sup> (CIP) standards was submitted to the Northeast Power Coordinating Council (NPCC)<sup>15</sup> on June 9; the audit will commence at the Clark Energy Center on July 11. NYPA's compliance documentation for the off-site FERC Order 693 (non-CIP) audit was submitted to NPCC on June 20; the audit commenced on June 21.

Pursuant to FERC Order 743, NERC established a Standard Drafting Team to develop a new Bulk Electric System (BES) definition and a Rules of Procedure Team to develop rules of procedure for an exception process. NYPA's internal team of subject matter experts continues to monitor the work of both of these teams. On June 10, NYPA submitted comments to NERC on the Technical Principles for Demonstrating BES Exceptions and the BES Definition Exception Process. The Drafting Team expects to post the new BES definition for ballot and official comment in August.

NYPA Technical Compliance staff continues to work with the NYISO and the New York Transmission Owners to develop an action plan for addressing the statewide impacts of the implementation of the new BES definition. On June 29, a conference call was held to further discuss the statewide impacts of the implementation of the new BES definition; in particular, the impacts on Transmission Operator registration in New York State. The focus to date has been on estimating the costs for managing the Transmission Operator requirements in the NERC standards once the new BES definition is adopted. The next meeting on July 19 will include representatives from NPCC. In addition, the NYISO has an action item to initiate discussions with the New York Transmission Owners on Transmission Planning registration impacts.

NYPA has a responsibility to implement its assessment plan developed in response to NERC's Alert Recommendation to Industry regarding overhead transmission line ground clearances pursuant to the NERC Facility Ratings Standards. NYPA's assessment progressed as planned in June. Beginning July 15, NYPA will report progress to NPCC, as required, every six months. NYPA participated in a June 20 meeting of the technical staffs of the New York Transmission Owners to discuss the methods being used to assess potential clearance violations and the mitigation actions to ensure some consistency in the response to the NERC alert across New York State.

In June, NYPA finalized a position paper that presents a case for removing the Authority from the NERC registry as a Load Serving Entity.<sup>16</sup> NYPA expects to submit the position paper to NPCC in July and to continue its discussion with NPCC on this matter.

In June there was no progress in the settlement discussions with NPCC relating to July 2010 self-reports of possible violations of two NERC CIP standards. Mitigation plans were finalized and submitted to NPCC on June 15 for self-reports identified in February 2011 associated with two NERC Protective Relay and Control<sup>17</sup> (PRC) Standards; the mitigation plans must be completed by December 15. At the same time, NYPA notified NPCC of its desire to enter into settlement discussions for these possible violations. Also in June, NYPA submitted to NPCC justification for dismissal of the February 2011 self-report for a PRC standard.

## Energy Resource Management

### *NYISO Markets*

In June, ERM bid over 2.3 million MWh of NYPA's generation into the NYISO markets, netting \$49.4 million in power supplier payments to the Authority. Year-to-date net power supplier payments are \$221.1 million.

### *Fuel Planning & Operations*

In June, NYPA's Fuels Group transacted \$19.0 million in natural gas and oil purchases, compared with \$14.7 million in June 2010. Year-to-date natural gas and oil purchases are \$117.4 million, compared with \$114.8 million at this point in 2010. The total year-to-date \$2.6 million increase is mainly attributed to increased fuel cost at the 500-MW Combined Cycle Plant (+\$2.7 million) and increased generation at the Small Clean Power Plants (+\$6.8 million) and the Richard M. Flynn Power Plant (+\$5.7 million), which was offset by cessation of operations at the Poletti Power Project (-\$12.6 million, the last day of operations was January 31, 2010).

### *Regional Greenhouse Gas Initiative*

On June 8, Auction 12 of the Regional Greenhouse Gas Initiative (RGGI)<sup>18</sup> was held. During the auction, RGGI allowances once again cleared at the Vintage 2011 price floor set earlier this year at \$1.89/ton. Allowances also cleared at this price floor during the preceding March auction. NYPA did not participate in Auction 12 because the Authority secured 2,260,000 tons of 2011 allowances in March. This number of allowances currently represents approximately 78 percent of NYPA's estimated allowance requirement for all plants in 2011. Since the inception of this program, NYPA has spent \$18.7 million on 7.7 million RGGI allowances, or \$2.42/ton on average. Year to date, NYPA has spent \$1.89/ton on average for Vintage 2011 allowances.

In May, New Jersey Gov. Chris Christie announced that his state would be withdrawing from RGGI at the end of 2011, which marks the end of the current compliance period. In response, the participating states confirmed that according to each state's regulations, they will

each recognize without limitation all New Jersey Vintage 2009, 2010 and 2011 allowances in circulation as well as those sold in Auction 12.

Office of the Chief Operating Officer

*Sustainability Action Plan – Midyear Report*

By midyear, NYPA has completed milestones marking the implementation of its Sustainability Action Plan. The Authority published its first Sustainability Annual Report, *Generating Sustainability*, which was distributed to stakeholders and employees, and made publicly available on the NYPA website. Also in the first half of 2011, NYPA filed as a transitional reporter with the Climate Registry<sup>19</sup> as part of its effort to calculate and publicly disclose its carbon footprint. Significant progress has been made on several of the 13 sustainability milestones due for completion in the second half of the year, starting in September.

## GLOSSARY

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<sup>1</sup> **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.

<sup>2</sup> **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.

<sup>3</sup> **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).

<sup>4</sup> **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.

<sup>5</sup> **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.

<sup>6</sup> **Compressor** – The part of the gas-fired turbine that compresses intake air to high pressure so that it can be used in the combustion area.

<sup>7</sup> **Transmission Reliability** – A measurement of the impact of forced and scheduled outages on the statewide system's ability to transmit power.

<sup>8</sup> **Significant Unplanned Transmission Events** – Forced or emergency outages of individual transmission lines that 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 eight hours, or have a repair cost greater than \$75,000.

<sup>9</sup> **Life Extension and Modernization Program** — A major undertaking in which all the turbines at the St. Lawrence-Franklin D. Roosevelt project are being replaced and the generators and other components significantly refurbished. The program is intended to ensure that the project operates at maximum efficiency far into the future.

<sup>10</sup> **R-22 Refrigerant** – Common refrigerant used in residential and light commercial air conditioning, refrigerators, and freezers. R-22 is being phased out of production in the U.S. because of concerns over its threat to ozone depletion.

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<sup>11</sup> **New York Independent System Operator** – 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.

<sup>12</sup> **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.)

<sup>13</sup> **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.

<sup>14</sup> **Critical Infrastructure Protection (CIP)** – The Critical Infrastructure Protection (CIP) program coordinates all of the North American Electric 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.

<sup>15</sup> **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).

<sup>16</sup> **Load Serving Entity (LSE)** – An entity designated by a retail electricity customer to provide capacity, energy and ancillary services to serve such customer, in compliance with NYISO tariffs, rules, manuals and procedures.

<sup>17</sup> **Protective Relay and Control Standards** – Generally, the purpose of these NERC standards is to ensure the protection and monitoring of the electric system and its protection systems.

<sup>18</sup> **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 10 states have capped CO<sub>2</sub> emissions from the power sector, and will require a 10 percent reduction in these emissions by 2018. RGGI is composed of individual CO<sub>2</sub> Budget Trading Programs in each of the participating states. Regulated power plants can use a CO<sub>2</sub> allowance issued by any of the 10 participating states to demonstrate compliance with the state program governing their facility. Taken together, the individual state programs function

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as a single regional compliance market for carbon emissions, the first mandatory, market-based CO<sub>2</sub> emissions reduction program in the United States.

<sup>19</sup> **Climate Registry** - A nonprofit collaboration among North American states, provinces, territories and Native Sovereign Nations that sets consistent and transparent standards to calculate, verify and publicly report greenhouse gas emissions into a single registry.