

**THIS FILING LETTER DOES NOT CONTAIN ANY PRIVILEGED OR CONFIDENTIAL INFORMATION. REPORT SECTIONS II AND III DO NOT CONTAIN ANY PRIVILEGED OR CONFIDENTIAL INFORMATION. THE BODY OF REPORT SECTION I, AND ATTACHMENT I, and ATTACHMENTS IV - VI DO NOT CONTAIN ANY PRIVILEGED OR CONFIDENTIAL INFORMATION. ATTACHMENT II AND III CONTAIN PRIVILEGED AND CONFIDENTIAL INFORMATION, AND ARE CLEARLY MARKED.**

December 20, 2013

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

Re: Annual Report in Docket Nos. ER01-3001-000, ER03-647-000 and  
Request for Privileged Treatment of Attachments II and III

Dear Ms. Bose:

Enclosed for filing in the above-referenced dockets is the New York Independent System Operator's ("NYISO's") Annual Installed Capacity Report on the NYISO's Capacity Market, Possible Withholding, New Generation Projects, and Net Revenue Analysis (the "Report").<sup>1</sup> By Order dated February 3, 2010, the Commission directed the NYISO to file this report for informational purposes only.<sup>2</sup>

### **I. List of Documents Submitted**

The NYISO submits with this letter, and the below request for confidential treatment, a public version of the Report, with Attachment II and III redacted. Separately, the NYISO is submitting as confidential Attachments II and III.

As with prior annual Installed Capacity Reports, the Report is comprised of the following separate sections: Section I: Capacity Market Report and Withholding Analysis, Section II: Report on New Generation Projects, and Section III: New Generation Projects and Net Revenue Analysis.

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<sup>1</sup> *New York Independent System Operator, Inc.*, 117 FERC ¶ 61,086 (2006); *New York Independent System Operator, Inc.*, 103 FERC ¶ 61,201 (2003), 108 FERC ¶ 61,280 (2004), 121 FERC ¶ 61,090 (2007), 123 FERC ¶ 61,206 (2008). In Docket ER03-647, the NYISO files an annual report regarding its Demand Side Management programs on January 15, and a semi-annual report on its Demand Side Management programs and new generation projects on June 15 each year.

<sup>2</sup> *New York Independent System Operator, Inc.*, Order, Docket Nos. ER01-3001 and ER03-647 (Feb. 3, 2010).

## II. Request for Confidential Treatment of Attachments II and III

In accordance with Sections 388.107 and 388.112 of the Commission's Regulations,<sup>3</sup> Article 6 of the NYISO's Market Administration and Control Area Services Tariff, Sections 1.0(4) and 4.0 of the NYISO's Code of Conduct, the NYISO requests Privileged and Confidential treatment of the contents of Attachments II and III (the "Confidential Attachments"). The NYISO also requests that the Confidential Attachments be exempted from public disclosure under the Freedom of Information Act ("FOIA"), 5 U.S.C. §522.<sup>4</sup>

The Confidential Attachments contains privileged and commercially sensitive, and trade secret information that is not made public by the NYISO and that could cause competitive harm to the affected Market Participants,<sup>5</sup> and could adversely affect competition in the markets administered by the NYISO, if publicly disclosed. This information includes the identity of Installed Capacity Suppliers and their respective offering behavior, and the basis therefor. This confidential, commercially sensitive information, is exempt from disclosure under 5 U.S.C. §522(b)(4). For this reason, the NYISO requests that the contents of Confidential Attachments received Privileged and Confidential treatment and be exempt from FOIA disclosure.

A redacted, public version of the contents of Attachment II is included in the Report as Attachment I.

The NYISO requests waiver of any obligation it may have under the Commission's regulations or the Secretary's rules to submit a redacted version of Attachment III. The NYISO incorporated into the body of Report Section I a masked or aggregated version of the information that is contained in Attachment III and thereby makes publicly available the information contained in Attachment III that is not confidential and commercially sensitive. In that regard, the NYISO has provided a redacted version of the information contained in Attachment III within the body of the report.

Attachments II and III are identified and marked in accordance with the Commission's regulations and rules published by the Secretary's Office for submitting Privileged information.

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<sup>3</sup> 18 C.F.R. §§ 388.107, 388.112 (2012).

<sup>4</sup> The information provided by the NYISO for which the NYISO claims an exemption from FOIA disclosure is labeled "Contains Privileged Information – Do Not Release."

<sup>5</sup> Terms with initial capitalization not defined herein have the meaning set forth in the NYISO's Market Administration and Control Area Services Tariff.

### III. Correspondence

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Respectfully submitted,

/s/ Gloria Kavanah

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**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding in accordance with the requirements of Rule 2010 of the Rules of Practice and Procedure, 18 C.F.R. §385.2010.

Dated at Rensselaer, NY this 20<sup>th</sup> day of December, 2013.

*/s/ Joy A. Zimmerlin*

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# 2013 Annual Installed Capacity Report

*Report on the NYISO's Capacity Market, Possible Withholding,  
New Generation Projects, and Net Revenue Analysis*

December 20, 2013

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## I.1. Capacity Market Report

### I.1.1. Overview

This report (the “December 2013 Report”) reviews the outcomes of the Installed Capacity (“ICAP”) market administered by the New York Independent System Operator (“NYISO”); assesses the effectiveness of the ICAP Demand Curves<sup>1</sup> (“Demand Curves”) in attracting investment in new generation; and examines potential withholding activity in the NYISO-administered Capacity auctions for the New York Control Area (“NYCA”) by its two Localities, New York City (“NYC”) and Long Island (“LI”), and the remaining area that comprises the NYCA, Rest of State (“ROS”) (referred to as “capacity areas”).<sup>2</sup> The December 2013 Report covers the Winter 2012-2013 and Summer 2013 Capability Periods, which span from November 2012 through October 2013. Similar NYISO reports filed in previous years cover earlier periods.

Capacity prices during the Winter 2012-2013 Capability Period were higher, on average, than those of the previous Winter Capability Period for each of the three capacity areas. The average ICAP Spot Market Auction prices over the Winter 2012-2013 Capability Period were \$1.99/kW-month, \$4.65/kW-month, and \$1.99/kW-month, for NYCA, NYC, and LI, respectively. These prices compare with \$0.17/kW-month, \$4.05/kW-month, and \$0.17/kW-month during the previous winter.

Capacity prices during the Summer 2013 Capability Period were higher in all three areas than the previous Summer Capability Period. The average Spot Market Auction prices over the Summer 2013 Capability Period were \$5.80/kW-month, \$16.07/kW-month, and \$7.13/kW-month, for NYCA, NYC, and LI, respectively. These prices compare with \$2.27/kW-month, \$11.88/kW-month, and \$3.19/kW-month during the previous summer. The average Spot Market Auction prices for Summer 2013 were higher than the Summer 2012 average in all Localities by: \$3.53/kW-month in NYCA; \$4.19/kW-month in NYC; and \$3.94/kW-month in Long Island. The increase was driven primarily by increases in the Demand Curve reference points, increase in the Locational Minimum Installed Capacity Requirement for every location, as well as by the reduction in available capacity compared to the load forecast throughout NYCA. These dynamics are depicted in Chart 1.

For the Winter 2012-2013 and Summer 2013 Capability Periods, there was minimal change in the proportion of Load Serving Entity (“LSE”) Capacity requirements met through purchases in the NYISO-administered capacity markets versus bilateral transactions when compared to previous Capability Periods. In the Winter 2012-2013 Capability Period, 42.7% of

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<sup>1</sup> Terms in upper case not defined herein shall have the meaning set forth in the NYISO’s Market Administration and Control Area Services Tariff (“Services Tariff”), as revised by the Commission’s acceptance of the NYISO’s filing to establish a New Capacity Zone and subsequent related filings in Docket Nos. ER12-360 and ER13-1380. See New York Independent System Operator, Inc., *Proposed Tariff Revisions to Establish and Recognize a New Capacity Zone and Request for Action on Pending Compliance Filing*, Docket No. ER13-1380-000 (April 30, 2013) (the “April 2013 NCZ Filing”) and New York Independent System Operator, Inc., *Initial Compliance Filing and Request for Shortened Comment Period and Expedited Action by July 1, 2013*, Docket No. ER12-360-001 (June 19, 2013). If not defined therein, then terms have the meaning set forth in the Open Access Transmission Tariff (“OATT”).

<sup>2</sup> The NYISO administers three Capacity auctions: NYCA, New York City, and Long Island. References in this report to the Rest of State are to the geographic area within the NYCA that excludes the New York City and Long Island Localities.



LSE Capacity procurements were met through bilateral transactions in Unforced Capacity (“UCAP”) terms, while the remaining percent of LSE obligations were met through purchases in the NYISO-administered auctions. Similarly, in the Summer 2013 Capability Period, 48.7% of LSE capability procurements were met through bilateral transactions, while the remaining LSE obligations were satisfied through purchases made in the NYISO-administered auctions.

The seasonal average quantities of unoffered capacity constituted less than 3% of available supply in the NYC Locality and less than 1% in the LI Locality (see Chart 8).

The seasonal average quantities of unsold capacity (i.e., capacity that was offered but went unsold) while below 1% for LI Locality, were approximately 1.5% for the NYC Locality. Unsold and unoffered capacity quantities from ROS resources were approximately 2.6% in the Winter 2012-2013, and 3% in Summer 2013 (see Chart 9).<sup>3</sup> The UCAP offered and purchased in NYCA and each of the two Localities exceeded the Locational Minimum Installed Capacity Requirements; therefore, prices were below the base reference point on the ICAP Demand Curves.

Overall, the Market-Clearing Prices in the ICAP Spot Market Auctions support the conclusion that the ICAP Spot Market Auctions continue to be attractive to Installed Capacity Suppliers. It continues to be difficult to correlate the effects of the ICAP Demand Curves on investment in new generation in the NYCA, mainly because over the past several years New York has had Capacity available in excess of the Locational Minimum Installed Capacity Requirement. The NYISO understands that developers will look to anticipated future revenues when making near-term investment decisions.

The NYISO will continue to monitor potential reliability risks and other issues that may affect the reliability outlook for New York’s bulk electric system. *The 2012 Comprehensive Reliability Plan* (“CRP”), produced by the NYISO, identified potential system reliability risks and transmission security deficiencies starting in year 2013 and resource adequacy needs starting in year 2021.<sup>4</sup> The market-based, regulated backstop and alternative regulated solutions have been proposed in the CRP to meet the reliability needs identified in the 2012 Reliability Needs Assessment.<sup>5</sup>

For locations where transmission security needs were identified, the Responsible Transmission Owners were required to provide updated Local Transmission Plans or Regulated Backstop Solutions to address the reliability violations. This effort includes tracking the planned development of new capacity resources and other proposed interconnection projects, assessing demand response resources’ participation in the ICAP Special Case Resource (“SCR”)

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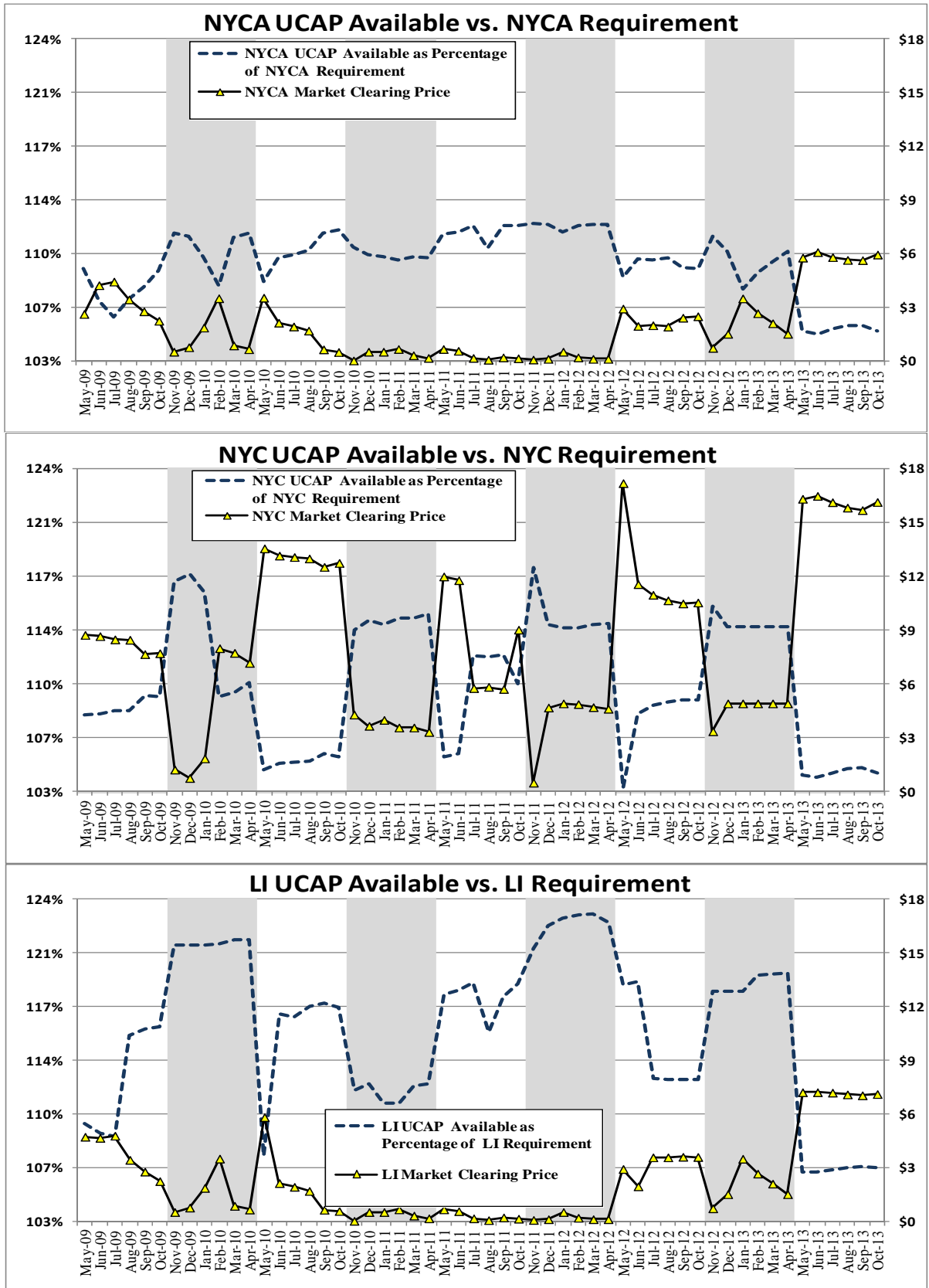
<sup>3</sup> Section I.4 of this report provides information and analysis of the unoffered and unsold capacity.

<sup>4</sup> See New York Independent System Operator. “2012 Comprehensive Reliability Plan” Issued on March 19, 2013, available at: <[http://www.nyiso.com/public/webdocs/markets\\_operations/services/planning/Planning\\_Studies/Reliability\\_Planning\\_Studies/Reliability\\_Assessment\\_Documents/2012\\_Comprehensive\\_Reliability\\_Plan\\_Final\\_Report.pdf](http://www.nyiso.com/public/webdocs/markets_operations/services/planning/Planning_Studies/Reliability_Planning_Studies/Reliability_Assessment_Documents/2012_Comprehensive_Reliability_Plan_Final_Report.pdf)>.

<sup>5</sup> See New York Independent System Operator. “2012 Reliability Needs Assessment”. Issued on September 18, 2012, available at: <[http://www.nyiso.com/public/webdocs/markets\\_operations/services/planning/Planning\\_Studies/Reliability\\_Planning\\_Studies/Reliability\\_Assessment\\_Documents/2012\\_RNA\\_Final\\_Report\\_9-18-12\\_PDF.pdf](http://www.nyiso.com/public/webdocs/markets_operations/services/planning/Planning_Studies/Reliability_Planning_Studies/Reliability_Assessment_Documents/2012_RNA_Final_Report_9-18-12_PDF.pdf)>

program, tracking and evaluating potential reliability impacts of generator retirements, monitoring the need for creation of new capacity zones, and evaluating the cumulative effect of emerging environmental regulations on the existing generation fleet.

Chart 1: UCAP Available Reserve and Spot Market Clearing Prices



## I.2. Market Design and Regulatory Developments

Over the past year, there have been several ICAP market design initiatives and regulatory developments pertaining to the NYISO's Installed Capacity market. The most significant developments include: (i) the identification of a new Locality encompassing load zones G, H, I and J ("G-J Locality") to be effective for the May 1st, 2014 start of the 2014/2015 Capability Year; (ii) the filing of proposed Demand Curves for Summer 2014 through Winter 2016/2017; (iii) evaluation of modifications to the buyer-side mitigation rules<sup>6</sup> ("BSM rules") and a FERC order on outstanding litigation; among other developments described below.

### I.2.1. New Capacity Zone

Pursuant to a process in the Services Tariff for an examination of constraints, the NYISO presented the results of a deliverability analysis to the ICAP Working Group. That study triggered the tariff requirement that the NYISO propose a New Capacity Zone ("NCZ"). After extensive stakeholder discussions, on April 30, 2013, the NYISO proposed in a filing with the Commission tariff revisions to establish the G-J Locality.<sup>7</sup> On August 13, 2013, FERC issued an order accepting that filing, including its boundaries; and the tariff revisions so that it can be in place for the start of the 2014/2015 Capability Year

On June 29, 2012, the NYISO filed the ICAP market mitigation measures to be applied to any NCZs, in compliance with FERC's September 08, 2011 order.<sup>8</sup> The proposed measures were substantially similar to the current NYC ICAP market mitigation measures.<sup>9</sup> On June 06, 2013,<sup>10</sup> and August 13, 2013<sup>11</sup> FERC issued orders accepting the NYISO's filings. In the June 2013 Order, FERC directed the NYISO to provide a report within 120 days after discussions with stakeholders, evaluating whether modifications to the BSM rules in the NCZ were needed regarding renewable resources, small suppliers, and SCRs.<sup>12</sup> The NYISO made several presentations to, discussed the issue with, and obtained input from, stakeholders in its ICAP Working Group. The NYISO filed the report on its evaluation with FERC on October 04, 2013, entitled, "Report Regarding Buyer-Side Mitigation Rules for Small Suppliers, Renewable Resources, and Special Case Resources in New Capacity Zones."<sup>13</sup>

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<sup>6</sup> See Services Tariff Section 23.4.5.

<sup>7</sup> See *New York Independent System Operator, Inc., Proposed Tariff Revisions to Establish and Recognize a New Capacity Zone*, Docket No. ER-13-1380-000.

<sup>8</sup> *New York Independent System Operator, Inc.*, 136 FERC ¶ 61,165 (2011)

<sup>9</sup> See *New York Independent System Operator, Inc.*, 136 FERC ¶61,165 (2011); *New York Independent System Operator, Inc., Further Compliance Filing*, Docket No. ER12-360-000 (filed June 29, 2012).

<sup>10</sup> *New York Independent System Operator, Inc.*, 143 FERC ¶ 61,217 (2013) (the "June 2013 Order")

<sup>11</sup> *New York Independent System Operator, Inc.*, 144 FERC ¶ 61, 126 (2013) (the "August 2013 Order")

<sup>12</sup> Letter Order, Docket No. ER12-360-003, (Aug. 14, 2013).

<sup>13</sup> *New York Independent System Operator, Inc.'s, Report Regarding Buyer-Side Mitigation Rules for Small Suppliers, Renewable Resources, and Special Case Resources in New Capacity Zones*, Docket No. ER12-360-000. Available at <

## I.2.2. Demand Curve Reset

In accordance with the Services Tariff, the NYISO's Demand Curve independent consultant studied and proposed the parameters for ICAP Demand Curves for the NYCA, NYC, LI, and the G-J Locality. The NYISO made its triennial filing for Demand Curve reset on November 29, 2013.<sup>14</sup> The filing proposed a phase-in of the annual reference values for the G-J Locality.

## I.2.3. Buyer Side Mitigation

The NYISO proposed to stakeholders in its ICAP Working Group various concepts for revisions to its BSM rules. Those proposals include the application of the BSM rules to existing generators or UDR facilities that are being repowered or that are replacing existing facilities, and to increases in capacity ("CRIS") at existing facilities. Other discussions with stakeholders have included the design of a competitive entry exemption for "merchant" investments, and a proposal to increase the default Offer Floor<sup>15</sup> from 75% of Mitigation Net CONE<sup>16</sup> to 100%.

On June 22, 2012, FERC issued an order which granted in part and denied in part a complaint regarding NYISO's implementation of its current BSM rules.<sup>17</sup>

On August 3, 2012, the Hudson Transmission Partners ("HTP") filed a complaint against the NYISO regarding certain aspects of the NYISO's application of the tests in the BSM rules to its project.<sup>18</sup> On November 21, 2013, FERC issued an order denying the complaint in large part, but granting it with respect to using HTP's cost of capital. The Order also required the NYISO to

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[http://www.nyiso.com/public/webdocs/markets\\_operations/documents/Legal\\_and\\_Regulatory/FERC\\_Filings/2013/October/NYISO%20Compliance%20Report%20BSM%2010-4-13.pdf](http://www.nyiso.com/public/webdocs/markets_operations/documents/Legal_and_Regulatory/FERC_Filings/2013/October/NYISO%20Compliance%20Report%20BSM%2010-4-13.pdf).

<sup>14</sup> *New York Independent System Operator, Inc., Proposed Tariff Revisions to Implement Revised ICAP Demand Curves and a New ICAP Demand Curve for Capability Years 2014/2015, 2015/2016 and 2016/2017 and Request for Partial Phase-In and for Any Necessary Tariff Waivers*, Docket No. ER14-500-000; and *Unrelated Ministerial Tariff Correction*, Docket No. ER12-360-000 (filed Nov. 29, 2013).

<sup>15</sup> Section 23.4.5.7 of Attachment H of the Services Tariff provides that, unless exempt from mitigation, NYC ICAP suppliers that enter the capacity market must do so at a price no lower than the applicable offer floor. Section 23.2.1 defines "Offer Floor" as the lower of: (1) 75 percent of the net cost of new entry of the peaking unit in NYC that is used to establish the NYC ICAP Demand Curve (which the Commission has referred to as the "Default Offer Floor") or (2) the new entrant's actual net cost of new entry for the specific unit (which the Commission has referred to as the Unit Offer Floor). See *Astoria Generating Company, LP et al. vs. New York Independent System Operator, Inc.*, 139 FERC ¶61,244 at P 2 n. 3 (2012).

<sup>16</sup> Mitigation Net CONE means the capacity price on the currently effective ICAP Demand Curve for the Mitigated Capacity Zone corresponding to the average amount of excess capacity above the Mitigated Capacity Zone Installed Capacity requirement, expressed as a percentage of that requirement, that formed the basis for the ICAP Demand Curve approved by the Commission.

<sup>17</sup> *Astoria Generating Company, LP et al. vs. New York Independent System Operator, Inc.*, 139 FERC

¶61,244 (2012). Requests for clarification of that Order are pending before the Commission.

<sup>18</sup> *Hudson Transmission Partners, LLC vs. New York Independent System Operator, Inc., Complaint of Hudson Transmission Partners, LLC*, Docket No. EL12-98-000 (filed August 3, 2012).

disclose the Scaling Factor used in the HTP determination, explain how it was calculated, and support the methodology.<sup>19</sup> In addition, the Order directed the NYISO to file “*proposed tariff provisions to include a detailed description of the methodology that it intends to use in order to project the likely energy and ancillary services revenues for merchant transmission lines.*”<sup>20</sup>

On April 18, 2013, the NYISO updated the Buyer-side Mitigation Narrative and Numerical Example, which is posted to its website.<sup>21</sup> On September 03, 2013, the NYISO further revised the Buyer-side Mitigation Narrative and Numerical Example, to add a description of the estimation of Net Energy and Ancillary Services Revenues. This further revised version was also posted on the NYISO’s website.<sup>22</sup>

## I.2.4. Other Developments

As discussed in this section, over the period since the 2012 Annual Report posted in February 2013, there have been filings with and orders issued by FERC related to the NYISO Installed Capacity market. There also have been proceedings held by the New York State Department of Public Service (“NYSDPS”) that could have an impact on the NYISO capacity markets.

In an effort to improve the Class Year process, the NYISO filed proposed OATT revisions, generally regarding the dates on which a Class Year can commence after the prior Class Year is completed.<sup>23</sup> Depending on when the previous Class Year completes, the NYISO can begin the next Class Year on March 1st, June 1st, or September 1st.

On February 1, 2013 – in compliance with the Commission’s order in Docket No. EL12-56-000 on December 10, 2012) – NYISO submitted proposed revisions to its Market Administration and Control Area Services Tariff to address tariff ambiguity with respect to its Installed Capacity (“ICAP”) Special Case Resource (“SCR”) program rules. On April 2, 2013, the Commission accepted the NYISO’s compliance filing that clarified that Local Generators are eligible to qualify and participate in the ICAP/SCR program only if they are available to cause a load reduction on the transmission system and/or distribution system at the direction of NYISO in a measurable and verifiable manner.

On June 17, 2013, FERC issued a Notice of Technical Conference on “Centralized Capacity Markets in Regional Transmission Organizations and Independent System

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<sup>19</sup> *Hudson Transmission Partners, LLC v. New York Independent System Operator, Inc.*, 145 FERC ¶ 61,156 P 90. (2013).

<sup>20</sup> *Id.* at P 90.

<sup>21</sup> Available at <[http://www.nyiso.com/public/webdocs/markets\\_operations/services/market\\_monitoring/ICAP\\_Market\\_Mitigation/Buyer\\_Side\\_Mitigation/Numerical\\_Example/BSM\\_Narrative\\_and\\_Numerical\\_Example\\_March\\_29\\_2013.pdf](http://www.nyiso.com/public/webdocs/markets_operations/services/market_monitoring/ICAP_Market_Mitigation/Buyer_Side_Mitigation/Numerical_Example/BSM_Narrative_and_Numerical_Example_March_29_2013.pdf)>.

<sup>22</sup> Available at <[http://www.nyiso.com/public/webdocs/markets\\_operations/services/market\\_monitoring/ICAP\\_Market\\_Mitigation/Buyer\\_Side\\_Mitigation/Numerical\\_Example/BSM\\_Narrative\\_and\\_Numerical\\_Example%20September%203%202013.pdf](http://www.nyiso.com/public/webdocs/markets_operations/services/market_monitoring/ICAP_Market_Mitigation/Buyer_Side_Mitigation/Numerical_Example/BSM_Narrative_and_Numerical_Example%20September%203%202013.pdf)>.

<sup>23</sup> See New York Independent System Operator, Inc., Docket No. ER13-588-00



Operators.”<sup>24</sup> The FERC technical conference was held on September 25, 2013. The technical conference had representatives from the NYISO, ISO New England, PJM Interconnection, market participants, regulatory agencies, market monitors, expert consultants, and others on panels discussing issues related to the northeast ICAP markets. In advance of the technical conference, FERC published a report titled “Centralized Capacity Market Design Elements.”<sup>25</sup>

The NYISO filed for tariff changes related to the Demand Response Special Case Resources (“SCR”) element that is the Average Coincident Load (“ACL”) on October 04, 2013.<sup>26</sup> This filing proposes rules to increase the flexibility of enrolling SCRs without available interval meter data, and to establish a mechanism – an “Incremental ACL” – by which a Responsible Interface Party (“RIP”) may increase an SCR’s ACL baseline to reflect a material increase in the SCR’s Load since the Prior Equivalent Capability Period. As part of the development of the Incremental ACL, the NYISO proposed a verification process and shortfall penalties. The filing also proposes to clarify certain circumstances that could result in an individual SCR having an Installed Capacity shortfall and the method by which the NYISO will calculate the penalty for such shortfall and assess it to the relevant RIP. Throughout the year, numerous presentations were made regarding Demand Response (SCRs) development of Average Coincident Loads and how they could participate in the capacity markets. On December 04, 2013, FERC issued an order in which it accepted the tariff changes subject to the NYISO making conforming changes to the tariff to reflect clearly its new proposal with respect to shortfall penalties and deficiency charges. The NYISO’s compliance filing for Docket No. ER14-39 is due in early January 2014.

### **I.3. Recent Installed Capacity Auction Results**

Capacity committed through self-supply, bilateral transactions, and the NYISO-administered auctions (referred to herein as “committed” capacity) remains well above the NYCA Minimum Installed Capacity Requirement, and the NYC and LI Locational Minimum Installed Capacity Requirements. In general, the amount of capacity available from many generators in the NYCA increases in the Winter Capability Period because of higher possible output at lower ambient temperatures. Capacity imports from External Control Areas also fluctuate monthly. The NYCA Demand Curve price can decline to zero when supply exceeds the NYCA Minimum Installed Capacity Requirement by 12 percent or more. Accordingly, the NYCA Market-Clearing Prices have been consistently at or below a third of the NYCA ICAP Demand Curve reference price, particularly in the Winter Capability Period when prices were consistently near \$2.00/kW-month.

The amount of capacity committed to the NYCA, including imports, continues to be high relative to the minimum ICAP requirements. The monthly average import levels into the entire NYCA were 1,822 MW in the Winter 2012-2013 Capability Period and 2,131 MW in the Summer 2013 Capability Period. Those values represent a 22 MW monthly average decrease over levels imported for the previous Winter Capability Period and a 31 MW monthly average increase relative to the 2012 Summer Capability Period.

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<sup>24</sup> *Notice of Technical Conference, Centralized Capacity Markets in Regional Transmission Organizations and Independent System Operators*, Docket No. AD13-7-000 (June 17, 2013).

<sup>25</sup> Available at: <<http://www.ferc.gov/CalendarFiles/20130826142258-Staff%20Paper.pdf>>.

<sup>26</sup> New York Independent System Operator, Inc., Proposed Tariff Revisions Related to Special Case Resources; Docket No. ER14-39 -000 (Oct. 4, 2013).

ICAP Market-Clearing Prices and auction activity levels from November 1999 through October 2013 for the NYCA, NYC, and LI are summarized in tabular form in Attachment VI. Market-Clearing Prices are depicted graphically in Chart 2, Chart 4, and Chart 6; and the amount of capacity committed, MW that were offered, and unsold MW are depicted in Chart 3, Chart 5, Chart 7.



Chart 2: NYCA Market Clearing Prices

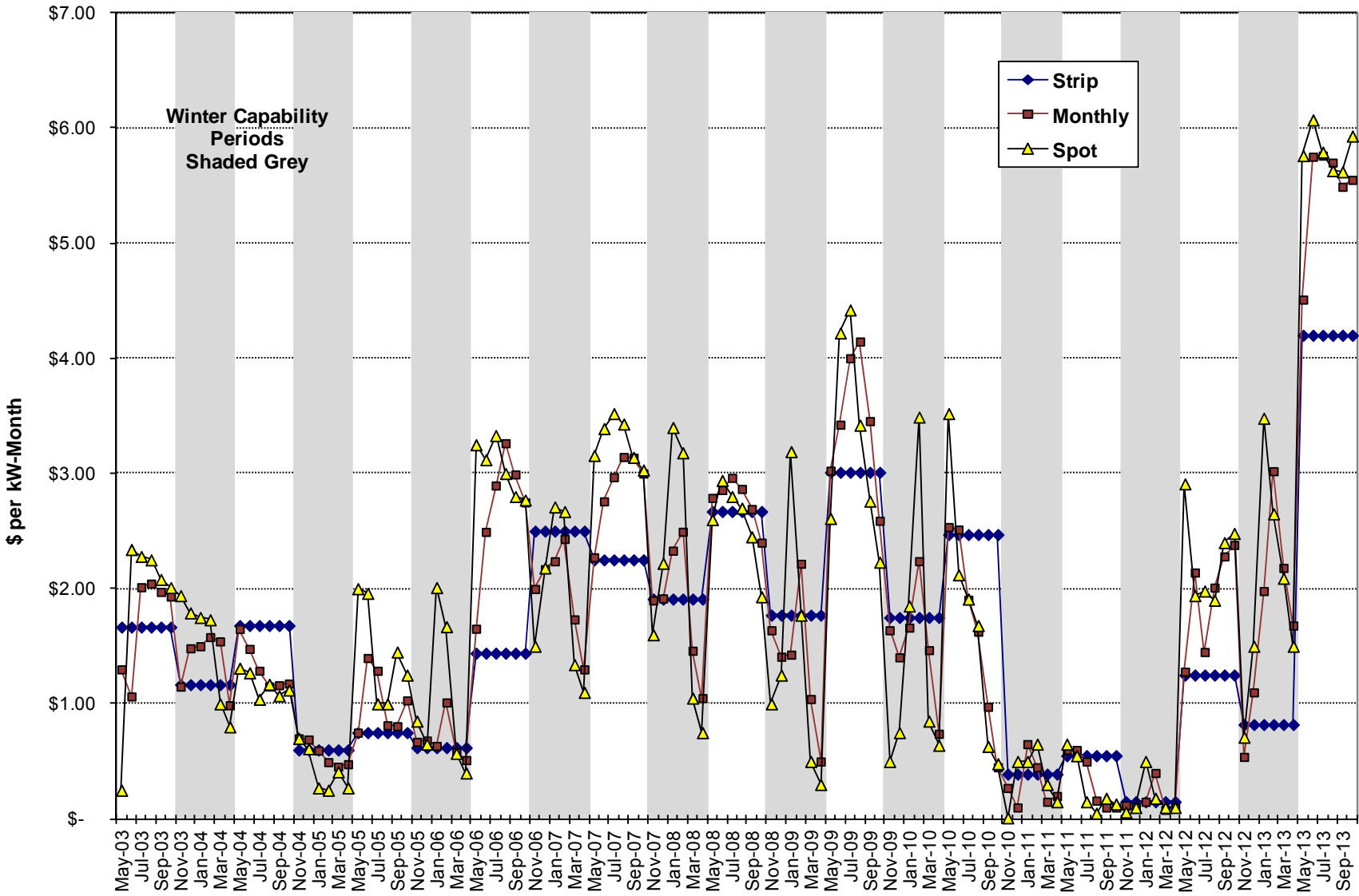


Chart 3: NYCA Offered MW

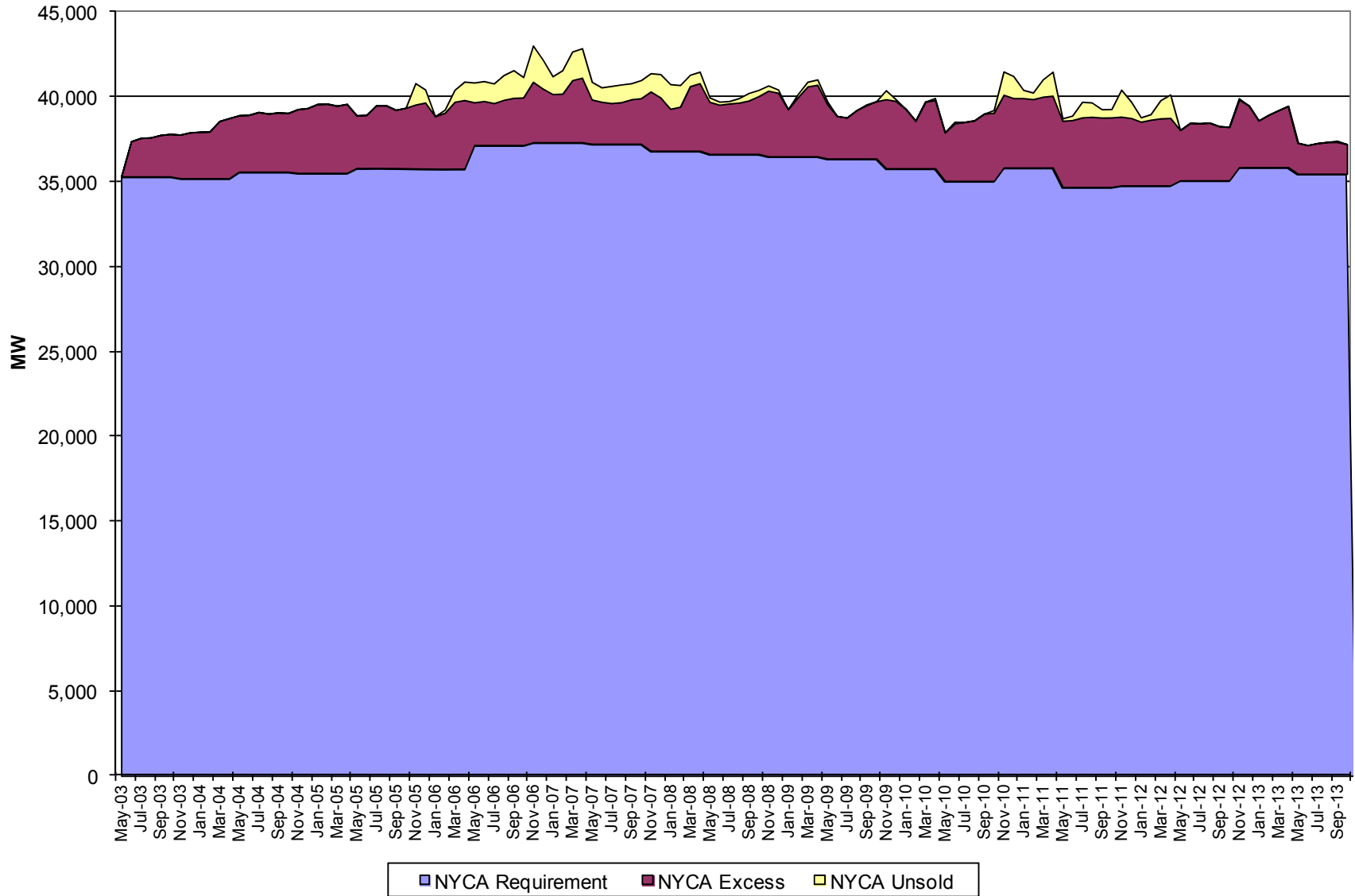


Chart 4: NYC Market Clearing Prices

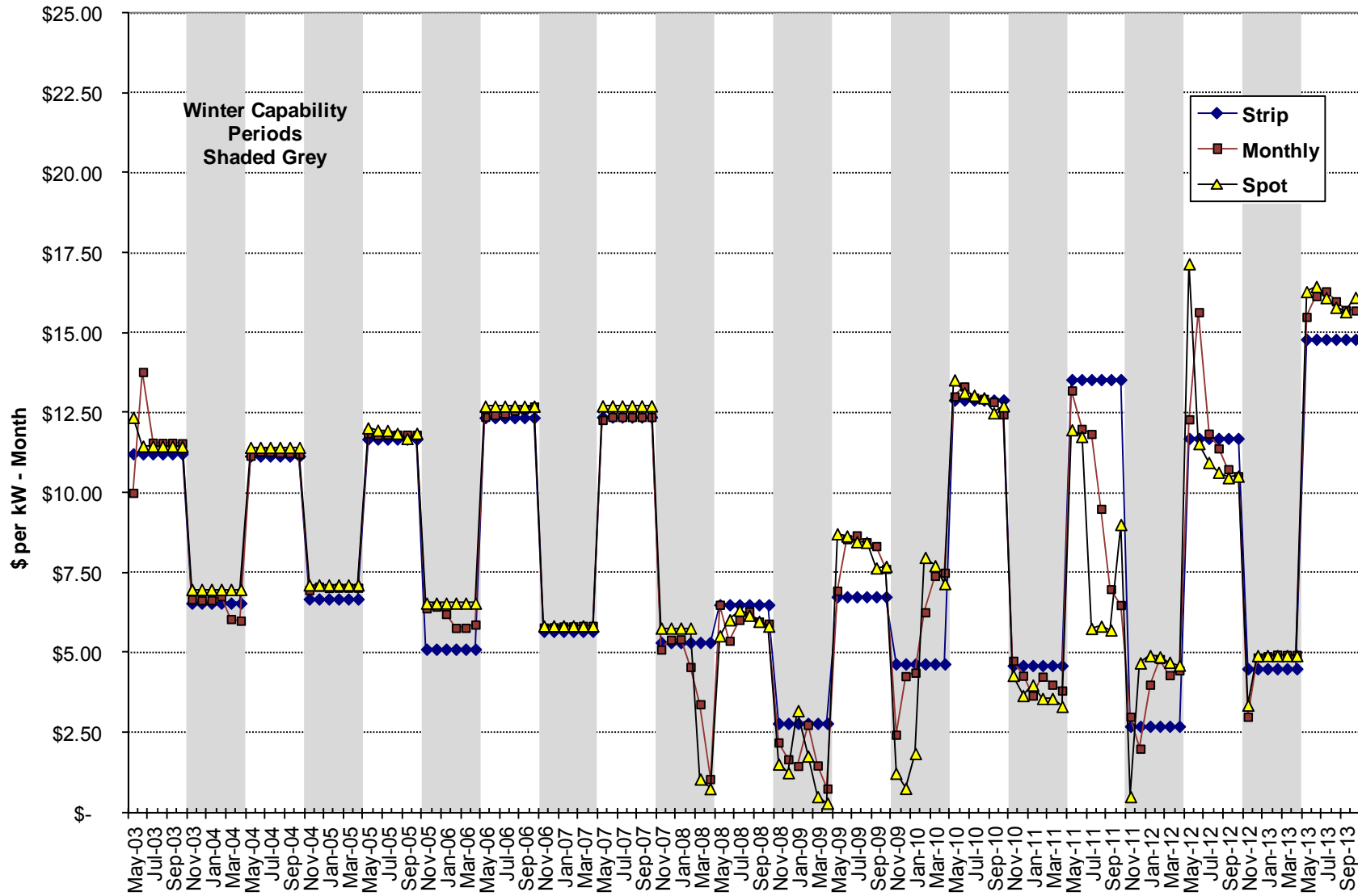


Chart 5: NYC Offered MW

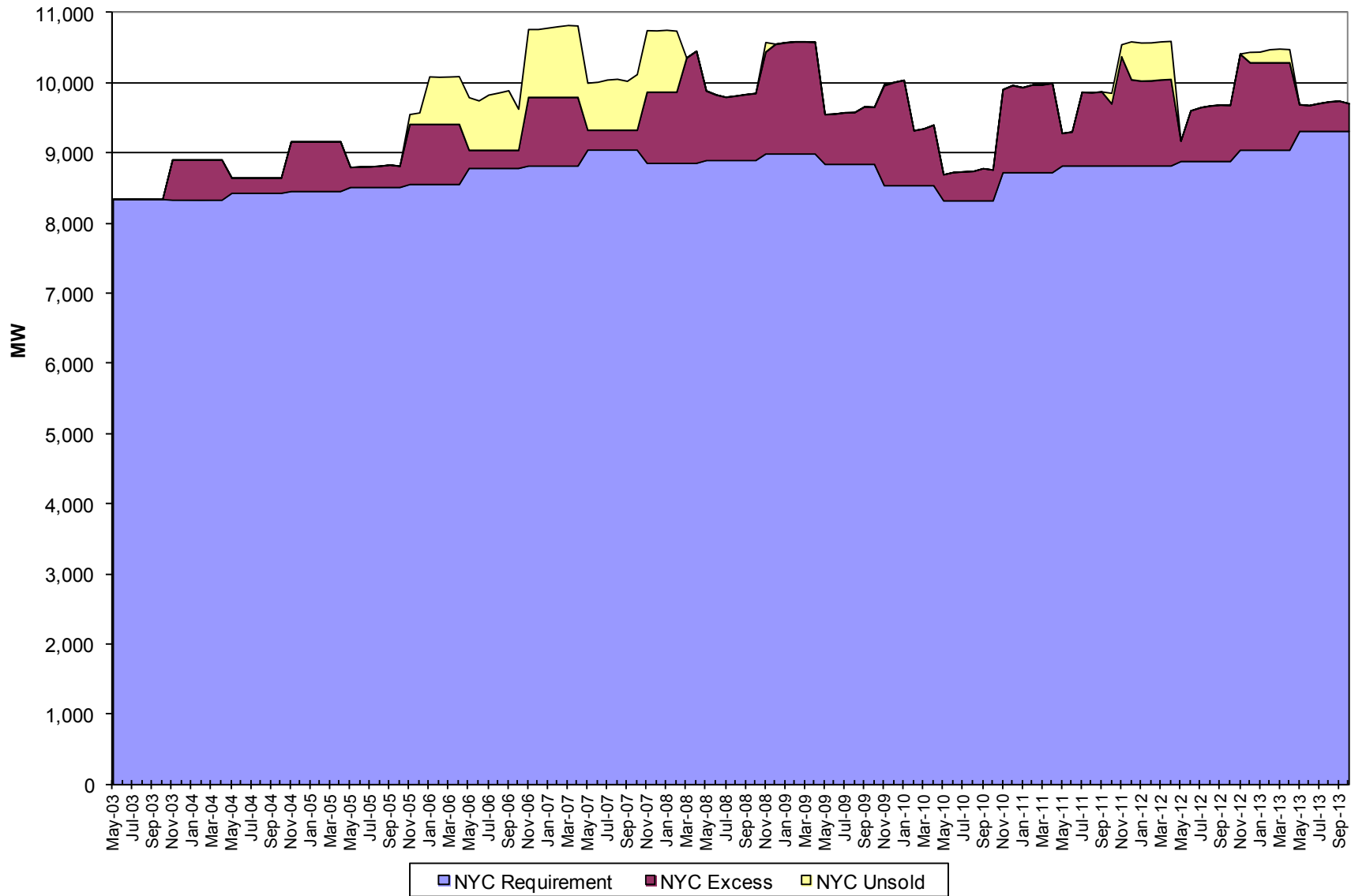


Chart 6: Long Island Market Clearing Prices

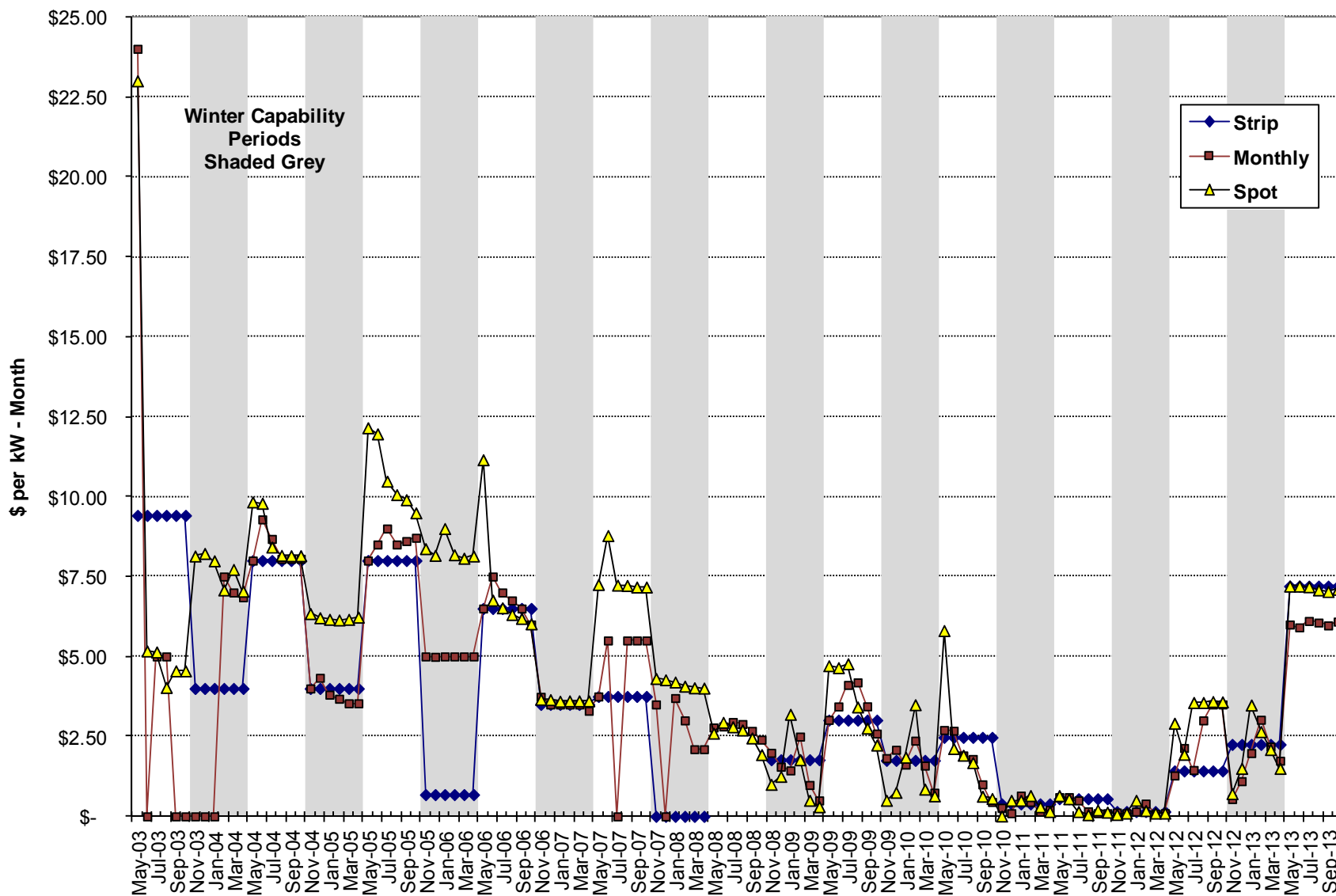


Chart 7: Long Island Offered MW

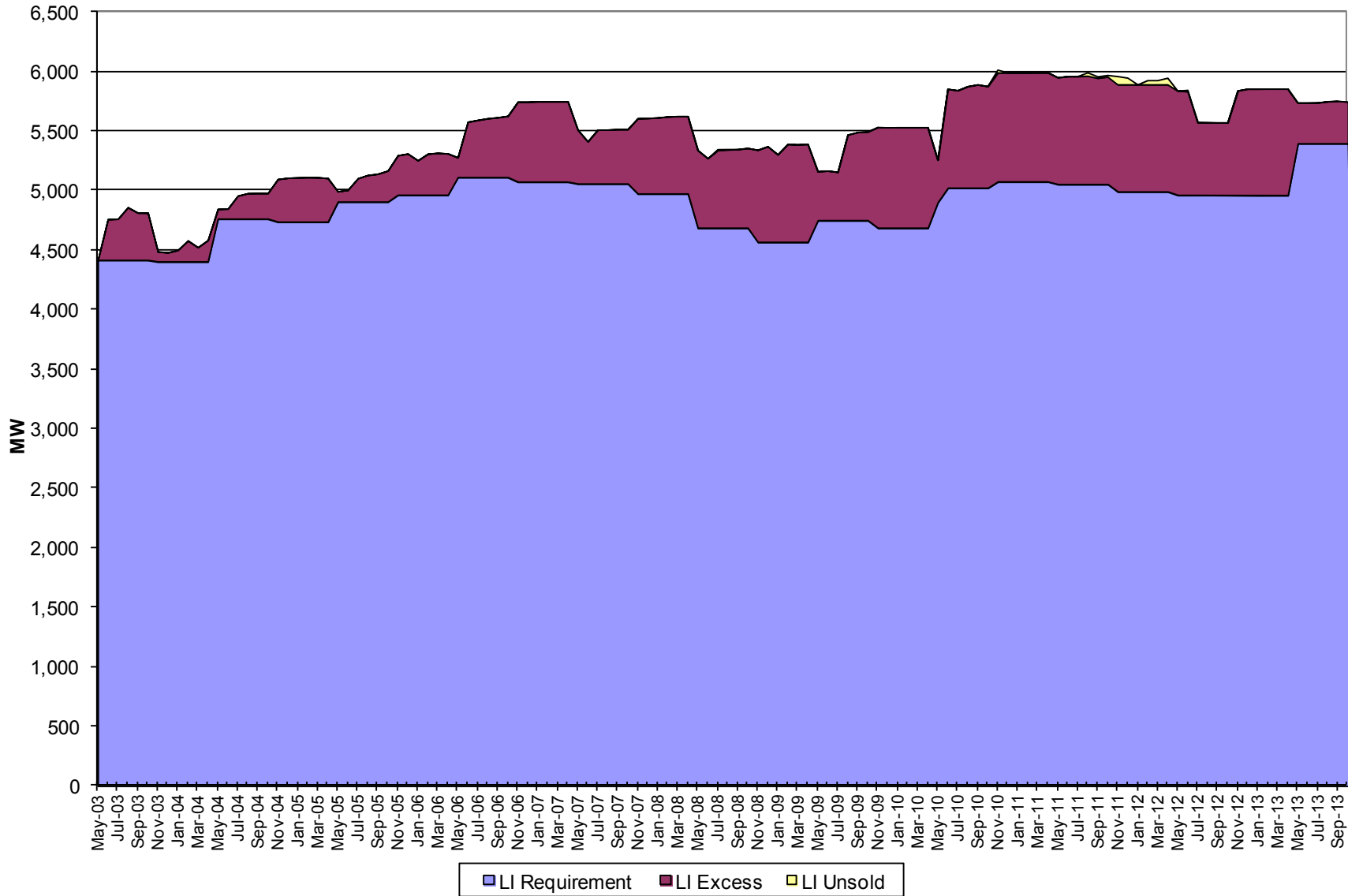


Table 1 summarizes amount of generating capacity throughout the NYCA either mothballed or retired during the Winter 2012-2013 and the Summer 2013 Capability Periods. Over the last 7 Capability Periods, there were 36 generators that were retired, laid-up, or mothballed, totaling about 3, 476 MW, with two of them – totaling about 49MW – returned to service after being mothballed for about a year. For the period of November 2012 through October 2013, there were 2 mothballed generating units (totaling 146.7 MW), and 4 retired generators (totaling 7.5 MW). Due to increased emission restrictions in environmental regulations, the age of generators in the NYCA fleet, and the low price of natural gas compared to other fossil fuels, this trend of older, less efficient generators ceasing operation is anticipated to continue.

**Table 1: List of Mothballed and Retired Units**

Organization Name	Unit Name	Zone	Capacity <sup>27</sup>	Status <sup>28</sup>	Capability Period
AES Eastern Energy LP	AES Westover Unit 7	C	43.5	R	Winter 2009-2010
AES Eastern Energy LP	AES Greenidge Unit 3	C	52.8	R	Winter 2009-2010
New York Power Authority	NYPA Poletti	J	891.0	R	Winter 2009-2010
Energy Systems North East LLC	Energy Systems North East	A	82.0	R	Winter 2010-2011
Project Orange Associates	Project Orange_1	C	43.6	R	Winter 2010-2011
Project Orange Associates	Project Orange_2	C	44.0	R	Winter 2010-2011
Long Island Power Authority	Ravenswood GT 3-4	K	35.8	M	Summer 2011
Long Island Power Authority	Barrett 07	K	17.3	R	Summer 2011
Standard Binghamton LLC	Binghamton Cogen	C	43.8	R	Winter 2011-2012
Rochester Gas& Electric Corp.	Beebee GT	B	15.0	R	Winter 2011-2012
Astoria Generating Company LP	Astoria 2	J	177.0	M	Summer 2012
Astoria Generating Company LP	Astoria 4	J	375.6	M	Summer 2012
NRG Power Marketing LLC	Astoria GT 10	J	24.9	M	Summer 2012
Long Island Power Authority	Far Rockaway_4	K	110.6	R	Summer 2012
Long Island Power Authority	Glenwood_4	K	118.7	R	Summer 2012
Long Island Power Authority	Glenwood_5	K	122.0	R	Summer 2012
NRG Power Marketing LLC	Astoria GT 11	J	23.6	M	Summer 2012
AES Eastern Energy LP	AES Westover Unit 8	C	83.8	M	Summer 2012
AES Eastern Energy LP	AES Greenidge Unit 4	C	106.1	M	Summer 2012
NRG Power Marketing LLC	Dunkirk 3	C	201.4	M	Summer 2012
NRG Power Marketing LLC	Dunkirk 4	C	199.1	M	Summer 2012
New York Power Authority	Kensico Hydro Project	I	1.8	R	Summer 2012
Long Island Power Authority	Montauk Units 02	K	2.00	R	Summer 2013
Long Island Power Authority	Montauk Units 03	K	2.00	R	Summer 2013
Long Island Power Authority	Montauk Units 04	K	2.00	R	Summer 2013
Niagara Generation LLC	Niagara Bio-Gen	A	50.5	M	Summer 2013
NRG Power Marketing LLC	Dunkirk 1	A	96.2	M	Summer 2013
Freeport Electric Municipality	Freeport Electric 9 <sup>29</sup>	K	1.5	R	Summer 2013
NRG Power Marketing LLC	Astoria GT 10	J	(24.9)	RTS	Summer 2013
NRG Power Marketing LLC	Astoria GT 11	J	(23.6)	RTS	Summer 2013

<sup>27</sup> The capacity values listed are the CRIS MW values stated in the NYISO's 2013 Load and Capacity Data report (referred to as the "2013 Gold Book"), available at: [http://www.nyiso.com/public/webdocs/markets\\_operations/services/planning/Documents\\_and\\_Resources/Planning\\_Data\\_and\\_Reference\\_Docs/Data\\_and\\_Reference\\_Docs/2013\\_GoldBook.pdf](http://www.nyiso.com/public/webdocs/markets_operations/services/planning/Documents_and_Resources/Planning_Data_and_Reference_Docs/Data_and_Reference_Docs/2013_GoldBook.pdf).

<sup>28</sup> "R" stands for "retired", "M" indicates "mothballed", and "RTS" stands for "returned to service after being Mothballed"

<sup>29</sup> 1.5 MW of Summer Capacity per the 2013 Gold Book Table III-2.

## I.4. Capacity Withholding Analysis

### I.4.1. All Capacity Areas in the NYCA

This section of the report addresses potential withholding issues in the NYISO-administered capacity auctions for all three capacity areas during the period November 2012 to October 2013: ROS, NYC, and LI. For the purposes of this report, in order to identify whether any potential withholding occurred, the NYISO analyzed the differences between available capacity<sup>30</sup> and the supply committed through self-supply, bilateral transactions, and the NYISO-administered auctions. In particular, the NYISO examined:

- The NYCA capacity that was available to be offered into the ICAP Spot Market Auctions, but was not offered (“unoffered capacity”),
- Available NYCA capacity that was offered into the ICAP Spot Market Auctions but was not sold (“unsold capacity”),
- Unoffered capacity as a percentage of available capacity, and
- Unsold capacity as a percentage of offered capacity.

When capacity is available but not offered, it is an indication that physical withholding may have occurred. Similarly, if available capacity is offered at a price that causes it to not clear, it is an indication of possible economic withholding. The amounts of unoffered and unsold capacity are determined from the ICAP Spot Market Auction results, because this auction is the last opportunity for an Installed Capacity Supplier to sell its capacity. The existence of unoffered and unsold capacity, however, does not necessarily imply the intent to manipulate market prices.

As reflected in the NYISO’s previous reports on the Installed Capacity Demand Curves, patterns of unsold capacity have varied across the two Localities and the NYCA. For the entire NYCA, there generally has been more unsold capacity in Winter months than Summer months, due in part to the lower prices in the Winter months. The seasonal monthly average of unsold MW for the Winter 2012-2013 for the entire NYCA was 52 MW compared to 486 MW in the Winter 2011-2012. The seasonal monthly average amount of unsold MW for the Summer 2012 for the entire NYCA was near zero, while it was 4 MW in the Summer 2013.

In Long Island, historical levels of unsold capacity have averaged near zero. There are no unsold MWs in the Winter 2012-2013, compared to a monthly average of 42 MW in the Winter 2011-2012; and only 1 MW in the Summer 2013, compared to 2 MW on average in the Summer 2012.

In NYC, the seasonal monthly average amount of unsold MW for the Winter 2012-2013 was 144 MW, compared to 488 MW in the Winter 2011-2012. For the Summer 2012 and Summer 2013 that number is zero MW, compared to 25 MW in the Summer 2011.

There are three types of capacity auctions in each Capability Period: a Capability Period Auction (also referred to as the “strip auction”), six Monthly Auctions, and six ICAP Spot Market

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<sup>30</sup> Available capacity is defined as the lesser of the NYISO-accepted DMNC and the Capacity Resource Interconnection Service (“CRIS”) MW value, with the Equivalent Demand Forced Outage Rates (“EFORd”) reduction applied.



Auctions. Available capacity may be offered into any or all of the auctions. There are three distinct minimum ICAP requirements: one each for the NYC and the LI Localities, and one for the NYCA as a whole. LSEs with Load in NYC and on Long Island are required to procure minimum levels of capacity that is electrically located within the respective Locality – the Locational Minimum Installed Capacity Requirement (“LCR”). Such capacity is also credited toward each NYC and Long Island LSE’s overall NYCA obligation. The NYISO establishes the NYCA Minimum Installed Capacity Requirement and the Locational Minimum Installed Capacity Requirements on an annual basis.

The Services Tariff does not require Installed Capacity Suppliers to offer UCAP into the ICAP markets except for certain suppliers in NYC. Until the implementation of the ICAP mitigation measures set forth in Attachment H of the Services Tariff, which were effectuated in May 2008, the majority of capacity in NYC – that of the “Divested Generation Owners” – had been subject to Commission-approved ICAP mitigation measures that imposed bid caps and required the units’ capacity to be offered into the ICAP auctions. The Commission’s March 7, 2008 Order<sup>31</sup> removed the requirements unique to the Divested Generation Owners and approved mitigation measures applicable to all In-City capacity. The March 7, 2008 Order effectuated new In-City mitigation measures, based on Pivotal Supplier determinations combined with offering conduct and price impact thresholds, to determine whether market power had been exercised. These measures are set forth in Attachment H of the Services Tariff (as revised over time, “Supply-side Mitigation Measures”).

In developing the information for this report, the NYISO examined auction outcomes of the Capability Periods from the Summer 2007, which began May 1, 2007, through Summer 2013, which ended October 31, 2013. Since the capacity product transacted in the NYISO-administered ICAP auctions is UCAP, the following information was examined:

- Certification data, reflecting the certified MW of UCAP from all the Resources within New York available to supply capacity to the NYCA. The analysis did not include resources physically located outside of the NYCA.
- The amount of UCAP supplied, which includes UCAP sold in any of the NYISO ICAP auctions, UCAP certified as self-supplied against an LSE’s Unforced Capacity Obligation, and UCAP committed through bilateral transactions.

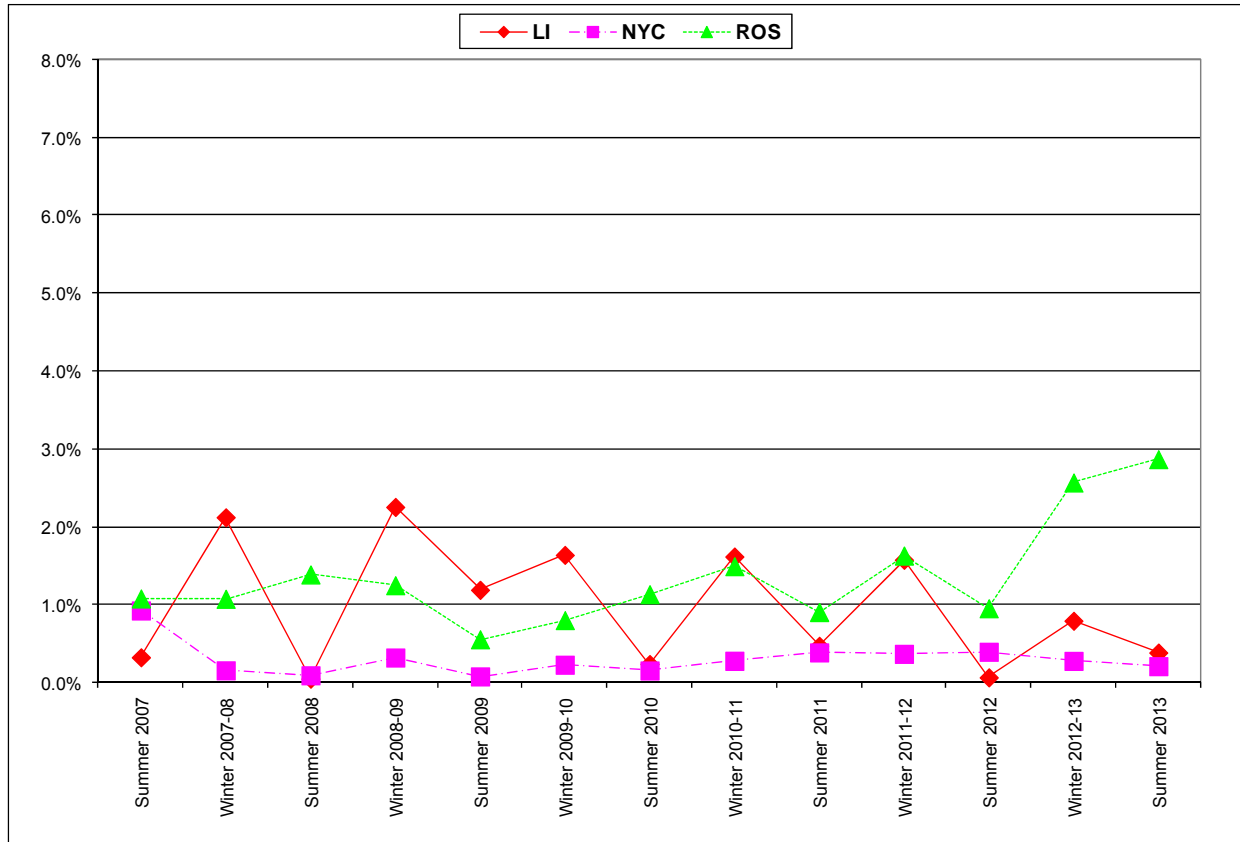
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<sup>31</sup> *New York Independent System Operator, Inc.*, Docket No. EL07-39-000, Order Conditionally Approving Proposal, 122 FERC ¶ 61,211 (2008).

## I.4.2. Unoffered Capacity

Chart 8 presents seasonal averages of unoffered capacity as a percentage of available Capacity for each of the three capacity areas.

**Chart 8: Average Percent of Unoffered MW**

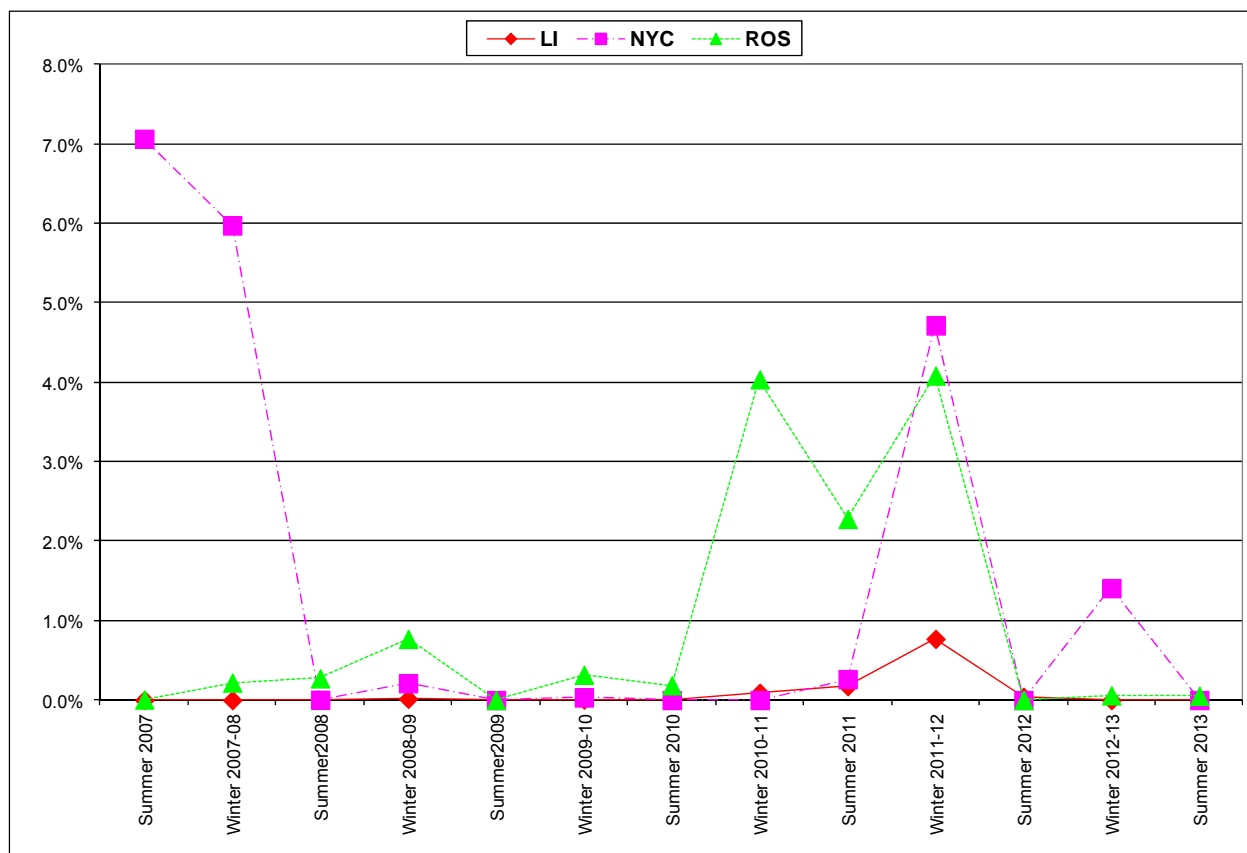


The Long Island Locality has fairly consistent seasonal fluctuations in the amounts of unoffered capacity, which can be seen in Chart 8. The Long Island Locality is characterized by procurement chiefly through bilateral transactions and self-supply. While the amount of unoffered capacity on Long Island fluctuates between 0.01% and 2.3%, much of the unoffered capacity is not actually available due, in some instances, to site permit restrictions.

In the NYC Locality, prior to the Summer 2008, the low level of unoffered capacity was principally due to the offer requirement applicable to the Divested Generation Owners. Beginning with the Summer 2008 Capability Period, the near absence of unoffered capacity can be attributed to the Supply-side Mitigation Measures effectuated in 2008.

In the ROS the spike in unoffered MW for the Winter 2012-2013 and Summer 2013 compared with other Capability Periods, was primarily due to expected retirements. More information regarding this data is discussed in Section I.4.5.2. Chart 9 displays unsold capacity as a percent of available UCAP in each of the three capacity areas.

**Chart 9: Average Percent of Unsold MW**



### I.4.3. Unsold Capacity

For all Capability Periods beginning with the Summer 2007, nearly all Long Island offered capacity was sold. In NYC, the average amount of unsold capacity as a percentage of available capacity trended at near zero levels from the start of the Summer 2008 Capability Period, except for the Winter 2011-2012 when some offered capacity did not clear because it was offered at a price greater than the UCAP Offer Reference Level. The UCAP Offer Reference Level is the price at which the ICAP Spot Market Auction would clear if all available capacity was offered and sold. For the period of November 2012 through October 2013, nearly all of the capacity offered in NYCA auctions was sold.

The increased Locational Minimum Installed Capacity Requirements and Installed Reserve Margin (“IRM”) contributed to lower amounts of unsold MW, year-over-year. Table 2 summarizes these values for NYCA and the two localities over the past six years.

**Table 2: Locational Capacity Requirements<sup>32</sup>**

Capability Year	NYC	LI	NYCA
2007/2008	80.0	99.0	116.5
2008/2009	80.0	94.0	115.0
2009/2010	80.0	97.5	116.5
2010/2011 (May)	80.0	102.0	118.0
2010/2011 (June-April)	80.0	104.5	118.0
2011/2012	81.0	101.5	115.5
2012/2013	83.0	99.0	116
2013/2014	86.0	105	117

Table 3 displays the breakdown of unsold and unoffered capacity for each Locality and ROS. As part of the NYISO's August 24, 2010 ICAP compliance filing,<sup>33</sup> the NYISO stated that it would include unoffered and unsold capacity in the NYC Locality in its annual Installed Capacity Demand Curves reports. The unoffered and unsold capacity values for NYC and ROS are included to give a full representation of the data that underlies this report.

**Table 3: Unoffered and Unsold MW**

Month	Unoffered			Unsold		
	NYC	LI	ROS	NYC	LI	ROS
Nov-12	39.1	68.6	300.2	0	0	82
Dec-12	23.5	68.4	318.4	147.5	0	0
Jan-13	25.4	70.2	734.5	150.8	0	0
Feb-13	30.1	17.4	730.2	184.1	0	0
Mar-13	26.4	12.9	735.1	193.9	0	0
Apr-13	27.1	12.5	754.8	185.9	0	0
May-13	20.5	16.3	649.5	0	0	0
Jun-13	8.4	10.4	519.6	0	0	0
Jul-13	8.8	9.1	600.5	0	0	0
Aug-13	16.1	50.7	598.6	0	1	0
Sep-13	12.2	11.9	596.9	0	0	69.5
Oct-13	55.3	18.1	764	0	0	0

<sup>32</sup> The New York State Reliability Council issues an annual IRM Study Report, which presents the lowest feasible for the NYCA. Each report includes a comparison of the IRM and LCR values to the previous year along with an explanation of each parameter that contributed to the changes. The NYISO determines the actual LCRs for each Locality taking into consideration changes that have occurred since the Reliability Council approved the IRM Study Report. The IRM Study Report for the 2013/2014 Capability Year is available at: [http://www.nysrc.org/pdf/MeetingMaterial/ICSMaterial/ICS\\_Agenda144/LCR2013\\_OC\\_report\\_V4c.pdf](http://www.nysrc.org/pdf/MeetingMaterial/ICSMaterial/ICS_Agenda144/LCR2013_OC_report_V4c.pdf).

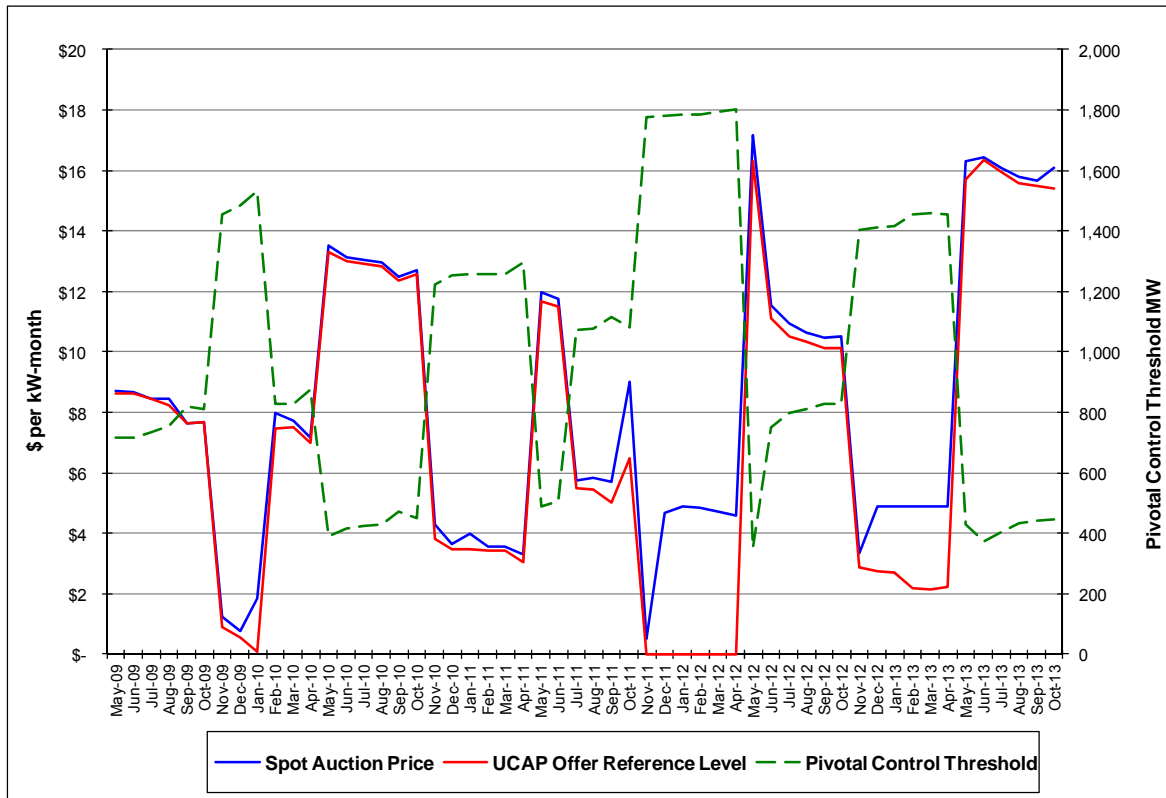
<sup>33</sup> See *New York Independent System Operator, Inc.*, Resubmittal of August 24, 2010 Filing, Docket Nos. ER10-2210-000, EL07-39-000, and ER08-695-0004 at p. 16.

### I.4.4. New York City Locality

To administer the Supply-side Mitigation Measures, the NYISO identifies Pivotal Suppliers by examining the In-City UCAP that each ICAP Supplier, along with its Affiliated Entities, Controls in excess of the pivotal control threshold.<sup>34</sup> The UCAP under the Control of Pivotal Suppliers (“Mitigated UCAP”) must be offered into the ICAP Spot Market Auction at a price at or below the lesser of the UCAP Offer Reference Level or the ICAP Supplier’s Going-Forward Costs determined by the NYISO (“GFCs”). Chart 10 illustrates the effects of the Supply-side Mitigation Measures. The UCAP Offer Reference Level, as shown in Chart 10, becomes the cap that the Pivotal Supplier must offer at or below in the ICAP Spot Market Auction unless the Pivotal Supplier’s Going Forward Costs (GFCs) are higher than it.

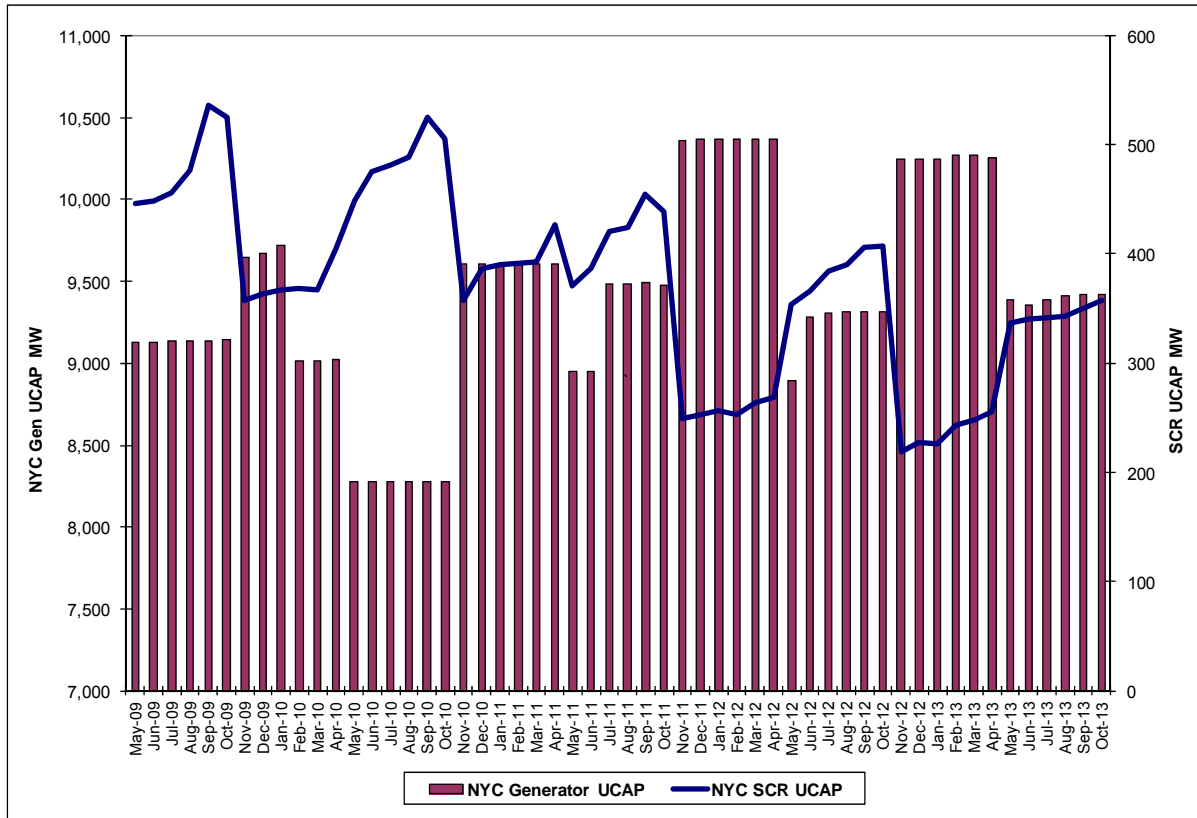
The level of unoffered and unsold MW can be inferred from Chart 10 by comparing the NYC Spot Market Auction price to the UCAP Offer Reference Level, while Chart 11 depicts the levels of available generator and SCR UCAP in the NYC Locality. The difference between the ICAP Spot Market Auction clearing price and UCAP Offer Reference Level can be attributed to In-City capacity that is either not offered or is offered at a price above the UCAP Offer Reference Level. Note that the NYC Spot Market Auction price will diverge from the UCAP Offer Reference Level when the NYCA ICAP Spot Market Auction sets the NYC Spot Market Auction price. This divergence is the result of the auction rules, and is not caused by unoffered or unsold NYC Capacity.

**Chart 10: NYC Mitigation Results**



<sup>34</sup> See Services Tariff Attachment H Sections 23.2.1 and 23.4.5.

Chart 11: NYC Generator and SCR UCAP



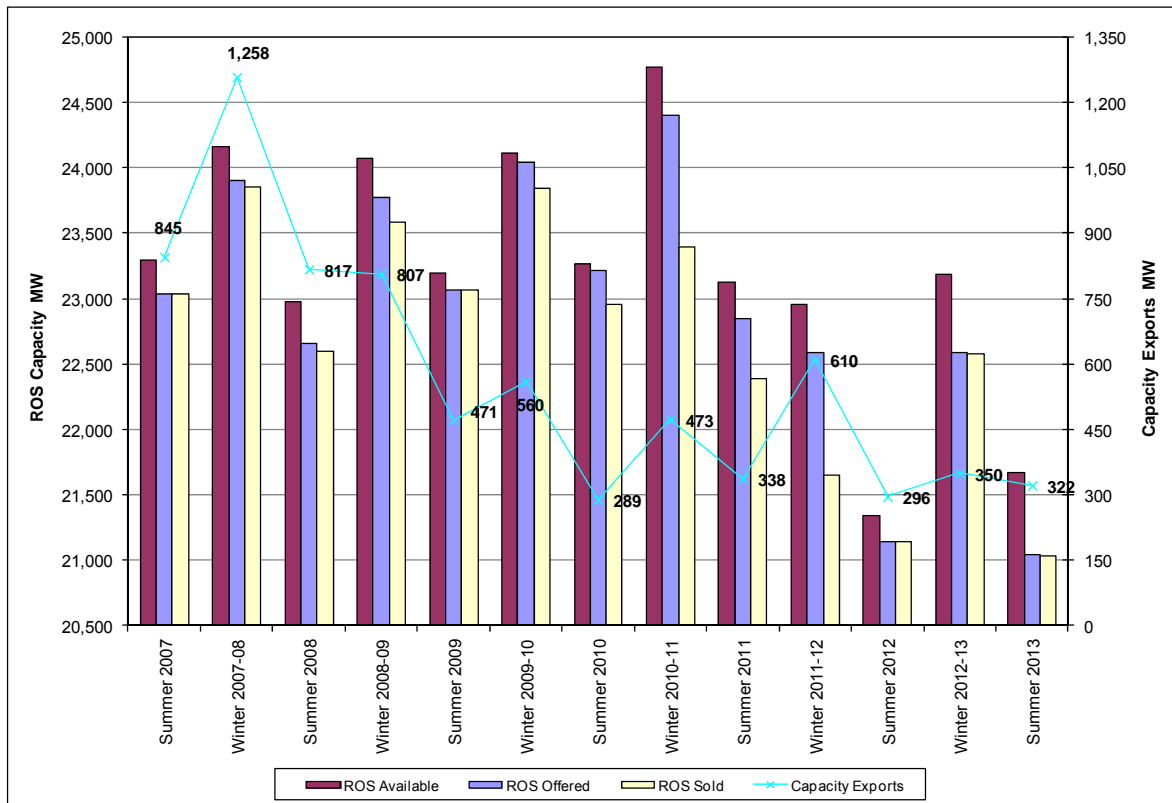
## I.4.5. Rest of State

### I.4.5.1. Overview

This section of the report addresses possible withholding of Capacity located in the Rest of State, from November 2012 through October 2013. For this review, the NYISO conducted a detailed analysis of unoffered and unsold capacity. This section of the review pertains primarily to the NYCA but also contains some explanations for unoffered capacity in NYC and Long Island.

Chart 12 shows the monthly average values over each Capability Period for four ROS capacity types: available, offered, sold, and exported MW.

**Chart 12: Rest of State Capacity Available, Offered, Sold and Exported**



Examination of Rest of State capacity data pertaining to individual Market Participants revealed general patterns in unsold and unoffered capacity. The patterns suggest a three-way classification of suppliers by market sector: all generation-owning transmission owners, ROS generation owners, and other suppliers (a category which includes SCRs). Table 4 of this December 2013 Report summarizes the monthly averages of unoffered and unsold capacity since the Summer 2008. The ROS generation-owners category was updated to include all ROS generation owners in addition to the five selected ROS companies reported in the 2012 annual

ICAP report.<sup>35</sup> The data in Table 4 for all Capability Periods reflect the new groupings and thus may be different from the data presented in prior ICAP annual reports.

**Table 4: ROS Unoffered and Unsold Capacity MW by Type of Market Participant**

ROS Unoffered Capacity MW by Type of Market Participant							
	GenCo	% of GenCo	TO	% TO	Others	% Others	Capability Period Average
Summer 2008	114.22	32.7%	204.37	58.6%	30.32	8.7%	348.9
Summer 2009	49.23	40.4%	69.25	56.8%	3.47	2.8%	121.95
Summer 2010	98.07	37.1%	158.22	59.9%	7.87	3.0%	264.15
Summer 2011	54.13	25.8%	78.97	37.6%	76.7	36.6%	209.8
Summer 2012	60.08	29.5%	68.4	33.6%	75.32	37.0%	203.8
Summer 2013	486.55	78.3%	70.77	11.4%	64.20	10.3%	621.52

ROS Unoffered Capacity MW by Type of Market Participant							
	GenCo	% of GenCo	TO	% TO	Others	% Others	Capability Period Average
Winter 2008-2009	236.8	78.5%	64.13	21.3%	0.57	0.2%	301.5
Winter 2009-2010	93.27	48.1%	91.02	47.0%	9.45	4.9%	193.73
Winter 2010-2011	212.55	57.4%	127.45	34.4%	30.35	8.2%	370.35
Winter 2011-2012	138.53	37.0%	142.42	38.0%	93.65	25.0%	374.6
Winter 2012-2013	437.30	73.4%	137.25	23.0%	20.98	3.5%	595.53

ROS Unsold Capacity MW by Type of Market Participant							
	GenCo	% of GenCo	TO	% TO	Others	% Others	Capability Period Average
Summer 2008	92.43	99.5%	0	0.0%	0.48	0.5%	92.9
Summer 2009	0	0.0%	0	0.0%	0	0.0%	0
Summer 2010	23.03	35.6%	0	0.0%	41.73	64.4%	64.75
Summer 2011	479.94	91.0%	2.5	0.5%	44.91	8.5%	527.35
Summer 2012	0	0.0%	0	0.0%	0	0.0%	0
Summer 2013	0	0.0%	0	0.0%	69.5	100.0%	69.5

ROS Unsold Capacity MW by Type of Market Participant							
	GenCo	% of GenCo	TO	% TO	Others	% Others	Capability Period Average
Winter 2008-2009	214.41	97.7%	0	0.0%	5.15	2.3%	219.56
Winter 2009-2010	110.14	95.3%	0	0.0%	5.43	4.7%	115.57
Winter 2010-2011	895.19	89.5%	0	0.0%	105.09	10.5%	1,000.28
Winter 2011-2012	811.26	86.5%	38.35	4.1%	88.42	9.4%	938.03
Winter 2012-2013	50	61.0%	0	0.0%	32	39.0%	82

Salient facts from the above tables are:

- The group of all ROS generation-owning Transmission Owners consistently had unoffered capacity which ranged from 11% to 60% of total unoffered capacity.
- The group of all ROS generation-owning Transmission Owners had up to 4.1% of offered and unsold capacity.
- The group of generation owners consistently had unoffered capacity which ranged from 25% to 79% of total unoffered capacity.
- The group of generation owners had unsold capacity which accounted for 0% to 100% of total capacity that was offered and unsold capacity.
- The group of all others including SCRs consistently had unoffered capacity that ranged from 0% to 37% of total unoffered capacity.

<sup>35</sup> This adjustment was made because the grouping of ROS generation owners in prior reports no longer encompassed the majority of ROS generators due to changes in ownership.



- The group of all others including SCRs had capacity that was offered and unsold capacity that ranged from 0% to 100%.

### **I.4.5.2. Analysis of Unoffered Capacity**

This section provides a detailed analysis of the unoffered capacity located in the ROS. The section also presents the maximum price impact of the unoffered capacity, in each month and averaged over the six months of each Capability Period. Market Participants with a significant amount of unoffered capacity were provided an opportunity to justify their unoffered MW. Generally, responses suggest that the Installed Capacity Suppliers' reasons for not offering the Capacity were benign, and none of the instances evidence behavior intended to artificially raise prices.

The NYISO contacted each Installed Capacity Supplier with at least 15 MW of unoffered capacity in any one month in either Winter 2012-2013 or Summer 2013 for an explanation of why it did not offer all of its capacity. There were 11 Market Participants with at least 15 MW of unoffered capacity in any given month in ROS, and the NYISO sought and received explanations from each of them.<sup>36</sup>

- There were three cases of administrative oversight for failing to offer capacity. The instances had unoffered capacity in only two months averaging 44.5 MW per instance. Market Participants in this category cited the lost opportunity for revenue resulting from the oversight. They also claimed to not have an incentive to withhold capacity, as this group was comprised mostly of entities that had purchased capacity and inadvertently did not offer it into the ICAP Spot Market Auction. The Market Participants cited scheduling mistakes, procedural and personnel issues; and included explanations as to how the organization planned to avoid such administrative errors in the future.
- Three Market Participants did not offer capacity due to their intention to temporarily or permanently withdraw their generating units from the markets.
- Six Market Participants cited economic and/or physical conditions of their generating units as reason for not offering their capacity. These instances had unoffered capacity ranging from 19 MW to 135 MW. The explanations provided include, but are not limited to, low water levels, conservative strategy, water use agreements, lack of storage capabilities, a neighboring state's rules, and a PURPA contract that prohibits it from selling any Capacity above the level of the bilateral contract.

Table 5 shows the maximum price impact of the unoffered capacity (15 MW or higher per incident) based on the slopes of the ICAP Demand Curves for the relevant Capability Periods. The maximum price impact is calculated as the lesser of (1) the product of the monthly unsold MW and the slope of the ICAP Demand Curve and (2) the ICAP Spot Market Auction Market-Clearing Price, since the price impact cannot exceed the auction price. Monthly values and seasonal averages of the maximum price impact are reported. The maximum price impact of the unoffered capacity, averaged over the six months of the Winter 2012-2013 and Summer 2013 Capability Periods, was \$1.22/kW-month and \$1.22/kW-month, respectively.

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<sup>36</sup> Confidential Attachment III provides a more detailed summary of the Market Participants' explanations for having unoffered capacity.

**Table 5: Maximum Price Impact of ROS Unoffered Capacity (15MW+)<sup>37</sup>**

Month	Total Unoffered MW	Monthly Maximum Price Impact	Seasonal Average Maximum Price Impact
Nov-12	247.4	\$0.56	\$1.22
Dec-12	269.0	\$0.61	
Jan-13	689.2	\$1.55	
Feb-13	689.2	\$1.55	
Mar-13	699.2	\$1.57	
Apr-13	709.0	\$1.50	
May-13	591.7	\$1.40	\$1.22
Jun-13	437.4	\$1.03	
Jul-13	497.3	\$1.17	
Aug-13	472.4	\$1.12	
Sep-13	472.4	\$1.12	
Oct-13	621.4	\$1.47	

### I.4.5.3. Analysis of ROS Unsold Capacity

This section of the report analyzes and reports on ROS unsold capacity in the ICAP Spot Market Auction. Attachment I summarizes masked unsold capacity offers<sup>38</sup>. This section also presents the maximum price impact of the ROS unsold capacity, in any one month and the price impact average for the six months of the Capability Period. The process utilized by the NYISO in performing this analysis includes contacting each generator for an explanation of its behavior if (a) the class of generators that it was in had equal or more than 15 MW of unsold capacity in a given month; (b) monthly average price impact over the capability period is greater than or equal to \$0.20/kW-month or \$0.35/kW-month in any month; and (c) if the generator had a ICAP Spot Market Auction offer that was greater than the generator's class average Net GFC with half net revenues.<sup>39</sup> In addition to calculating the monthly maximum and average maximum price impacts, the following metrics can be calculated for the analysis period:

- Class average GFCs, with and without a risk adjustment;
- Estimated monthly price impacts of unsold capacity associated with offers above class average GFCs.

<sup>37</sup> The price impact of all ROS unoffered capacity average \$1.31/kW-month for the Winter 2012-2013, and \$1.47/kW-month for the Summer 2013. The monthly price impact cannot exceed the ICAP Spot Market Auction clearing price for that month.

<sup>38</sup> Attachment II is a redacted version of the unsold capacity offers

<sup>39</sup> Going Forward Cost terminology and elements for purposes of ROS unsold capacity analysis were discussed in details in the 2012 Annual Installed Capacity Report. See 2012 Annual Report at Table 7, available at: [http://www.nyiso.com/public/webdocs/markets\\_operations/services/market\\_monitoring/ICAP\\_Market\\_Mitigation/Annual\\_ICAP\\_Report/PUBLIC\\_NYISO\\_2012\\_Annual\\_ICAP\\_Report\\_20130214.pdf](http://www.nyiso.com/public/webdocs/markets_operations/services/market_monitoring/ICAP_Market_Mitigation/Annual_ICAP_Report/PUBLIC_NYISO_2012_Annual_ICAP_Report_20130214.pdf).

### I.4.5.4. Monthly Price Impacts

Table 6 includes the average monthly maximum price impact of unsold capacity for each Capability Period. The price impacts reported in Table 6 did not exceed the NYISO's threshold for determining whether GFCs are evaluated in all months of the analysis period, November 2012 through October 2013. Specifically, none of the Capability Period impacts exceeded the \$0.20/kW-month threshold. The average price impacts were \$0.03/kW-month in both Winter 2012-2013 and Summer 2013. Monthly maximum price impact was \$0.18/kW-month for November 2012 which is below the \$0.35/kW-month threshold. There was no further investigation needed for purposes of this report.

**Table 6: Maximum Price Impact of ROS Unsold MW**

Month	Total Unsold MW	Monthly Maximum Price Impact	Seasonal Average Maximum Price Impact
Nov-12	82.0	\$0.18	\$0.03
Dec-12	0.0	\$0.00	
Jan-13	0.0	\$0.00	
Feb-13	0.0	\$0.00	
Mar-13	0.0	\$0.00	
Apr-13	0.0	\$0.00	
May-13	0.0	\$0.00	\$0.03
Jun-13	0.0	\$0.00	
Jul-13	0.0	\$0.00	
Aug-13	0.0	\$0.00	
Sep-13	69.5	\$0.16	
Oct-13	0	\$0.00	

## II. NYISO Report on New Generation Projects

In its October 23, 2006 order, the Commission ordered the NYISO to submit “a list of investments in new generation projects in New York (including a description and current status of each such project), regardless of the stage of project development at the time of the filing.”<sup>40</sup> The NYISO keeps a list of Interconnection Requests and Transmission Projects for the New York Control Area that includes information about all generation projects in the State that have requested interconnection.

The NYISO interconnection process is described in two attachments of the NYISO OATT: OATT Attachment X entitled, “Standard Large Facility Interconnection Procedures,” and OATT Attachment Z entitled, “Small Generator Interconnection Procedures.” OATT Attachment X applies to Generating Facilities that exceed 20 MW in size and to Merchant Transmission Facilities, collectively referred to as “Large Facilities.” OATT Attachment Z applies to Generating Facilities no larger than 20 MW.

Under OATT Attachment X, Developers of Large Facilities must submit an Interconnection Request to the NYISO. The NYISO assigns a Queue Position to all valid Interconnection Requests. Under OATT Attachment X, proposed generation and merchant transmission projects undergo up to three studies: the Feasibility Study, the System Reliability Impact Study, and the Class Year Interconnection Facilities Study. The Class Year Interconnection Facilities Study is performed on a Class Year basis for a group of eligible projects pursuant to the requirements of Attachment S of the NYISO OATT. Under OATT Attachment Z, proposed small generators undergo a process that is similar, but with different paths and options that are dependent on the specific circumstances of the project.

Proposed generation and transmission projects currently in the NYISO interconnection process are listed on the list of Interconnection Requests and Transmission Projects for the New York Control Area (“NYISO Interconnection Queue”). The generation projects on that list are shown in Attachment IV to this report, which is dated November 30, 2013. The NYISO updates the NYISO Interconnection Queue on at least a monthly basis and posts the most recent list on the NYISO’s public web site<sup>41</sup> at the “Planning Documents and Resources”, underneath the “Interconnection Studies” section.

The status of each project on the NYISO Interconnection Queue is shown in the column labeled “S.” An explanation of this column is provided in Attachment V to this report. Also, note that the proposed In-Service Date for each project is the date provided to the NYISO by the respective Owner/Developer, is updated only on a periodic basis, and is subject to change.

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<sup>40</sup> *New York Indep. Sys. Operator, Inc.*, 117 FERC ¶ 61,086, at P 14 (2006)

<sup>41</sup> See <[http://www.nyiso.com/public/markets\\_operations/services/planning/documents/index.jsp](http://www.nyiso.com/public/markets_operations/services/planning/documents/index.jsp)>

## III. New Generation Projects and Net Revenue Analysis

### III.1. Overview

The ICAP Demand Curves are designed to send efficient price signals to build new generation when and where it is needed. In past ICAP annual reports, the NYISO stated that it is difficult to relate the development of new generation to the ICAP Demand Curves given the lead-time required to site, develop, and construct new generation, and to address other barriers to new entry. For this reason, in this section of the report, the NYISO utilizes the same methodology as in past reports, and continues to review the methodology for potential enhancements for future reports.

### III.2. Market Design Developments to Enhance Demand Curve Performance

FERC has accepted tariff revisions by which a new Locality, comprised of Load Zones G, H, I and J (the “G-J Locality”), will be effective beginning with the Summer 2014 Capability Period. The G-J locality will have an ICAP Demand Curve specific to it. That ICAP Demand Curve was developed concurrent, and filed, with the ICAP Demand Curves for NYC, LI, and the NYCA, on November 29, 2013. The creation of this new Locality is expected to enhance price signals and incent investment in new and existing resources in that area.

In 2013 the NYISO reviewed with stakeholders a proposal to revise the Services Tariff to broaden the technology of the capacity resource that can be used to establish the ICAP Demand Curves. Presently, the tariff requires that it be a peaking plant. The proposal would have changed the current requirement that the Demand Curve be established based on the technology that results in the lowest fixed costs and highest variable costs, so that it would be set based on the technology that results in the lowest ICAP Demand Curve reference point. The proposal was intended to address the MMU’s observation that if the proxy unit is not the lowest net cost unit, “the capacity market may motivate inefficiently large quantities of investment (maintain high capacity surpluses) and raise overall market costs.”<sup>42</sup> Although the proposal failed to achieve the necessary votes to pass through the stakeholder process, the NYISO plans to revisit the proposal before the next ICAP Demand Curve reset.

### III.3. Interconnection Queue Projects

The NYISO’s interconnection queue lists the projects being evaluated in the interconnection study processes. In-service dates stated on the interconnection queue for projects are provided by the developers, and the NYISO periodically updates the queue. Chart 13 depicts the amount of generation listed on the NYISO’s interconnection queue since 2003 in New York City (“NYC”), Long Island (“LI”), and Rest of State (“ROS”) – with wind projects depicted separately from generation projects with other fuel types.

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<sup>42</sup> See 2011 State of the Market Report for the New York ISO Markets, April 2012, at p. 39, <[http://www.nyiso.com/public/webdocs/markets\\_operations/documents/Studies\\_and\\_Reports/Reports/Market\\_Advisor\\_Reports/2011/SOM\\_Report-Final\\_41812.pdf](http://www.nyiso.com/public/webdocs/markets_operations/documents/Studies_and_Reports/Reports/Market_Advisor_Reports/2011/SOM_Report-Final_41812.pdf)>.

Chart 13: NYISO Interconnection Queue Projects

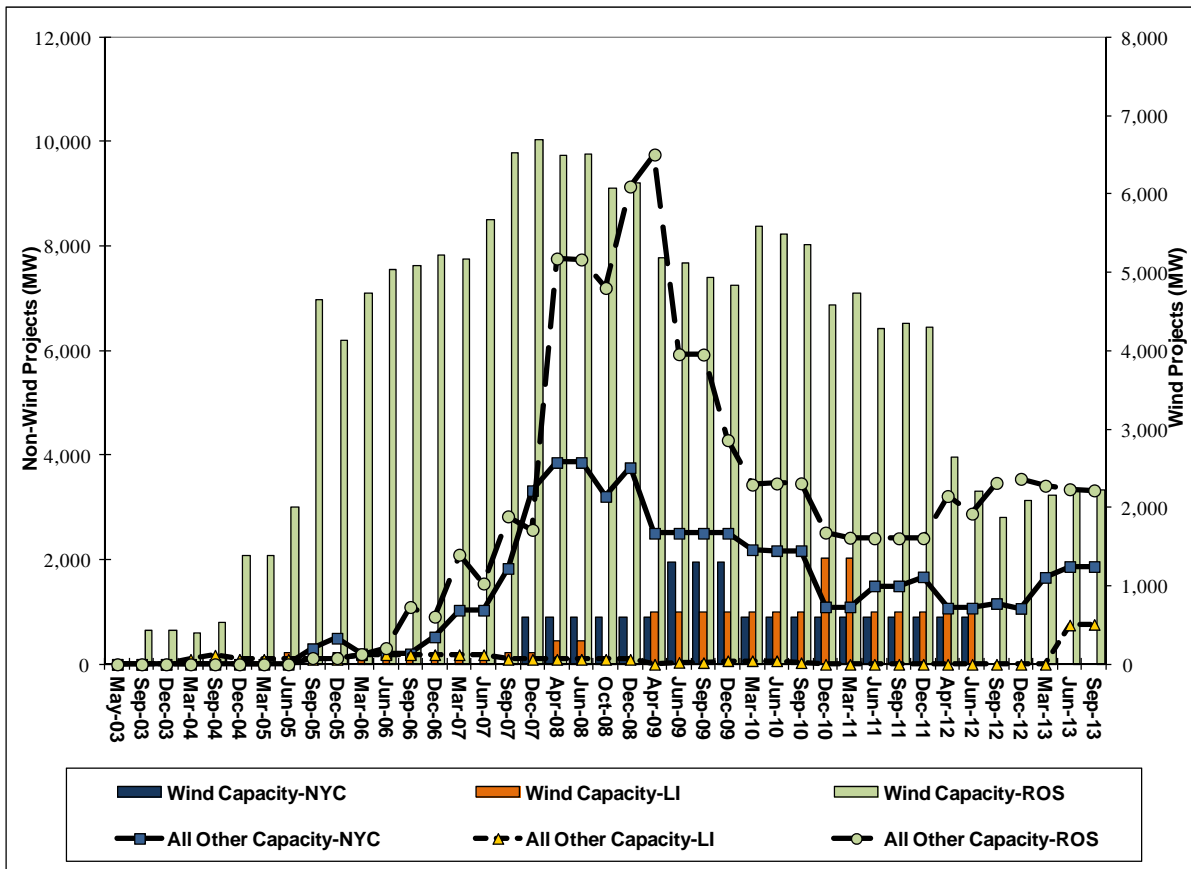


Chart 13 was compiled using the NYISO’s interconnection queue. The Chart reports only those projects that were placed on the queue after May 1, 2003.<sup>43</sup> Since the queue includes projects at various stages, for purposes of the analysis for this section of the report, it is reasonable to include only projects that are identified as active. Accordingly, pre-2005 period projects with codes ‘I’, ‘W’, or ‘C’ were excluded; and for 2005 and beyond projects, status codes 0, 1, 12, 13, and 14 were omitted.

Generally, the number of generation projects and the amount of MW in the interconnection process has increased since the ICAP Demand Curves became effective in May 2003. The number of MW associated with projects based on technologies other than wind

<sup>43</sup> Each project in the queue is provided a status code that identifies its position in the study process that ranges from the initial scoping meeting to entering service. Prior to 2005, each project was provided a status-code based on the NYISO System Reliability Impact Study from the following: *P=Pending, A=Active, I=Inactive, R=Under Review, C=Completed, W=Withdrawn*. Starting in 2005, the classification system was changed and status-codes were based on the standard steps in the NYISO’s interconnection process as follows: *1=Scoping Meeting Pending, 2=FES Pending, 3=FES in Progress, 4=SRIS Pending, 5=SRIS in Progress, 6=SRIS Approved, 7=FS Pending, 8=Rejected Cost Allocation/Next FS Pending, 9=FS in Progress, 10=Accepted Cost Allocation/IA in Progress, 11=IA Completed, 12=Under Construction, 13=In Service for Test, 14=In Service Commercial, 0=Withdrawn*, where *FES=Feasibility Study Available, SRIS=System Reliability Impact Study Available, FS=Facilities Study and/or ATRA Available*.



(measured on the left Y-axis, above) did not increase significantly until the summer of 2005. Chart 13 shows that beginning with the Winter 2007-2008 Capability Period, there has been a sharply rising trend in the number of MW listed in the interconnection queue for the Rest of State, particularly new non-wind projects. By the end of 2011, this trend had largely reversed to pre-Winter 2007-2008 levels. Since the 2012 Annual Installed Capacity Report, of the projects in the interconnection queue, there has been a decrease in the total amount of Rest of State non-wind generation, an increase in NYC and LI non-wind generation, and an increase in wind generation in Rest of State. There were no wind projects proposed in NYC and LI in 2013. In addition to the amounts set forth in Chart 13, there are proposed HVDC connections. Two of the projects are from External Control Areas, one terminating in NYC and the other terminating in LI. A third project is proposed to be between the Rest of State (Load Zone F) and Load Zone H (i.e., part of the G-J Locality). If these projects receive Unforced Capacity Deliverability Rights (“UDRs”), the UCAP associated with the UDRs can be used to satisfy LCRs.

### III.4. Proposed Resource Additions

In March 2013, the NYISO Board of Directors approved the 2012 Comprehensive Reliability Plan (“CRP”), which was the sixth CRP since its introduction in 2005. The 2012 CRP builds upon the analyses and results contained in the 2012 RNA<sup>44</sup>, as well as the NYISO’s prior Comprehensive Reliability Plans (2005, 2007, 2008, 2009, and 2010 as applicable). The first three CRPs addressed the reliability needs identified by their respective RNAs, and included the evaluation of market-based and regulated responses to the Reliability Needs. The 2009 and 2010 RNAs identified no Reliability Needs, and their respective CRPs did not need to evaluate market-based or regulated solutions.

The 2012 CRP determined that additional resources will be needed beginning in the last two years of the Study Period (2013-2022) in order to comply with the resource adequacy requirement for the NYCA. The CRP identified that the “[r]etirement of additional generating units beyond those already contemplated in the 2012 RNA for either economic or environmental factors could adversely affect the reliability of the NYCA bulk power system beyond what has been identified in this CRP. The retirement of the Danskammer generating plant, which was announced after the CRP base case was finalized, will advance the year of resource adequacy needs by two years to 2019.”<sup>45</sup> The 2012 CRP also identified transmission security violations starting in year 2013. Based upon its evaluation of the market-based solutions and the most recent long term plans (“LTPs) from the Transmission Owners, the NYISO concluded that there are sufficient proposed market-based resource additions which, if developed, would result in the NYCA being in compliance with the resource adequacy criteria for the next 10 years. Based upon the Transmission Owners’ LTPs and proposed specific operating instructions for certain needs, the NYISO concluded that there were sufficient solutions to mitigate the transmission security issues identified as Reliability Needs in 2013. Accordingly, the NYISO has determined

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<sup>44</sup> The 2012 RNA is available at [http://www.nyiso.com/public/webdocs/markets\\_operations/services/planning/Planning\\_Studies/Reliability\\_Planning\\_Studies/Reliability\\_Assessment\\_Documents/2012\\_RNA\\_Final\\_Report\\_9-18-12\\_PDF.pdf](http://www.nyiso.com/public/webdocs/markets_operations/services/planning/Planning_Studies/Reliability_Planning_Studies/Reliability_Assessment_Documents/2012_RNA_Final_Report_9-18-12_PDF.pdf).

<sup>45</sup> See New York Independent System Operator. “2012 Comprehensive Reliability Plan” Issued on March 19, 2013, available at: [http://www.nyiso.com/public/webdocs/markets\\_operations/services/planning/Planning\\_Studies/Reliability\\_Planning\\_Studies/Reliability\\_Assessment\\_Documents/2012\\_Comprehensive\\_Reliability\\_Plan\\_Final\\_Report.pdf](http://www.nyiso.com/public/webdocs/markets_operations/services/planning/Planning_Studies/Reliability_Planning_Studies/Reliability_Assessment_Documents/2012_Comprehensive_Reliability_Plan_Final_Report.pdf) at p.6.

that no additional action needed to be taken to implement any regulated backstop solution or any alternative regulated solution to address the resource adequacy needs identified in the 2012 RNA and the 2012 CRP. The NYISO will continue to monitor the progress of the market-based solutions and Transmission Owners LTPs through its quarterly monitoring program. If these solutions fail to make adequate progress, the NYISO may need to trigger a gap or regulated solution to meet system reliability needs.<sup>46</sup> Table 7 presents the market-based solutions and Transmission Owners' plans that were submitted in response to requests for solutions and were included in the 2008 CRP. The table indicates that as of December 2013, 520 MW of generation solutions in Zone J are still being reported to the NYISO as moving forward with development. These generation projects will be sufficient to meet the resource adequacy needs as indicated in the 2012 CRP. There are a number of other projects in the NYISO interconnection queue that are also moving forward in the interconnection process which were not offered as market-based solutions in the NYISO's Comprehensive Reliability Planning Process ("CRPP").

**Table 7: December 2013 Status of the 2008 CRP Market-Based Solutions and Transmission Owner Plans**

Project Type	NYISO Queue #	Submitted	MW	Zone	Original Proposed In-Service Date	Current Status
<b>Resource Proposals</b>						
Gas Turbine NRG Astoria Re-powering	201 and 224	CRP 2005, CRP 2007, CRP 2008	520	J	Jun - 2010	New Target June 2016
Empire Generation Project	69	CRP 2008	635	F	Q1 2010	Placed in Service September 2010
<b>Transmission Proposals</b>						
Back-to-Back HVDC, AC Line HTP	206	CRP 2007, CRP 2008 and was an alternative regulated proposal in CRP 2005	660	PJM - J	Q2 2011 PJM Queue O66	Placed in Service June 2013
<b>TOs' Plans</b>						
ConEd M29 Project	153	CRP 2005	N/A	J	May - 2011	Placed in Service February 2011

<sup>46</sup> The 2012 CRP is available at [http://www.nyiso.com/public/webdocs/markets\\_operations/services/planning/Planning\\_Studies/Reliability\\_Planning\\_Studies/Reliability\\_Assessment\\_Documents/2012\\_Comprehensive\\_Reliability\\_Plan\\_Final\\_Report.pdf](http://www.nyiso.com/public/webdocs/markets_operations/services/planning/Planning_Studies/Reliability_Planning_Studies/Reliability_Assessment_Documents/2012_Comprehensive_Reliability_Plan_Final_Report.pdf).



### III.5. Revenue Analysis

The FERC's order directing the NYISO to submit an annual ICAP report stated that the NYISO should include a complete net revenue analysis to provide information about whether NYISO market revenues are adequate to incent new capacity resources in regions where capacity is needed. Where there is growing pressure on existing capacity, e.g., the reserve margin is shrinking; there should be a rise in combined revenues from energy and capacity markets.

As in the prior annual reports, the NYISO examined the level of "need" for additional capacity by looking at the percentage of capacity in excess of the applicable minimum Installed Capacity requirement. The NYISO then looked at possible revenues from the capacity, energy, and ancillary services markets for a hypothetical combustion turbine. Based on the methodology used, which is the same as used in prior annual reports, the analysis shows that, in general, there is a tendency for revenues to increase as the percentage of excess capacity decreases and vice versa.

#### III.5.1. Quantification of "Need"

For purposes of this analysis, the excess of capacity relative to the minimum requirement was used as a proxy for need. Capacity margin is calculated as:

$$\text{Capacity margin \%} = \frac{\text{Availability}}{\text{Requirement}} \times 100$$

Using this definition, a value in excess of 100% reflects an excess Capacity margin. A relatively high value indicates less of a need for new capacity and, conversely, declining values suggest an increased need.<sup>47</sup> The following Table 8 displays the required and available amounts of UCAP as calculated from detailed data from monthly certified capacity, auction offers, and sales awards.

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<sup>47</sup> The use of "need" in this context is based on the revenue analysis and is not intended to infer whether there may be a system-specific need.

**Table 8: Available Capacity vs. Required Capacity**

		2009	2010	2011	2012	2013
NYCA	Requirement (MW)	36,362	35,045	34,684	35,076	35,467
	Available Cap. (MW)	38,217	37,272	38,041	37,881	36,177
	Capacity margin %	105.1%	106.4%	109.7%	108.0%	102.0%
NYC	Requirement (MW)	8,855	8,336	8,832	8,897	9,325
	Available Cap. (MW)	9,612	8,753	9,660	9,696	9,721
	Capacity margin %	108.5%	105.0%	109.4%	109.0%	104.2%
LI	Requirement (MW)	4,749	5,021	5,052	4,961	5,394
	Available Cap. (MW)	5,331	5,864 <sup>48</sup>	5,952	5,858	5,740
	Capacity margin %	112.3%	116.8%	117.8%	118.1%	106.4%

In Table 8, the required NYCA UCAP is based on the annual NYCA Minimum Installed Capacity Requirement, and for each of NYC and LI, it is based on the respective Locational Minimum Installed Capacity Requirement. Available Capacity reflects the aggregate of UCAP ratings excluding the amount imported via external transactions.<sup>49</sup> In 2013, the NYCA, NYC and LI Capacity margins reported in the table decreased from 2012, in part due to an increase in the IRM from 16% to 17%, and an increase in LCRs for NYC from 83% to 86% and in LI from 99% to 105%. NYCA was further impacted by approximately 154.2 MW of unit retirements and mothballs.

### III.5.2. Measure of Revenues

As it did in the analysis for prior reports, for this report, the NYISO assumed a revenue requirement based on the respective ICAP Demand Curves for the respective years. It used a levelized annual revenue requirement for a given capability year (May – April) that is derived from a cost of new entry (“CONE”) of a gas-fueled simple-cycle combustion turbine for a given location in the Rest of State (for the NYCA Demand Curve analysis) and each Locality. As in prior reports, the revenue requirement methodology uses Summer/Winter DMNCs to convert these annual revenue requirements into Summer and Winter \$/kW-month equivalents. Next, these monthly UCAP values were used to compute annual revenue requirements for each year from 2009 through 2013.

Table 9 shows the annual revenue requirement for a hypothetical new entry unit based on the assumptions in ICAP Demand Curves for the corresponding Capability Years, including the financial assumptions and different benchmark technologies for each of New York City, Long Island, and the NYCA. For example, the notional figures for New York City in the 2009 – 2013 Demand Curves were based on an LMS100 unit.

<sup>48</sup>The available UCAP for Long Island in 2010 was 5,864 MW; however, this table in the 2010 Annual Report incorrectly stated it was 5,662 MW. Consequently, as described in the 2011 and 2012 Annual Reports, the Capacity margin for Long Island in the 2010 Annual Report should have been stated as 116.8%.

<sup>49</sup> In contrast to the forecasted figures used in the Gold Book, these charts reflect data based on realized outcomes over the Summer Capability Periods.

**Table 9: Annual Revenue Requirements in UCAP terms (\$/MW)**

	2009	2010	2011	2012	2013
<b>NYCA</b>	\$103,312	\$105,115	\$110,577	\$122,650	\$124,094
<b>NYC</b>	\$213,943	\$244,147	\$233,486	\$282,388	\$284,578
<b>LI</b>	\$194,743	\$211,069	\$214,785	\$263,070	\$262,912

Table 10 shows the individual elements of revenues (*i.e.*, those earned in the Energy, Ancillary Services (A/S), and ICAP markets) that a hypothetical peaking plant may have received based on actual LBMPs, natural gas prices, and other reasonable parameters used to calculate variable costs.<sup>50</sup>

For this and previous reports, a model was used to calculate the Energy and Ancillary Services revenue for the hypothetical Demand Curve peaking plants: net energy revenues are earned in hours when the day-ahead market LBMP price exceeds the calculated variable cost; otherwise, day-ahead Ancillary Services revenues are earned. This approach is similar to the “standard method” used by the MMU in its annual State of the Market reports.

In annual ICAP reports prior to 2011, Ancillary Services revenues were based on 10 minute reserve prices. For the 2011, 2012 and this report, the Ancillary Services revenues earned by the hypothetical Demand Curve peaking plant reflected the capability of the applicable Demand Curve peaking plant. Ancillary Service revenues for the hypothetical NYCA peaking plant therefore are based on Day-Ahead 30-minute reserve prices. Because Table 11 and Chart 14 utilize data from Table 10, the adjustment reflected in Table 10 also affected the corresponding NYCA revenue margins in Table 11 and Chart 14 for years 2009-2013.

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<sup>50</sup> The assumed parameters for the 2013 ICAP Demand Curve benchmark combustion turbine are based on the NERA Demand Curve report (15 November 2010). See *New York Independent System Operator, Inc., Errata Filing, Docket No. ER11-2224-000 (filed December 3, 2010)* at Attachment 1 “Independent Study to Establish Parameters of the ICAP Demand Curve for the New York Independent System Operator,” September 3, 2012 (Revised September 7, 2010, November 15, 2010), prepared by NERA Economic Consulting. The NERA report is available at <[http://www.nyiso.com/public/webdocs/markets\\_operations/committees/bic\\_icapwg/meeting\\_materials/2010-12-01/Demand\\_Curve\\_Study\\_Report\\_11-15-10\\_Revised.pdf](http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_icapwg/meeting_materials/2010-12-01/Demand_Curve_Study_Report_11-15-10_Revised.pdf)>. For NYCA, Heat Rate = 10,206 Btu/kWh, Variable Operating & Maintenance Costs (VOM) = \$1/MWh, and Forced Outage Rate = 3%; For NYC and LI, Heat Rate = 9023 Btu/kWh, VOM = \$5/MWh, and Forced Outage Rate = 3.84%.

**Table 10: Benchmark Annual Revenues in UCAP terms (\$/MW)<sup>51</sup>**

		Revenue Elements in \$					Revenue Elements as % of Total				
		2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
NYCA <sup>52</sup>	Energy	\$5,291	\$20,815	\$16,646	\$35,147	\$42,916	14%	52%	80%	70%	47%
	A/S	\$4,058	\$1,161	\$341	\$666	\$1,873	11%	3%	2%	1%	2%
	Capacity	\$27,920	\$18,420	\$3,820	\$14,650	\$46,730	75%	46%	18%	29%	51%
	<b>Total</b>	<b>\$37,269</b>	<b>\$40,397</b>	<b>\$20,807</b>	<b>\$50,463</b>	<b>\$91,519</b>	100%	100%	100%	100%	100%
NYC	Energy	\$24,221	\$59,052	\$59,028	\$55,634	\$59,779	25%	34%	41%	35%	31%
	A/S	\$14,155	\$7,648	\$12,892	\$9,300	\$10,366	15%	4%	9%	6%	5%
	Capacity	\$58,640	\$104,600	\$72,440	\$95,550	\$124,320	60%	61%	50%	60%	64%
	<b>Total</b>	<b>\$97,016</b>	<b>\$171,299</b>	<b>\$144,360</b>	<b>\$160,483</b>	<b>\$194,465</b>	100%	100%	100%	100%	100%
Long Island	Energy	\$32,795 <sup>53</sup>	\$84,130	\$95,780	\$117,016	\$130,905	43%	76%	86%	81%	68%
	A/S	\$11,829	\$5,356	\$11,400	\$6,971	\$6,388	16%	5%	10%	5%	3%
	Capacity	\$30,800	\$20,790	\$3,840	\$20,180	\$54,720	41%	19%	3%	14%	28%
	<b>Total</b>	<b>\$75,424</b>	<b>\$110,276</b>	<b>\$111,020</b>	<b>\$144,168</b>	<b>\$192,013</b>	100%	100%	100%	100%	100%

In order to assess revenue adequacy for purposes of this report, “Revenue Margin” is the metric used. “Revenue Margin” is Benchmark Revenues expressed as a percentage of Required Revenues. Revenue Margins are calculated as:

$$\text{Revenue Margin \%} = \frac{\text{Benchmark Revenue}}{\text{Required Revenue}} \times 100$$

A higher value indicates a greater degree of adequacy of revenues using this approach. The following table displays the values of Revenue Margins for the hypothetical peaking plant.

**Table 11: Revenue Margins**

	2009	2010	2011	2012	2013
<b>NYCA</b>	36%	38%	19%	41%	74%
<b>NYC</b>	45%	70%	62%	57%	68%
<b>LI</b>	39%	52%	52%	55%	73%

In 2013, Revenue Margins increased from prior levels in NYCA, NYC and LI, largely due to the increase in capacity revenues. To assess whether the revenue streams for the hypothetical unit are adequate in relation to the level of need for new capacity, data from Table 8 and Table 11 are graphed below, showing revenue (Chart 14) and Capacity (Chart 15) margins.

Chart 16 plots the capacity revenue component of the total net revenue as a percentage of the cost of new entry in the NYCA and in each Locality. The magnitude of excess capacity peaked in NYCA, NYC, and LI in 2011, and as a result, the capacity market revenues relative to

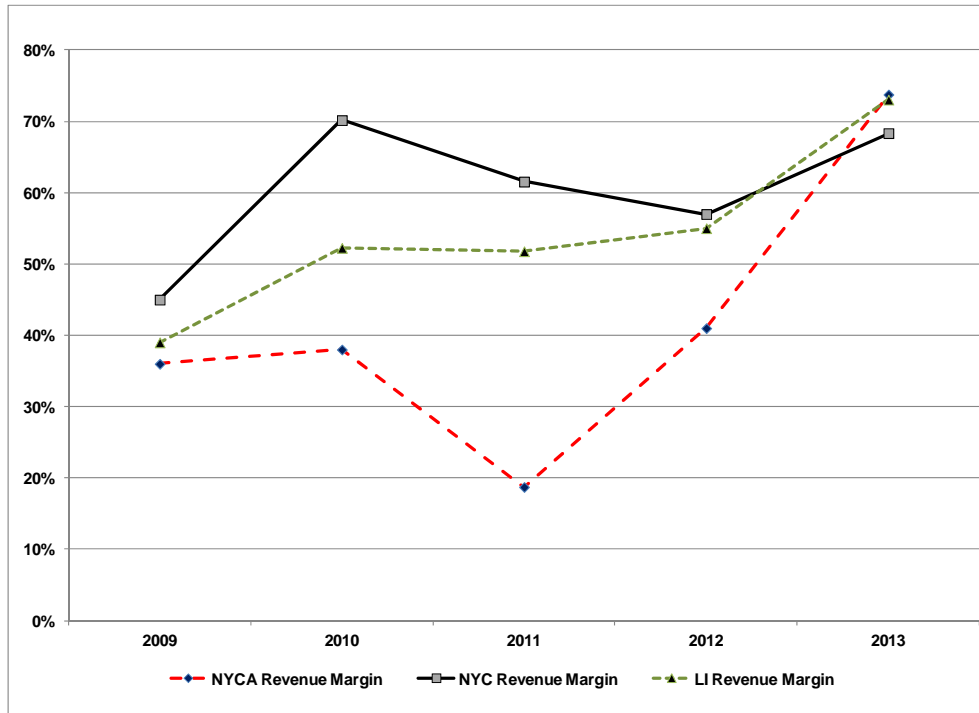
<sup>51</sup> Because of the change in methodology beginning with the 2011 annual ICAP report, the Ancillary Services revenues shown in Table 10 for the NYCA were recast from those shown in the 2001 – 2010 annual reports, so all Table data was determined utilizing the same methodology.

<sup>52</sup> These values are for the Capital Zone (Zone F), which is used as a representation for revenues in the NYCA.

<sup>53</sup> The Energy and Ancillary Services revenues for Long Island (LI) stated for 2009 in the 2010 Annual Report were updated in the 2012 Annual Report to \$32,759 and \$11,829/MW from the \$48,229 and \$16,998/MW, as reflected in this report.

the CONE requirements shown in Chart 16 dropped precipitously, thereby appropriately signaling to the market that sufficient capacity already existed<sup>54</sup>. Market Participants elected to retire, mothball or lay-up more than 154.2 MW of generating capacity in 2013<sup>55</sup>, reducing the excess capacity in the market, and capacity market revenues rebounded in proportion to the reduced level of excess and the higher October 2012/April 31, 2013 ICAP Demand Curves. The effect of the reduced level of excess is reflected in higher revenue margins in 2013.

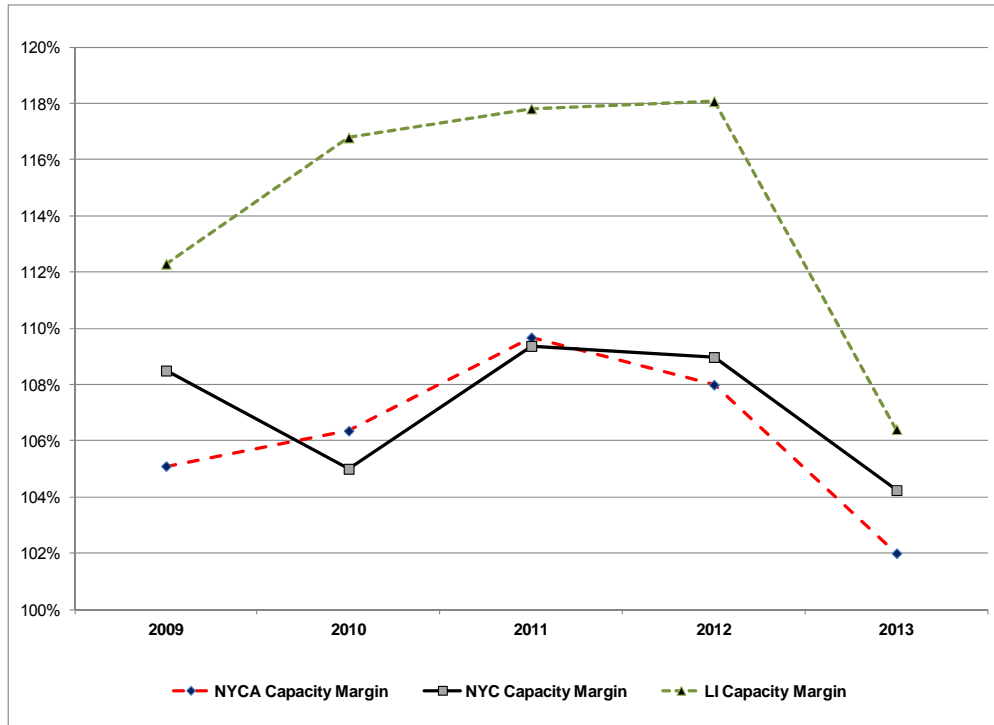
**Chart 14: UCAP-based Revenue Margins**



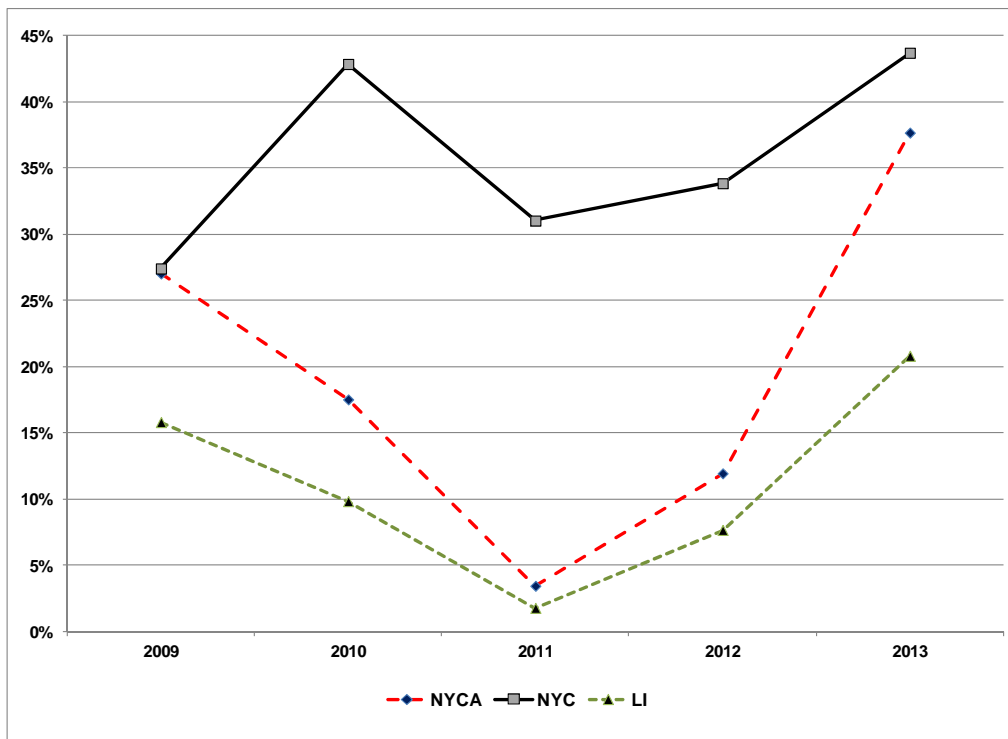
<sup>54</sup> 2011 SOM Report, Page A-13

<sup>55</sup> Table 1 presents a list of mothballed and retired Units

**Chart 15: UCAP-based Capacity Margins**



**Chart 16: Capacity Market Revenues Relative to CONE Requirements**



# Attachments

## Attachment I: Unsold Capacity Offers (Masked)

Masked PTID Name	AUCTION TYPE	AUCTION MONTH	LOCATION DESCRIPTION	OFFER CAPACITY	OFFER PRICE	AWARDED CAPACITY	MARKET CLEARING PRICE	UNSOLD
Unit 01	Spot	Nov-12	ROS	50.0	\$0.80	0.00	\$0.71	50.00
Unit 02	Spot	Nov-12	ROS	32.0	\$1.50	0.00	\$0.71	32.00
		<b>11/1/2012 Total</b>		<b>82.0</b>				<b>82.00</b>
Unit 03	Spot	Sept-13	ROS	10.9	\$9.00	0.00	\$5.62	10.90
Unit 04	Spot	Sept-13	ROS	58.6	\$9.00	0.00	\$5.62	58.60
		<b>9/1/2013 Total</b>		<b>69.50</b>				<b>69.50</b>
		<b>Grand Total</b>		<b>151.50</b>				<b>151.50</b>

## **Attachment II: Confidential. Unsold Capacity Offers (Unmasked)**

(Not included with the public filing.)



## **Attachment III: Confidential. Market Participant Explanations**

(Not included with the public filing.)





# Attachment IV: Interconnection Queue

Queue Pos.	Owner/Developer	Project Name	Date of IR	SP (MW)	WP (MW)	Type/Fuel	Location County/State	Z	Interconnection Point	Utility	S	Last Update	Availability of Studies	FS Complete/ SGIA Tender	Proposed In-Service	Proposed COD
127A	Airtricity Munnsville Wind Farm, LLC	Munnsville	10/9/02	6		W	Madison, NY	E	46kV line	NYSEG	11	3/31/13	SRIS, FS	7/12/07	2013/12	2013/12
154	KeySpan Energy for LIPA	Holtsville-Brentwood-Pilgrim	8/19/04	N/A		AC	Suffolk, NY	K	Holtsville & Pilgrim 138kV	LIPA	5	4/30/13	None		2017	
166	Cape Vincent Wind Power, LLC	St. Lawrence Wind Farm	2/8/05	75.9	75.9	W	Jefferson, NY	E	Rockledge Substation 115kV	NM-NG	10	3/31/13	SRIS, FS	6/15/09	2014/12	2014/12
180A	Green Power	Cody Rd	3/17/05	10	10	W	Madison, NY	C	Fenner - Cortland 115kV	NM-NG	11	3/31/13	None	8/30/09	2013/Q4	2013/Q4
189	Atlantic Wind, LLC	Horse Creek Wind	4/8/05	126	126	W	Jefferson, NY	E	Coffeen St-Thousand Island 115kV	NM-NG	9	3/31/13	FES, SRIS		2014/10	2014/12
197	PPM Roaring Brook, LLC / PPM	Roaring Brook Wind	7/1/05	78	78	W	Lewis, NY	E	Boonville-Lowville 115kV	NM-NG	11	3/31/13	FES, SRIS, FS	2/1/10	2015/10	2015/12
201	NRG Energy	Berrians GT	8/17/05	200	200	CC-NG	Queens, NY	J	Astoria West Substation 138kV	CONED	10	11/30/13	FES, SRIS, FS	10/15/13	2014/03	2014/06
206	Hudson Transmission Partners	Hudson Transmission	12/14/05	660	660	DC/AC	NY, NY - Bergen, NJ	J	West 49th Street 345kV	CONED	14	6/30/13	FES, SRIS, FS	2/1/10	I/S	I/S
207	Cape Vincent Wind Power, LLC	Cape Vincent	1/12/06	209.3	209.3	W	Jefferson, NY	E	Rockledge Substation 115kV	NM-NG	10	3/31/13	FES, SRIS, FS	2/1/10	2014/12	2014/12
224	NRG Energy, Inc.	Berrians GT II	8/23/06	50	90	CC-NG	Queens, NY	J	Astoria West Substation 138kV	CONED	10	11/30/13	FES, SRIS, FS	10/15/13	2014/03	2014/06
237	Allegany Wind, LLC	Allegany Wind	1/9/07	72.5	72.5	W	Cattaraugus, NY	A	Homer Hill - Dugan Rd. 115kV	NM-NG	11	6/30/13	FES, SRIS, FS	11/30/11	2014/08	2014/11
251	CPV Valley, LLC	CPV Valley Energy Center	7/5/07	677.6	690.6	CC-NG	Orange, NY	G	Coopers - Rock Tavern 345kV	NYP&A	10	11/30/13	FES, SRIS, FS	10/15/13	2015/12	2016/05
263	Stony Creek Wind Farm, LLC	Stony Creek Wind Farm	10/12/07	92.8	92.8	W	Wyoming, NY	C	Stolle Rd - Meyer 230kV	NYSEG	13	11/30/13	FES, SRIS, FS	11/30/11	2013/09	2013/12
264	RG&E	Seth Green	10/23/07	2.8	2.8	H	Monroe, NY	B	11kV	RG&E	9	8/31/13	None		N/A	N/A
266	NRG Energy, Inc.	Berrians GT III	11/28/07	250	290	CC-NG	Queens, NY	J	Astoria 345kV	NYP&A	9	3/31/13	FES, SRIS		2016/03	2016/06
270	Wind Development Contract Co LLC	Hounsfield Wind	12/13/07	244.8	244.8	W	Jefferson, NY	E	Fitzpatrick - Edic 345kV	NYP&A	6	3/31/13	FES, SRIS		2015/12	2015/12
276	Air Energie TCI, Inc.	Crown City Wind Farm	1/30/08	90	90	W	Cortland, NY	C	Cortland - Fenner 115kV	NM-NG	6	5/31/13	FES, SRIS		2014/12	2014/12
284	Broome Energy Resources, LLC	Nanticoke Landfill	3/6/08	1.6	1.6	M	Broome, NY	C	Nanticoke Landfill Plant 34.5kV	NYSEG	14	9/30/13	None	6/15/12	I/S	I/S
290A	Green Island Power Authority	Green Island Power	4/7/08	20	20	L	Albany, NY	F	Maplewood - Johnson Rd 115kV	NM-NG	6	11/30/11	SIS		2012/Q4	
294	Orange & Rockland	Ramapo-Sugarloaf	4/29/08	N/A	N/A	AC	Orange/Rockland, NY	G	Ramapo - Sugarloaf 138kV	O&R	6	3/31/13	SIS		2014/Q2	
305	Transmission Developers Inc.	Champlain Hudson Power Express	7/18/08	1000	1000	DC	Quebec - NY, NY	J	Astoria Substation 345kV	NYP&A	9	6/30/13	FES, SRIS		2017/12	2017/12
310	Cricket Valley Energy Center, LLC	Cricket Valley Energy Center	9/22/08	1019.9	1136	CC-NG	Dutchess, NY	G	Pleasant Valley - Long Mt. 345kV	ConEd	9	11/30/13	FES, SRIS		2017/07	2018/01
322	Rolling Upland Wind Farm, LLC	Rolling Upland Wind	1/13/09	59.9	59.9	W	Madison, NY	E	County Line - Brothertown 115kV	NYSEG	9	3/31/13	FES, SRIS		2015/07	2015/10
326	NYSEG/RG&E	Rochester SVC/PST Trans.	3/9/09	N/A	N/A	AC	Monroe, NY	B	Station 124 115kV	NYSEG	6	3/31/13	SIS		2014/Q2	
331	National Grid	Northeast NY Reinforcement	4/22/09	N/A	N/A	AC	Saratoga, NY	F	NGrid 230kV	NM-NG	12	10/31/11	SIS		2010-2019	
333	National Grid	Western NY Reinforcement	5/5/09	N/A	N/A	AC	Cattaraugus, NY	A	NGrid 115kV	NM-NG	6	10/31/13	SIS		2015/Q2	
338	RG&E	Brown's Race II	8/11/09	8.3	8.3	H	Monroe, NY	B	Station 137 11kV	RG&E	9	8/31/13	None		N/A	N/A
339	RG&E	Transmission Reinforcement	8/17/09	N/A	N/A	AC	Monroe, NY	B	Niagara - Kintigh 345kV	RG&E	6	3/31/13	SIS		2016/12	
347	Franklin Wind Farm, LLC	Franklin Wind	12/2/09	50.4	50.4	W	Delaware, NY	E	Oakdale - Delhi 115kV	NYSEG	5	3/31/13	FES		2015/12	2015/12
349	Taylor Biomass Energy-Montgomery, LLC	Taylor Biomass	12/30/09	19	22.5	SW	Montgomery, NY	G	Maybrook - Rock Tavern	CHGE	10	11/30/13	SRIS, FS	10/15/13	2015/09	2015/12
354	Atlantic Wind, LLC	North Ridge Wind	5/13/10	100	100	W	St. Lawrence, NY	E	Nicholville - Parishville 115kV	NM-NG	6	3/31/13	FES, SRIS		2014/12	2014/12
355	Brookfield Renewable Power	Stewarts Bridge Hydro	8/3/10	3	3	H	Saratoga, NY	F	Spier Falls - EJ West	NM-NG	9, 14	6/30/13	SRIS		I/S	I/S
358	West Point Partners, LLC	West Point Transmission	9/13/10	1000	1000	DC	Greene, Westchester, NY	F, H	Leeds - Buchanan North 345kV	NM-NG/ConEd	5	4/30/13	FES		2017/07	2017/07
360	NextEra Energy Resources, LLC	Watkins Glen Wind	12/22/10	122.4	122.4	W	Schuyler, NY	C	Bath - Montour Falls 115 kV	NYSEG	6	9/30/13	FES, SRIS		2015/07	2015/07
361	US PowerGen Co.	Louster Creek Energy	2/15/11	401	444	CC-D	Queens, NY	J	Astoria West Substation 138kV	CONED	6	11/30/13	FES, SRIS		2015/06	2015/06
362	Monticello Hills Wind, LLC	Monticello Hills Wind	3/7/11	19.8	19.8	W	Otsego, NY	E	W. Winfield - Richfield Spring 46kV	NYSEG	10	8/31/13	None		2015/12	2015/12
363	Poseidon Transmission 1, LLC	Poseidon Transmission	4/27/11	500	500	DC	NJ - Suffolk, NY	K	Werner - Ruland Rd. 230kV	LIPA	5	9/30/13	FES		2016/06	2016/06
367	Orange & Rockland	North Rockland Transformer	9/14/11	TBD	TBD	AC	Rockland, NY	G	Line Y94 345kV	ConEd	6	10/31/12	SIS		2016/06	
368	Consolidated Edison Co. of NY	Feeder 76 Ramapo to Rock Tavern	10/13/11	TBD	TBD	AC	Orange, Rockland, NY	G	Ramapo to Rock Tavern 345 kV	ConEd/CenHud	6	12/31/12	SIS		2016/08	
369	Clover Leaf Power, LLC	Clover Leaf Hollers Ave	10/24/11	173.9	192.8	CT	Bronx, NY	J	E 179th St. Substation 138kV	ConEd	4	7/31/13	FES		2016/12	2016/12
370	Smokey Avenue Wind, LLC	Smokey Avenue Wind	10/28/11	18	18	W	Otsego, NY	F	Worcester - Schenevus 23kV	NM-NG	7	3/31/13	None		2013/12	2013/12
371	South Mountain Wind, LLC	South Mountain Wind	10/31/11	18	18	W	Delaware, NY	E	River Rd Substation 46kV	NYSEG	9	3/31/13	None		2014/12	2014/12
372	Dry Lots Wind, LLC	Dry Lots Wind	10/31/11	33	33	W	Herkimer, NY	E	Schuyler - Whitesboro 46kV	NM-NG	5	3/31/13	FES		2014/11	2014/11
373	New York Power Authority	Coopers Corners Shunt Reactor	12/21/11	N/A	N/A	AC	Sullivan, NY	E	Coopers Corners 345 kV	NYSEG	6	10/31/13	SIS		2014/04	
374	CPV Valley, LLC	CPV Valley II	2/21/12	820	820	CC-D	Wawayanda, NY	G	Rock Tavern to Coopers Corners	NYP&A	5	3/31/13	None		2017/05	2017/05
375	Eagle Creek Hydro, LLC	Eagle Creek Hydro	3/6/12	0.8	0.8	H	Sullivan, NY	E	Rio 69kV Switchyard	O&R	11	10/31/13	None	3/6/13	2013/12	2013/12
377	Monroe County	Monroe County Mill Seat	3/16/12	3.2	3.2	M	Monroe, NY	B	Sanford Rd. 34.5kV	NM-NG	9	5/31/13	None		2013/Q4	2013/Q4
378	Invenergy NY LLC	Marsh Hill Wind	3/29/12	16.2	16.2	W	Steuben, NY	C	Jasper - Marshall Warriner 34.5kV	NYSEG	9	9/30/13	None		2014/07	2014/07

# Attachment IV: Interconnection Queue

Queue Pos.	Owner/Developer	Project Name	Date of IR	SP (MW)	WP (MW)	Type/ Fuel	Location County/State	Z	Interconnection Point	Utility	S	Last Update	Availability of Studies	FS Complete/ SGIA Tender	Proposed In-Service	Proposed COD
380	New York Power Authority	Marcy South Reinforcement	5/14/12	N/A	N/A	AC	Oneida-Sullivan, NY	E	Marcy/Edic-Coopers Corners 345kV	NYSEG	6	5/31/13	SIS		2017	
382	Astoria Generating Co.	South Pier Improvement	5/30/12	88	190	CT-NG	Kings, NY	J	Gowanus Substation 138kV	ConEd	6	6/30/13	SRIS		2015/07	2015/07
383	NRG Energy, Inc.	Bowline Gen. Station Unit #3	5/30/12	775	775	CC-NG	Rockland, NY	G	Ladentown Substation 345kV	O&R/ConEd	6	11/30/13	SRIS		2016/01	2016/06
384	National Grid	Knickerbocker Pleasant Valley	6/15/12	TBD	TBD	AC	Columbia-Dutchess, NY	F, G	Knickerbocker - P. Valley 345kV	NM-NG/ConEd	6	7/31/13	SIS		2018	
385	National Grid	Hudson Valley Reinforcement	6/15/12	TBD	TBD	AC	Alb.-Col.-Dutch., NY	F, G	N. Scotland-Leeds-P. Valley 345kV	NM-NG/ConEd	6	7/31/13	SIS		2018	
386	GII Development LLC	Grand Isle Intertie	6/28/12	400	400	AC	Clinton, NY - VT	D	Plattsburgh - Essex, VT 230kV	NYP&A	5	10/31/13	FES		2017/01	2017/06
387	Cassadaga Wind, LLC	Cassadaga Wind	7/19/12	126	126	W	Chautauqua, NY	A	Dunkirk - Moon Station 115 kV	NM-NG	4	9/30/13	FES		2015/10	2015/12
390	Trail Co.	Farmers Valley Substation	9/14/12	TBD	TBD	AC	Cattaraugus, NY - PA	A	Homer City - Stolle Rd. 345kV	NM-NG/NYSEG	5	8/31/13	None		2015/06	
391	North America Transmission, LLC	Edic - Fraser #2	9/21/12	TBD	TBD	AC	Oneida-Delaware, NY	E	Edic - Fraser 345kV	NM-NG/NYSEG	5	11/30/13	FES		2017/11	2017/11
392	Exelon Corporation	Scriba-Volney	10/5/12	TBD	TBD	AC	Oswego, NY	C	Scriba - Volney 345kV	NM-NG/NYSEG	6	11/30/13	SIS		2015/03	
393	NRG Energy, Inc.	Berriens East Repower	10/16/12	500	580	CC-D	Queens, NY	J	Astoria East Substation 138kV	CONED	4	8/31/13	FES		2018/06	2018/06
394	Trail Co.	Mainesburg Substation	10/16/12	TBD	TBD	AC	Chemung, NY - PA	C	Homer City - Watercure 345kV	NYSEG	5	8/31/13	None		2015/06	
395	Copenhagen Wind Farm, LLC	Copenhagen Wind	11/12/12	79.9	79.9	W	Lewis, NY	E	East Watertown 115kV	NM-NG	4	11/30/13	FES		2014/10	2017/12
396	Baron Winds, LLC	Baron Winds	11/30/12	300	300	W	Steuben, NY	C	Hillside - Meyer 230kV	NYSEG	3	3/31/13	None		2015/10	2015/12
396A	New York State Electric & Gas	Wood Street Transformer	12/14/12	TBD	TBD	AC	Putnum, NY	G	Wood St. 345/115kV	NYSEG	5	11/30/13	None		2017/12	
397	EDP Renewables North America	Jericho Rise Wind	12/21/12	79.9	79.9	W	Franklin, NY	D	Willis Substation 115kV	NYP&A	5	5/31/13	None		2015/11	2015/11
398	Black Oak Wind Farm, LLC	Black Oak Wind	1/10/13	12.6	12.6	W	Thompkins, NY	C	Montour - Coddington 115kV	NYSEG	5	4/30/13	None		2014/08	2014/08
400	East Coast Power LLC	Linden Cogen Uprate	3/4/13	208	204	CT-NG	Linden, NJ-NY, NY	J	Linden Cogen 345kV	ConEd	2	4/30/13	None		2016/Q2	2016/Q2
401	Caithness Long Island II, LLC	Caithness Long Island II	3/22/13	764	807	CC-D	Suffolk, NY	K	Sills Road Substation 138kV	LIPA	5	11/30/13	None		2017/04	2017/05
402	NextEra Energy Transmission	Marcy - PV 345	5/17/13	TBD	TBD	AC	Oneida-Dutchess, NY	E-G	Marcy - P. Valley 345kV	NM-NG/NYP&A/ConEd	3	10/31/13	None		2017/07	2017/08
403	PSEG Power New York	Bethlehem Energy Center Up	5/28/13	78.1	67.4	CS	Albany, NY	F	Bethlehem Energy Center	NM-NG	4	7/31/13	None		2017-2018	2017-2018
404	NextEra Energy Transmission	Princetown - Rotterdam 230	6/4/13	TBD	TBD	AC	Schenectady, NY	F	Princetown - Rotterdam 230kV	NM-NG	2	9/30/13	None		2017/07	2017/08
405	NextEra Energy Transmission	Oakdale - Fraser 345	6/21/13	TBD	TBD	AC	Broome-Delaware, NY	C, E	Oakdale - Fraser 345kV	NYSEG	3	10/31/13	None		2018/07	2018/08
406	NextEra Energy Transmission	Marcy - KB - PV 345	6/21/13	TBD	TBD	AC	Oneida-Dutchess, NY	E-G	Marcy - P. Valley 345kV	NM-NG/NYP&A/ConEd	3	10/31/13	None		2017/07	2017/08
407	National Grid	Edic-N.Scotland-Leed-PV	7/1/13	TBD	TBD	AC	Oneida-Dutchess, NY	E-G	Edic - Pleasant Valley 345kV	NM-NG	5	10/31/13	None		2018/12	2018/12
408	National Grid	Edic-Princetown-N.Scotland-Leeds-PV	7/1/13	TBD	TBD	AC	Oneida-Dutchess, NY	E, G	Edic - Pleasant Valley 345kV	NM-NG	5	10/31/13	None		2018/12	2018/12
409	National Grid	Edic-Knickerbocker-PV	7/1/13	TBD	TBD	AC	Oneida-Dutchess, NY	E, G	Edic - Pleasant Valley 345kV	NM-NG	5	10/31/13	None		2018/12	2018/12
410	National Grid	Edic-Princetown-Knickerbocker-PV	7/1/13	TBD	TBD	AC	Oneida-Dutchess, NY	E, G	Edic - Pleasant Valley 345kV	NM-NG	5	10/31/13	None		2018/12	2018/12
411	BCDC Transmission LLC	BCDC Transmission	7/1/13	400	400	AC	NJ - New York, NY	J	NJ - Farragut Substation 345kV	ConEd	2	8/31/13	None		2017/07	2017/10
412	New York State Electric & Gas	Oakdale - Fraser 345	8/20/13	TBD	TBD	AC	Broome-Delaware, NY	C, E	Oakdale - Fraser 345kV	NYSEG	5	10/31/13	None		2017/05	2017/05
413	National Grid	Edic-Prince.-N.Scotland-Knick.-PV	8/21/13	TBD	TBD	AC	Oneida-Dutchess, NY	E, G	Edic - Pleasant Valley 345kV	NM-NG	5	10/31/13	None		2018/06	2018/06
414	North America Transmission, LLC	New Scotland-Leeds-PV 345	9/5/13	TBD	TBD	AC	Albany-Dutchess, NY	F, G	New Scotland - P. Valley 345kV	NM-NG/ConEd	2	9/30/13	None		2017/11	2017/11
415	Iberdrola USA	Connect New York	9/6/13	1000	1000	DC	Albany-Dutchess, NY	F, G	New Scotland - Hurley Ave 345kV	NM-NG/Cen Hud NM-NG/NYP&A/ConEd	1	9/30/13	None		2016/06	2016/06
416	NextEra Energy Transmission	Marcy - KB - PV 345 (2)	9/9/13	TBD	TBD	AC	Oneida-Dutchess, NY	E, G	Marcy - P. Valley 345kV	NM-NG/NYP&A/ConEd	2	10/31/13	None		2017/07	2017/08
417	NextEra Energy Transmission	Marcy - KB - PV 345 (3)	9/9/13	TBD	TBD	AC	Oneida-Dutchess, NY	E, G	Marcy - P. Valley 345kV	NM-NG/NYP&A/ConEd	2	10/31/13	None		2017/07	2017/08
418	NextEra Energy Transmission	Marcy - NS - PV 345	9/9/13	TBD	TBD	AC	Oneida-Dutchess, NY	E, G	Marcy - P. Valley 345kV	NM-NG/NYP&A/ConEd	2	10/31/13	None		2017/07	2017/08
419	NextEra Energy Transmission	Marcy - NS - KB - PV 345	9/16/13	TBD	TBD	AC	Oneida-Dutchess, NY	E, G	Marcy - P. Valley 345kV	NM-NG/NYP&A/ConEd	2	10/31/13	None		2017/07	2017/08
420	NextEra Energy Transmission	Marcy - KB - PV 345 (4)	9/16/13	TBD	TBD	AC	Oneida-Dutchess, NY	E, G	Marcy - P. Valley 345kV	NM-NG/NYP&A/ConEd	2	10/31/13	None		2017/07	2017/08
423	Rochester Gas & Electric	University of Rochester	11/17/13	25	25	L	Monroe, NY	B	Station 251	NYSEG	1	10/31/13	None		2015	2015

Number of new projects during November	4
Number of new projects year to date	27
Number withdrawn during November	1
Number withdrawn year to date	12

NOTES:

- The column labeled 'SP' refers to the maximum summer megawatt electrical output. The column labeled 'WP' refers to the maximum winter megawatt electrical output.
- Type / Fuel. Key: ST=Steam Turbine, CT=Combustion Turbine, CC=Combined Cycle, CS=Steam Turbine & Combustion Turbine, H=Hydro, PS=Pumped Storage, W=Wind, NU=Nuclear, NG=Natural Gas, M=Methane, SW=Solid Waste, S=Solar, Wo=Wood, F=Flywheel ES=Energy Storage, O=Oil, C=Coal, D=Dual Fuel, AC=AC Transmission, DC=DC Transmission, L=Load
- The column labeled 'Z' refers to the zone
- The column labeled 'S' refers to the status of the project in the NYISO's LFIP. Key: 1=Scoping Meeting Pending, 2=FES Pending, 3=FES in Progress, 4=SRIS/SIS Pending, 5=SRIS/SIS in Progress, 6=SRIS/SIS Approved, 7=FS Pending, 8=Rejected Cost Allocation/Next FS Pending, 9=FS in Progress, 10=Accepted Cost Allocation/IA in Progress, 11=IA Completed, 12=Under Construction, 13=In Service for Test, 14=In Service Commercial, 0=Withdrawn
- Availability of Studies Key: None=Not Available, FES=Feasibility Study Available, SRIS=System Reliability Impact Study Available, FS=Facilities Study and/or ATRA Available
- FS Complete/SGIA Tender refers to the Attachment X milestone used to apply the 4-year COD limitation.
- Proposed in-service dates and Commercial Operation Dates (COD) are shown in format Year/Qualifier, where Qualifier may indicate the month, season, or quarter.

## Attachment V: Status Key for Interconnection Queue

1	Scoping Meeting Pending	Interconnection Request has been received, but scoping meeting has not yet occurred
2	FESA Pending	Awaiting execution of Feasibility Study Agreement
3	FES in Progress	Feasibility Study is in Progress
4	SRIS Pending	Awaiting execution of SRIS Agreement and/or OC approval of SRIS scope
5	SRIS in Progress	
6	SRIS Approved	SRIS Approved by NYISO Operating Committee
7	FS Pending	Awaiting execution of Facilities Study Agreement
8	Rejected Cost Allocation/ Next FS Pending	Project was in prior Class Year, but rejected cost allocation—Awaiting execution of Facilities Study Agreement for next Class Year or the start of the next Class Year
9	FS in Progress	Class Year Facilities Study or Small Generator Facilities Study is in Progress
10	Accepted Cost Allocation/ IA in Progress	Interconnection Agreement is being negotiated
11	IA Completed	Interconnection Agreement is executed and/or filed with FERC
12	Under Construction	Project is under construction
13	In Service for Test	
14	In Service Commercial	

## Attachment VI: November 1999 – October 2013 Installed Capacity Auction Activity

Month	NYCA								NYC								LI							
	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold
	MW	Price	MW	Price	MW	Price	MW	MW	MW	Price	MW	Price	MW	Price	MW	MW	MW	Price	MW	Price	MW	Price	MW	MW
Nov-99							35,563.1								8,305.6								4,555.3	
Dec-99							35,563.1								8,305.6								4,555.3	
Jan-00	Installed Capacity Market Existed but all purchases and sales were bilateral						35,563.1		Installed Capacity Market Existed but all purchases and sales were bilateral						8,305.6		Installed Capacity Market Existed but all purchases and sales were bilateral						4,555.3	
Feb-00	Installed Capacity Market Existed but all purchases and sales were bilateral						35,563.1		Installed Capacity Market Existed but all purchases and sales were bilateral						8,305.6		Installed Capacity Market Existed but all purchases and sales were bilateral						4,555.3	
Mar-00							35,563.1								8,305.6								4,555.3	
Apr-00							35,563.1								8,305.6								4,555.3	
May-00	1,976.0	\$1.5	434.2	\$1.3	32.7	\$0.5	35,636.0	1,976.0	5,408.8	\$8.8	59.4	\$12.5	0.0	-	8,272.0		0.0	-	0.0	-	0.0	-	4,638.0	
Jun-00	1,976.0	\$1.5	528.4	\$1.4	37.1	\$1.3	35,563.1	1,976.0	5,408.8	\$8.8	313.4	\$9.5	52.7	\$12.5	8,272.0		0.0	-	0.0	-	0.0	-	4,638.0	
Jul-00	1,976.0	\$1.5	344.2	\$1.8	140.8	\$2.0	35,563.1	1,976.0	5,408.8	\$8.8	342.7	\$9.4	100.0	\$12.5	8,272.0		0.0	-	0.0	-	0.0	-	4,638.0	
Aug-00	1,976.0	\$1.5	351.4	\$1.6	194.8	\$1.8	35,563.1	1,976.0	5,408.8	\$8.8	332.6	\$9.4	133.9	\$12.5	8,272.0		0.0	-	0.0	-	0.0	-	4,638.0	
Sep-00	1,976.0	\$1.5	648.9	\$1.3	81.3	\$1.2	35,563.1	1,976.0	5,408.8	\$8.8	344.5	\$9.4	149.5	\$12.5	8,272.0		0.0	-	0.0	-	0.0	-	4,638.0	
Oct-00	1,976.0	\$1.5	681.6	\$1.3	96.9	\$0.9	35,563.1	1,976.0	5,408.8	\$8.8	304.2	\$9.5	214.0	\$12.5	8,272.0		0.0	-	0.0	-	0.0	-	4,638.0	
Nov-00	4,010.6	\$1.0	1,813.6	\$1.0	157.7	\$0.8	35,563.1	4,010.6	4,861.4	\$8.8	735.0	\$8.7	170.3	\$8.8	8,272.0		0.0	-	0.0	-	0.0	-	4,638.0	
Dec-00	4,010.6	\$1.0	1,854.1	\$1.0	167.2	\$0.9	35,563.1	4,010.6	4,861.4	\$8.8	785.1	\$8.7	154.8	\$8.8	8,272.0		0.0	-	0.0	-	0.0	-	4,638.0	
Jan-01	4,010.6	\$1.0	1,847.6	\$1.0	170.5	\$0.9	35,563.1	4,010.6	4,861.4	\$8.8	899.5	\$8.7	154.8	\$8.8	8,272.0		0.0	-	0.0	-	0.0	-	4,638.0	
Feb-01	4,010.6	\$1.0	1,893.8	\$1.0	177.2	\$0.8	35,563.1	4,010.6	4,861.4	\$8.8	921.7	\$8.7	154.8	\$8.8	8,272.0		0.0	-	0.0	-	0.0	-	4,638.0	
Mar-01	4,010.6	\$1.0	2,032.8	\$1.0	208.1	\$0.8	35,563.1	4,010.6	4,861.4	\$8.8	936.5	\$8.7	156.0	\$8.8	8,272.0		0.0	-	0.0	-	0.0	-	4,638.0	
Apr-01	4,010.6	\$1.0	1,659.7	\$0.9	192.3	\$0.6	35,563.1	4,010.6	4,861.4	\$8.8	985.6	\$8.6	156.7	\$8.7	8,272.0		0.0	-	0.0	-	0.0	-	4,638.0	
May-01	2,738.6	\$1.9	852.3	\$2.3	1,022.2	\$9.6	36,132.0	2,738.6	5,316.6	\$8.8	248.7	\$8.8	235.1	\$12.5	8,375.0	(est.)	0.0	-	0.0	-	3.2	\$10.8	4,625.0	
Jun-01	2,738.6	\$1.9	397.6	\$2.7	1,521.0	\$9.4	36,132.0	2,738.6	5,316.6	\$8.8	228.4	\$10.9	299.0	\$12.2	8,375.0	(est.)	0.0	-	0.0	-	7.0	\$10.8	4,625.0	
Jul-01	2,738.6	\$1.9	1,776.6	\$4.3	1,534.9	\$9.4	36,132.0	2,738.6	5,316.6	\$8.8	407.8	\$9.8	292.5	\$8.8	8,375.0	(est.)	0.0	-	0.0	-	20.2	\$10.8	4,625.0	
Aug-01	2,738.6	\$1.9	1,788.4	\$4.6	1,601.3	\$9.4	36,132.0	2,738.6	5,316.6	\$8.8	440.1	\$8.4	350.1	\$9.5	8,375.0	(est.)	0.0	-	0.0	-	21.3	\$10.8	4,625.0	
Sep-01	2,738.6	\$1.9	1,701.2	\$4.2	1,498.0	\$9.2	36,132.0	2,738.6	5,316.6	\$8.8	434.9	\$8.4	316.0	\$8.3	8,375.0	(est.)	0.0	-	0.0	-	33.0	\$10.8	4,625.0	
Oct-01	2,738.6	\$1.9	1,787.1	\$4.0	1,473.4	\$9.1	36,132.0	2,738.6	5,316.6	\$8.8	430.1	\$8.0	343.4	\$8.7	8,375.0	(est.)	0.0	-	0.0	-	33.0	\$10.8	4,625.0	
Nov-01	1,760.4	\$2.0	878.0	\$0.1	5.8	\$-	32,892.3	1,760.4	3,972.5	\$9.4	772.8	\$9.0	77.7	\$4.8	7,613.3		0.0	-	0.6	\$3.5	8.5	\$12.3	4,077.6	
Dec-01	1,760.4	\$2.0	687.2	\$0.5	6.5	\$-	32,892.3	1,760.4	3,972.5	\$9.4	906.8	\$6.9	11.5	\$-	7,613.3		0.0	-	1.3	\$3.5	37.4	\$12.3	4,077.6	
Jan-02	1,760.4	\$2.0	750.5	\$0.8	133.0	\$0.8	32,892.3	1,760.4	3,972.5	\$9.4	492.6	\$5.5	377.3	\$8.3	7,613.3		0.0	-	1.3	\$5.0	39.7	\$12.3	4,077.6	
Feb-02	1,760.4	\$2.0	836.2	\$0.7	25.5	\$-	32,892.3	1,760.4	3,972.5	\$9.4	631.1	\$6.7	229.3	\$9.2	7,613.3		0.0	-	0.0	\$-	40.6	\$11.5	4,077.6	
Mar-02	1,760.4	\$2.0	901.3	\$0.6	30.0	\$0.3	32,892.3	1,760.4	3,972.5	\$9.4	784.3	\$6.9	90.6	\$7.5	7,613.3		0.0	-	14.0	\$11.5	26.4	\$11.5	4,077.6	
Apr-02	1,760.4	\$2.0	677.9	\$0.7	5.6	\$0.0	32,892.3	1,760.4	3,972.5	\$9.4	932.9	\$7.1	11.6	\$9.4	7,613.3		0.0	-	41.4	\$11.5	0.0	-	4,077.6	
May-02	3,201.6	\$1.8	552.1	\$0.3	2.3	\$-	32,479.5	3,201.6	4,355.2	\$9.2	684.1	\$9.4	30.5	\$9.4	7,621.6		0.0	-	0.0	-	0.0	-	4,177.8	
Jun-02	3,201.6	\$1.8	438.3	\$0.4	20.3	\$0.0	32,479.5	3,201.6	4,355.2	\$9.2	671.2	\$6.1	16.7	\$0.5	7,621.6		0.0	-	0.0	-	0.0	-	4,177.8	
Jul-02	3,201.6	\$1.8	721.9	\$1.0	11.1	\$0.0	32,479.5	3,201.6	4,355.2	\$9.2	684.7	\$5.3	0.3	\$0.0	7,621.6		0.0	-	0.0	-	0.0	-	4,177.8	
Aug-02	3,201.6	\$1.8	722.6	\$0.9	55.4	\$0.0	32,479.5	3,201.6	4,355.2	\$9.2	693.8	\$5.2	15.1	\$2.0	7,621.6		0.0	-	0.0	-	0.0	-	4,177.8	
Sep-02	3,201.6	\$1.8	714.0	\$0.3	71.2	\$0.0	32,479.5	3,201.6	4,355.2	\$9.2	688.4	\$4.8	24.5	\$0.0	7,621.6		0.0	-	0.0	-	0.0	-	4,177.8	
Oct-02	3,201.6	\$1.8	712.1	\$0.2	1.4	\$-	32,479.5	3,201.6	4,355.2	\$9.2	699.0	\$4.7	19.2	\$2.0	7,621.6		0.0	-	0.0	-	0.0	-	4,177.8	

\* Starting May 2006, Monthly Auction prices and quantities are reported for the upcoming auction month only

## Attachment VI: November 1999 – October 2013 Installed Capacity Auction Activity

Month	NYCA								NYC								LI							
	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold
	MW	Price	MW	Price	MW	Price	MW	MW	MW	Price	MW	Price	MW	Price	MW	MW	MW	Price	MW	Price	MW	Price	MW	MW
Nov-02	3,486.7	\$0.7	1,024.3	\$0.5	85.0	\$0.4	34,169.7	3,486.7	4,540.0	\$7.0	748.1	\$6.4	61.1	\$4.1	8,021.8		0.0	-	0.0	-	0.0	-	4,256.2	
Dec-02	3,486.7	\$0.7	1,219.3	\$0.3	51.4	\$0.1	34,169.7	3,486.7	4,540.0	\$7.0	762.7	\$4.1	29.9	\$2.8	8,021.8		0.0	-	0.0	-	0.0	-	4,256.2	
Jan-03	3,486.7	\$0.7	1,584.4	\$0.3	189.1	\$2.1	34,169.7	3,486.7	4,540.0	\$7.0	787.9	\$4.0	13.3	\$2.1	8,021.8		0.0	-	0.0	-	0.0	-	4,256.2	
Feb-03	3,486.7	\$0.7	1,623.1	\$0.3	85.6	\$0.5	34,169.7	3,486.7	4,540.0	\$7.0	808.6	\$3.5	1.5	\$3.0	8,021.8		0.0	-	0.0	-	0.0	-	4,256.2	
Mar-03	3,486.7	\$0.7	1,825.9	\$0.3	58.8	\$0.3	34,169.7	3,486.7	4,540.0	\$7.0	799.7	\$4.0	21.9	\$4.0	8,021.8		0.0	-	0.0	-	0.0	-	4,256.2	
Apr-03	3,486.7	\$0.7	1,571.5	\$0.2	4.2	\$0.0	34,169.7	3,486.7	4,540.0	\$7.0	829.7	\$3.4	9.1	\$3.6	8,021.8		0.0	-	0.0	-	0.0	-	4,256.2	
May-03	2,889.2	\$1.7	1,634.8	\$1.3	101.5	\$0.3	35,303.5	0.0	2,501.7	\$11.2	3,016.3	\$10.0	110.2	\$12.4	8,356.7	0.0	6.6	\$9.4	2.2	\$24.0	0.2	\$23.0	4,415.3	0.0
Jun-03	2,889.2	\$1.7	1,866.0	\$1.1	2,148.7	\$2.3	35,303.5	2,073.2	2,501.7	\$11.2	683.0	\$13.8	2,375.5	\$11.5	8,356.7	0.0	6.6	\$9.4	0.0	-----	341.9	\$5.2	4,415.3	341.9
Jul-03	2,889.2	\$1.7	1,249.2	\$2.0	2,824.2	\$2.3	35,303.5	2,274.1	2,501.7	\$11.2	527.9	\$11.6	2,558.0	\$11.5	8,356.7	0.0	6.6	\$9.4	1.0	\$5.0	344.7	\$5.1	4,415.3	344.7
Aug-03	2,889.2	\$1.7	1,344.1	\$2.0	3,096.6	\$2.3	35,303.5	2,299.3	2,501.7	\$11.2	567.9	\$11.6	2,497.9	\$11.5	8,356.7	0.0	6.6	\$9.4	1.1	\$5.0	441.8	\$4.0	4,415.3	441.8
Sep-03	2,889.2	\$1.7	1,396.7	\$2.0	3,134.1	\$2.1	35,303.5	2,448.1	2,501.7	\$11.2	558.1	\$11.6	2,499.5	\$11.5	8,356.7	0.0	6.6	\$9.4	0.0	-----	397.8	\$4.6	4,415.3	396.2
Oct-03	2,889.2	\$1.7	1,408.4	\$1.9	3,253.2	\$2.0	35,303.5	2,504.8	2,501.7	\$11.2	638.8	\$11.6	2,415.1	\$11.5	8,356.7	0.0	6.6	\$9.4	0.0	-----	397.8	\$4.6	4,415.3	396.0
Nov-03	2,163.2	\$1.2	2,128.8	\$1.2	6,833.0	\$1.9	35,203.4	2,566.9	475.0	\$6.6	579.3	\$6.7	5,029.3	\$7.0	8,346.1	571.0	0.0	\$4.0	0.0	-----	114.3	\$8.1	4,401.9	83.7
Dec-03	2,163.2	\$1.2	1,860.1	\$1.5	7,203.1	\$1.8	35,203.4	2,698.6	475.0	\$6.6	909.4	\$6.6	4,711.0	\$7.0	8,346.1	571.0	0.0	\$4.0	0.0	-----	107.5	\$8.2	4,401.9	76.9
Jan-04	2,163.2	\$1.2	2,083.6	\$1.5	6,972.2	\$1.8	35,203.4	2,732.1	475.0	\$6.6	968.9	\$6.6	4,644.8	\$7.0	8,346.1	571.0	0.0	\$4.0	0.0	-----	128.2	\$8.0	4,401.9	97.0
Feb-04	2,163.2	\$1.2	2,475.9	\$1.6	6,379.9	\$1.7	35,203.4	2,747.4	475.0	\$6.6	2,167.5	\$6.8	3,422.4	\$7.0	8,346.1	571.0	0.0	\$4.0	0.6	\$7.5	202.6	\$7.1	4,401.9	176.0
Mar-04	2,163.2	\$1.2	2,180.0	\$1.5	6,569.8	\$1.0	35,203.4	3,369.3	475.0	\$6.6	1,938.0	\$6.1	3,841.5	\$7.0	8,346.1	571.0	0.0	\$4.0	0.6	\$7.0	142.6	\$7.7	4,401.9	119.9
Apr-04	2,163.2	\$1.2	2,646.7	\$1.0	6,987.5	\$0.8	35,203.4	3,543.8	475.0	\$6.6	2,047.2	\$6.0	3,779.1	\$7.0	8,346.1	571.0	0.0	\$4.0	0.6	\$6.9	199.0	\$7.0	4,401.9	179.7
May-04	2,441.0	\$1.7	2,489.7	\$1.7	6,189.1	\$1.3	35,584.5	3,328.0	1,245.3	\$11.2	2,022.4	\$11.2	2,898.3	\$11.4	8,444.6	214.9	11.2	\$8.0	1.6	\$8.0	97.5	\$9.8	4,761.5	81.2
Jun-04	2,441.0	\$1.7	2,133.6	\$1.5	6,239.9	\$1.3	35,584.5	3,355.3	1,245.3	\$11.2	2,532.8	\$11.3	2,391.9	\$11.4	8,444.6	214.9	11.2	\$8.0	11.2	\$9.3	90.8	\$9.8	4,761.5	84.3
Jul-04	2,441.0	\$1.7	1,756.7	\$1.3	6,410.6	\$1.0	35,584.5	3,518.8	1,245.3	\$11.2	2,705.7	\$11.3	2,261.3	\$11.4	8,444.6	214.9	11.2	\$8.0	15.9	\$8.7	193.4	\$8.4	4,761.5	192.9
Aug-04	2,441.0	\$1.7	2,046.5	\$1.2	6,544.7	\$1.2	35,584.5	3,428.1	1,245.3	\$11.2	3,126.1	\$11.3	1,854.4	\$11.4	8,444.6	214.9	11.2	\$8.0	16.4	\$8.1	213.1	\$8.2	4,761.5	213.1
Sep-04	2,441.0	\$1.7	2,258.8	\$1.2	6,456.2	\$1.1	35,584.5	3,499.6	1,245.3	\$11.2	3,272.4	\$11.3	1,798.6	\$11.4	8,444.6	214.9	11.2	\$8.0	16.2	\$8.1	214.2	\$8.2	4,761.5	214.2
Oct-04	2,441.0	\$1.7	2,460.8	\$1.2	6,633.9	\$1.1	35,584.5	3,465.6	1,245.3	\$11.2	2,771.9	\$11.2	2,336.3	\$11.4	8,444.6	214.9	11.2	\$8.0	16.2	\$8.1	214.2	\$8.2	4,761.5	214.2
Nov-04	3,050.7	\$0.6	2,344.4	\$0.7	6,730.6	\$0.7	35,515.9	3,759.3	2,249.4	\$6.7	1,253.8	\$7.0	3,137.5	\$7.1	8,469.5	705.9	13.9	\$4.0	10.9	\$4.0	358.2	\$6.3	4,736.0	357.7
Dec-04	3,050.7	\$0.6	3,058.4	\$0.7	6,011.5	\$0.6	35,515.9	3,823.5	2,249.4	\$6.7	1,606.0	\$7.1	2,758.3	\$7.1	8,469.5	705.9	13.9	\$4.0	9.0	\$4.3	368.5	\$6.2	4,736.0	367.6
Jan-05	3,050.7	\$0.6	2,945.8	\$0.6	5,928.6	\$0.3	35,515.9	4,064.8	2,249.4	\$6.7	2,433.6	\$7.0	1,919.3	\$7.1	8,469.5	705.9	13.9	\$4.0	9.0	\$3.8	372.1	\$6.2	4,736.0	371.4
Feb-05	3,050.7	\$0.6	2,769.6	\$0.5	6,256.2	\$0.3	35,515.9	4,082.2	2,249.4	\$6.7	2,596.5	\$7.0	1,761.5	\$7.1	8,469.5	705.9	13.9	\$4.0	7.6	\$3.7	373.3	\$6.1	4,736.0	372.8
Mar-05	3,050.7	\$0.6	2,890.9	\$0.5	6,025.4	\$0.4	35,515.9	3,966.2	2,249.4	\$6.7	2,671.8	\$7.0	1,784.0	\$7.1	8,469.5	705.9	13.9	\$4.0	7.0	\$3.5	371.9	\$6.2	4,736.0	371.9
Apr-05	3,050.7	\$0.6	2,891.5	\$0.5	6,241.1	\$0.3	35,515.9	4,064.8	2,249.4	\$6.7	2,611.4	\$7.0	1,851.9	\$7.1	8,469.5	705.9	13.9	\$4.0	7.0	\$3.5	367.4	\$6.2	4,736.0	365.8
May-05	2,624.6	\$0.8	1,630.0	\$0.8	6,975.7	\$2.0	35,799.2	3,110.8	2,547.2	\$11.7	1,035.2	\$11.9	2,547.1	\$12.0	8,526.8	284.0	10.6	\$8.0	2.7	\$8.0	85.5	\$12.2	4,904.9	85.4
Jun-05	2,624.6	\$0.8	1,752.9	\$1.4	6,306.6	\$2.0	35,799.2	3,135.2	2,547.2	\$11.7	2,657.9	\$11.8	974.2	\$12.0	8,526.8	291.3	10.6	\$8.0	2.0	\$8.5	100.4	\$12.0	4,904.9	97.8
Jul-05	2,624.6	\$0.8	4,077.8	\$1.3	5,073.3	\$1.0	35,799.2	3,703.4	2,547.2	\$11.7	2,742.6	\$11.8	992.5	\$12.0	8,526.8	292.5	10.6	\$8.0	4.3	\$9.0	195.3	\$10.5	4,904.9	195.0
Aug-05	2,624.6	\$0.8	3,819.1	\$0.8	5,147.3	\$1.0	35,799.2	3,703.4	2,547.2	\$11.7	2,689.7	\$11.8	1,134.8	\$11.9	8,526.8	301.6	10.6	\$8.0	4.6	\$8.5	222.5	\$10.1	4,904.9	222.5
Sep-05	2,624.6	\$0.8	3,412.5	\$0.8	5,303.5	\$1.5	35,799.2	3,436.7	2,547.2	\$11.7	2,842.0	\$11.8	1,086.6	\$11.7	8,526.8	318.2	10.6	\$8.0	4.6	\$8.6	233.0	\$9.9	4,904.9	233.0
Oct-05	2,624.6	\$0.8	3,861.2	\$1.0	5,142.0	\$1.3	35,799.2	3,555.2	2,547.2	\$11.7	2,644.5	\$11.8	1,238.1	\$11.9	8,526.8	301.6	10.6	\$8.0	4.6	\$8.7	260.0	\$9.5	4,904.9	260.0

\* Starting May 2006, Monthly Auction prices and quantities are reported for the upcoming auction month only



## Attachment VI: November 1999 – October 2013 Installed Capacity Auction Activity

Month	NYCA								NYC								LI							
	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold
	MW	Price	MW	Price	MW	Price	MW	MW	MW	Price	MW	Price	MW	Price	MW	MW	MW	Price	MW	Price	MW	Price	MW	MW
Nov-05	2,987.1	\$0.6	2,676.1	\$0.7	6,661.9	\$0.9	35,761.5	3,789.0	1,846.4	\$5.1	943.9	\$6.4	3,865.4	\$6.6	8,569.2	854.3	15.0	\$0.7	10.0	\$5.0	330.5	\$8.4	4,962.4	330.5
Dec-05	2,987.1	\$0.6	3,466.7	\$0.7	6,306.0	\$0.7	35,761.5	3,907.2	1,846.4	\$5.1	2,130.4	\$6.4	2,674.7	\$6.6	8,569.2	854.3	15.0	\$0.7	10.1	\$5.0	344.5	\$8.2	4,962.4	344.5
Jan-06	2,987.1	\$0.6	3,966.1	\$0.6	5,625.3	\$2.0	35,761.5	3,102.5	1,846.4	\$5.1	2,558.2	\$6.2	2,116.6	\$6.6	8,569.2	854.3	15.0	\$0.7	10.0	\$5.0	288.1	\$9.0	4,962.4	288.1
Feb-06	2,987.1	\$0.6	3,379.8	\$1.0	6,432.7	\$1.7	35,761.5	3,305.2	1,846.4	\$5.1	3,162.5	\$5.8	2,037.4	\$6.6	8,569.2	854.3	15.0	\$0.7	10.0	\$5.0	343.1	\$8.2	4,962.4	343.1
Mar-06	2,987.1	\$0.6	5,214.9	\$0.6	5,234.1	\$0.6	35,761.5	3,954.5	1,846.4	\$5.1	2,704.7	\$5.8	2,031.7	\$6.6	8,569.2	854.3	15.0	\$0.7	10.0	\$5.0	350.8	\$8.1	4,962.4	350.8
Apr-06	2,987.1	\$0.6	4,899.7	\$0.5	5,357.5	\$0.4	35,761.5	4,055.0	1,846.4	\$5.1	3,237.1	\$5.9	1,540.4	\$6.6	8,569.2	854.3	15.0	\$0.7	10.0	\$5.0	346.1	\$8.1	4,962.4	346.1
May-06 *	3,014.5	\$1.4	2,196.7	\$1.6	6,936.8	\$3.3	37,154.2	2,526.4	2,186.7	\$12.4	1,422.7	\$12.4	2,209.8	\$12.7	8,798.1	255.9	4.0	\$6.5	9.0	\$6.5	166.8	\$11.2	5,110.3	165.0
Jun-06	3,014.5	\$1.4	2,123.1	\$2.6	6,163.0	\$3.1	37,154.2	2,601.6	2,186.7	\$12.4	1,088.8	\$12.4	2,165.3	\$12.7	8,798.1	255.9	4.0	\$6.5	2.3	\$7.5	469.3	\$6.8	5,110.3	462.5
Jul-06	3,014.5	\$1.4	1,926.2	\$2.9	5,901.1	\$3.3	37,154.2	2,481.4	2,186.7	\$12.4	1,021.0	\$12.5	1,909.6	\$12.7	8,798.1	255.9	4.0	\$6.5	3.0	\$7.0	483.0	\$6.5	5,110.3	478.8
Aug-06	3,014.5	\$1.4	2,170.6	\$3.3	5,488.5	\$3.0	37,154.2	2,675.1	2,186.7	\$12.4	930.5	\$12.6	1,870.7	\$12.7	8,798.1	255.9	4.0	\$6.5	3.0	\$6.8	497.2	\$6.3	5,110.3	493.0
Sep-06	3,014.5	\$1.4	2,213.1	\$3.0	5,087.8	\$2.8	37,154.2	2,295.3	2,186.7	\$12.4	847.6	\$12.6	1,953.5	\$12.7	8,798.1	255.9	4.0	\$6.5	4.6	\$6.5	503.4	\$6.2	5,110.3	500.8
Oct-06	3,014.5	\$1.4	1,990.0	\$2.8	5,368.3	\$2.8	37,154.2	2,814.8	2,186.7	\$12.4	818.3	\$12.7	2,316.7	\$12.7	8,798.1	255.9	4.0	\$6.5	7.2	\$6.0	513.6	\$6.0	5,110.3	512.6
Nov-06	3,167.7	\$2.5	3,170.9	\$1.8	7,454.7	\$1.5	37,319.2	3,577.8	3,298.4	\$5.7	1,023.5	\$5.8	2,057.8	\$5.8	8,831.5	974.8	1.5	\$3.5	9.6	\$3.8	672.0	\$3.7	5,072.2	669.4
Dec-06	3,167.7	\$2.5	2,020.2	\$2.3	7,841.7	\$2.2	37,319.2	3,170.5	3,298.4	\$5.7	1,015.1	\$5.8	2,018.8	\$5.8	8,831.5	974.8	1.5	\$3.5	11.0	\$3.5	670.6	\$3.7	5,072.2	669.7
Jan-07	3,167.7	\$2.5	1,932.7	\$2.5	7,780.6	\$2.7	37,319.2	2,853.4	3,298.4	\$5.7	1,064.4	\$5.8	1,973.8	\$5.8	8,831.5	974.8	1.5	\$3.5	13.0	\$3.5	673.0	\$3.6	5,072.2	672.9
Feb-07	3,167.7	\$2.5	2,012.1	\$2.6	7,029.1	\$2.7	37,319.2	2,876.6	3,298.4	\$5.7	954.8	\$5.8	2,144.0	\$5.8	8,831.5	974.8	1.5	\$3.5	13.0	\$3.5	672.3	\$3.6	5,072.2	672.3
Mar-07	3,167.7	\$2.5	2,691.5	\$1.7	5,932.2	\$1.3	37,319.2	3,673.8	3,298.4	\$5.7	922.4	\$5.8	2,008.8	\$5.8	8,831.5	974.8	1.5	\$3.5	13.0	\$3.5	672.3	\$3.6	5,072.2	672.3
Apr-07	3,167.7	\$2.5	1,921.9	\$1.3	5,912.0	\$1.1	37,319.2	3,817.9	3,298.4	\$5.7	990.0	\$5.8	1,971.6	\$5.8	8,831.5	974.8	1.5	\$3.5	13.0	\$3.3	672.3	\$3.6	5,072.2	672.3
May-07	3,196.6	\$2.3	2,610.6	\$2.4	6,283.6	\$3.2	37,228.3	2,618.7	1,894.0	\$12.4	1,099.1	\$12.3	3,125.4	\$12.7	9,058.3	281.1	2.2	\$3.8	3.0	\$3.8	450.3	\$7.3	5,056.3	450.2
Jun-07	3,196.6	\$2.3	2,416.8	\$2.9	5,876.5	\$3.4	37,228.3	2,485.6	1,894.0	\$12.4	1,194.4	\$12.4	2,951.5	\$12.7	9,058.3	281.1	2.2	\$3.8	3.0	\$5.5	353.1	\$8.8	5,056.3	353.1
Jul-07	3,196.6	\$2.3	2,379.3	\$3.2	5,749.7	\$3.5	37,228.3	2,407.6	1,894.0	\$12.4	1,088.3	\$12.4	3,073.0	\$12.7	9,058.3	281.1	2.2	\$3.8	0.0	\$0.0	451.5	\$7.2	5,056.3	451.4
Aug-07	3,196.6	\$2.3	2,408.3	\$3.2	5,334.6	\$3.4	37,228.3	2,462.4	1,894.0	\$12.4	1,092.6	\$12.4	3,153.8	\$12.7	9,058.3	281.1	2.2	\$3.8	1.0	\$5.5	454.0	\$7.2	5,056.3	452.0
Sep-07	3,196.6	\$2.3	2,434.9	\$3.2	5,513.6	\$3.1	37,228.3	2,631.6	1,894.0	\$12.4	1,161.0	\$12.4	3,037.9	\$12.7	9,058.3	281.1	2.2	\$3.8	1.3	\$5.5	455.6	\$7.2	5,056.3	455.5
Oct-07	3,196.6	\$2.3	2,523.5	\$3.0	5,503.1	\$3.0	37,228.3	2,698.2	1,894.0	\$12.4	1,251.1	\$12.4	2,942.8	\$12.7	9,058.3	281.1	2.2	\$3.8	1.4	\$5.5	455.7	\$7.2	5,056.3	455.7
Nov-07	3,064.4	\$1.9	2,586.1	\$1.9	9,045.5	\$1.6	36,819.2	3,503.7	908.2	\$5.3	1,393.5	\$5.6	4,438.1	\$5.8	8,870.8	1,009.5	0.0	\$0.0	2.0	\$3.5	631.5	\$4.3	4,972.5	630.6
Dec-07	3,064.4	\$1.9	2,134.9	\$2.0	8,009.1	\$2.2	36,819.2	3,149.2	908.2	\$5.3	1,532.1	\$5.6	4,067.3	\$5.8	8,870.8	1,009.5	0.0	\$0.0	0.0	\$0.0	635.9	\$4.3	4,972.5	633.0
Jan-08	3,064.4	\$1.9	2,324.2	\$2.4	7,053.4	\$3.4	36,819.2	2,477.3	908.2	\$5.3	1,149.7	\$5.6	4,662.5	\$5.8	8,870.8	1,009.5	0.0	\$0.0	1.9	\$3.7	640.3	\$4.2	4,972.5	637.4
Feb-08	3,064.4	\$1.9	1,553.9	\$3.0	6,848.0	\$3.2	36,819.2	2,602.7	908.2	\$5.3	1,342.9	\$5.6	4,442.2	\$5.8	8,870.8	1,009.5	0.0	\$0.0	7.2	\$3.0	645.1	\$4.1	4,972.5	645.1
Mar-08	3,064.4	\$1.9	3,409.4	\$1.5	8,288.3	\$1.1	36,819.2	3,818.1	908.2	\$5.3	1,573.3	\$3.6	3,348.7	\$1.1	8,870.8	1,494.9	0.0	\$0.0	2.8	\$2.1	648.5	\$4.0	4,972.5	648.5
Apr-08	3,064.4	\$1.9	2,511.1	\$1.1	7,759.5	\$0.8	36,819.2	3,989.6	908.2	\$5.3	1,245.5	\$1.1	2,964.9	\$0.8	8,870.8	1,591.6	0.0	\$0.0	2.8	\$2.1	648.8	\$4.0	4,972.5	648.8
May-08	2,994.7	\$2.7	1,851.8	\$2.8	8,294.8	\$2.6	36,632.5	3,080.6	494.9	\$6.5	903.4	\$6.5	4,987.2	\$5.5	8,910.6	985.9	0.0	\$2.8	21.8	\$2.8	652.1	\$2.6	4,684.9	650.8
Jun-08	2,994.7	\$2.7	1,909.8	\$2.9	7,684.7	\$2.9	36,632.5	2,909.9	494.9	\$6.5	1,620.2	\$5.4	3,745.8	\$6.0	8,910.6	930.1	0.0	\$2.8	110.5	\$2.9	644.9	\$2.9	4,684.9	583.3
Jul-08	2,994.7	\$2.7	1,609.2	\$3.0	8,324.1	\$2.8	36,632.5	2,981.6	494.9	\$6.5	744.5	\$6.0	3,758.3	\$6.3	8,910.6	896.9	0.0	\$2.8	128.2	\$3.0	653.4	\$2.8	4,684.9	650.8
Aug-08	2,994.7	\$2.7	1,854.4	\$2.9	7,451.6	\$2.7	36,632.5	3,030.1	494.9	\$6.5	1,157.8	\$6.3	3,349.2	\$6.2	8,910.6	914.8	0.0	\$2.8	87.1	\$2.9	657.4	\$2.7	4,684.9	656.3
Sep-08	2,994.7	\$2.7	2,350.0	\$2.7	6,766.6	\$2.5	36,632.5	3,156.4	494.9	\$6.5	1,083.2	\$6.0	3,083.4	\$6.0	8,910.6	935.7	0.0	\$2.8	13.0	\$2.7	659.4	\$2.5	4,684.9	658.9
Oct-08	2,994.7	\$2.7	2,029.6	\$2.4	6,944.8	\$1.9	36,632.5	3,418.3	494.9	\$6.5	604.4	\$5.9	3,230.1	\$5.8	8,910.6	951.9	0.0	\$2.8	7.9	\$2.4	668.7	\$1.9	4,684.9	668.7

\* Starting May 2006, Monthly Auction prices and quantities are reported for the upcoming auction month only

## Attachment VI: November 1999 – October 2013 Installed Capacity Auction Activity

Month	NYCA								NYC								LI							
	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold
	MW	Price	MW	Price	MW	Price	MW	MW	MW	Price	MW	Price	MW	Price	MW	MW	MW	Price	MW	Price	MW	Price	MW	MW
Nov-08	2,810.1	\$1.8	2,596.0	\$1.6	9,114.6	\$1.0	36,492.6	3,877.5	1,260.8	\$2.8	1,378.2	\$2.3	3,974.3	\$1.5	9,003.4	1,447.1	0.3	\$1.8	1.8	\$1.6	772.8	\$1.0	4,566.1	772.6
Dec-08	2,810.1	\$1.8	1,663.3	\$1.5	9,113.9	\$1.3	36,492.6	3,752.1	1,260.8	\$2.8	616.1	\$1.6	4,186.0	\$1.3	9,003.4	1,558.1	0.3	\$1.8	10.0	\$1.5	802.4	\$1.3	4,566.1	802.2
Jan-09	2,810.1	\$1.8	2,027.2	\$1.5	8,448.2	\$3.2	36,492.6	2,779.0	1,260.8	\$2.8	846.5	\$1.5	4,151.0	\$3.2	9,003.4	1,579.9	0.3	\$1.8	147.9	\$1.5	847.0	\$3.2	4,566.1	733.9
Feb-09	2,810.1	\$1.8	2,435.3	\$2.5	8,250.3	\$1.8	36,492.6	3,492.1	1,260.8	\$2.8	1,021.1	\$3.1	3,729.9	\$1.8	9,003.4	1,592.0	0.3	\$1.8	66.4	\$2.5	821.1	\$1.8	4,566.1	820.9
Mar-09	2,810.1	\$1.8	2,083.6	\$1.1	8,190.4	\$0.5	36,492.6	4,128.2	1,260.8	\$2.8	849.6	\$1.5	3,622.8	\$0.5	9,003.4	1,592.0	0.3	\$1.8	97.0	\$1.1	849.1	\$0.5	4,566.1	816.9
Apr-09	2,810.1	\$1.8	1,759.7	\$0.5	8,257.2	\$0.3	36,492.6	4,228.6	1,260.8	\$2.8	588.0	\$0.8	3,755.6	\$0.3	9,003.4	1,586.6	0.3	\$1.8	25.4	\$0.5	821.1	\$0.3	4,566.1	820.9
May-09	2,371.1	\$3.0	2,500.2	\$3.0	8,492.0	\$2.6	36,362.4	3,216.7	436.7	\$6.8	757.9	\$7.0	4,976.3	\$8.7	8,855.3	707.3	53.3	\$3.0	69.5	\$3.0	414.8	\$4.7	4,748.5	410.4
Jun-09	2,371.1	\$3.0	2,187.7	\$3.5	8,675.3	\$4.2	36,362.4	2,505.4	436.7	\$6.8	1,447.7	\$8.6	3,854.3	\$8.7	8,855.3	714.2	53.3	\$3.0	41.5	\$3.5	415.8	\$4.7	4,748.5	415.8
Jul-09	2,371.1	\$3.0	3,207.0	\$4.1	7,495.4	\$4.4	36,362.4	2,420.6	436.7	\$6.8	1,623.8	\$8.7	2,930.4	\$8.5	8,855.3	732.7	53.3	\$3.0	70.6	\$4.1	404.9	\$4.8	4,748.5	404.8
Aug-09	2,371.1	\$3.0	3,172.4	\$4.2	7,242.4	\$3.4	36,362.4	2,857.0	436.7	\$6.8	1,281.0	\$8.5	2,960.2	\$8.5	8,855.3	735.1	53.3	\$3.0	67.6	\$4.2	717.8	\$3.4	4,748.5	717.8
Sep-09	2,371.1	\$3.0	2,719.7	\$3.5	7,393.3	\$2.8	36,362.4	3,147.7	436.7	\$6.8	795.5	\$8.4	3,403.2	\$7.7	8,855.3	816.4	53.3	\$3.0	68.2	\$3.5	742.9	\$2.8	4,748.5	738.9
Oct-09	2,371.1	\$3.0	2,763.7	\$2.6	7,087.7	\$2.2	36,362.4	3,380.5	436.7	\$6.8	1,095.1	\$7.6	2,926.6	\$7.7	8,855.3	811.1	53.3	\$3.0	20.4	\$2.6	749.3	\$2.2	4,748.5	743.1
Nov-09	3,201.1	\$1.8	3,044.6	\$1.6	9,111.4	\$0.5	35,785.3	4,081.4	825.2	\$4.7	2,274.7	\$1.9	3,124.0	\$1.2	8,551.6	1,422.3	35.0	\$1.8	31.0	\$1.6	843.5	\$0.5	4,685.0	843.3
Dec-09	3,201.1	\$1.8	2,665.9	\$1.3	8,472.6	\$0.8	35,785.3	3,976.7	825.2	\$4.7	498.5	\$1.7	3,607.0	\$0.8	8,551.6	1,467.4	35.0	\$1.8	113.1	\$1.3	875.3	\$0.8	4,685.0	842.3
Jan-10	3,201.1	\$1.8	2,392.3	\$1.6	8,871.7	\$1.9	35,785.3	3,505.4	825.2	\$4.7	485.5	\$1.8	4,257.0	\$1.9	8,551.6	1,497.1	35.0	\$1.8	82.0	\$1.6	843.4	\$1.9	4,685.0	843.3
Feb-10	3,201.1	\$1.8	2,672.5	\$2.6	8,406.4	\$3.5	35,785.3	2,810.0	825.2	\$4.7	506.1	\$6.4	4,240.3	\$8.0	8,551.6	782.0	35.0	\$1.8	82.3	\$2.6	843.3	\$3.5	4,685.0	843.3
Mar-10	3,201.1	\$1.8	2,770.9	\$1.6	8,211.1	\$0.9	35,785.3	3,933.4	825.2	\$4.7	1,152.4	\$7.5	3,472.0	\$7.7	8,551.6	807.3	35.0	\$1.8	17.5	\$1.6	843.3	\$0.9	4,685.0	843.3
Apr-10	3,201.1	\$1.8	2,484.4	\$0.7	8,399.0	\$0.6	35,785.3	4,021.8	825.2	\$4.7	945.5	\$7.5	3,468.4	\$7.2	8,551.6	860.1	35.0	\$1.8	79.5	\$0.7	855.4	\$0.6	4,685.0	843.3
May-10	2,868.1	\$2.5	4,462.0	\$2.7	7,827.0	\$3.5	35,045.3	2,860.2	1,096.8	\$12.9	335.7	\$13.3	4,004.2	\$13.5	8,336.0	372.0	26.2	\$2.5	16.8	\$2.7	354.8	\$5.8	4,901.0	354.0
Jun-10	2,868.1	\$2.5	3,439.9	\$2.8	8,863.7	\$2.1	35,045.3	3,396.5	1,096.8	\$12.9	1,451.5	\$13.4	2,571.5	\$13.1	8,336.0	403.6	26.2	\$2.5	54.7	\$2.8	829.0	\$2.1	5,021.0	829.0
Jul-10	2,868.1	\$2.5	2,413.8	\$2.0	8,617.7	\$1.9	35,045.3	3,475.3	1,096.8	\$12.9	836.2	\$13.0	2,797.1	\$13.1	8,336.0	412.1	26.2	\$2.5	85.7	\$2.0	816.9	\$1.9	5,021.0	816.9
Aug-10	2,868.1	\$2.5	2,062.7	\$1.8	8,123.1	\$1.7	35,045.3	3,563.7	1,096.8	\$12.9	650.2	\$13.0	3,025.4	\$13.0	8,336.0	418.7	26.2	\$2.5	22.1	\$1.8	851.2	\$1.7	5,021.0	851.2
Sep-10	2,868.1	\$2.5	2,444.2	\$1.0	7,993.5	\$0.6	35,045.3	3,964.3	1,096.8	\$12.9	992.0	\$12.9	2,799.0	\$12.5	8,336.0	457.8	26.2	\$2.5	8.4	\$1.0	865.9	\$0.6	5,021.0	865.9
Oct-10	2,868.1	\$2.5	2,283.5	\$0.5	8,165.3	\$0.5	35,045.3	4,022.9	1,096.8	\$12.9	882.1	\$12.5	2,838.5	\$12.7	8,336.0	439.2	26.2	\$2.5	25.7	\$0.5	851.8	\$0.6	5,021.0	851.8
Nov-10	2,820.1	\$0.4	4,179.3	\$0.3	9,383.4	\$0.0	35,832.5	4,295.9	1,109.8	\$4.6	829.9	\$4.8	4,571.0	\$4.3	8,737.5	1,179.5	1.2	\$0.4	6.1	\$0.3	913.4	\$0.0	5,073.8	913.3
Dec-10	2,820.1	\$0.4	3,352.0	\$0.1	8,433.9	\$0.5	35,832.5	4,100.2	1,109.8	\$4.6	1,620.7	\$4.3	3,389.7	\$3.7	8,737.5	1,237.6	1.2	\$0.4	17.7	\$0.1	915.8	\$0.5	5,073.8	913.3
Jan-11	2,820.1	\$0.4	2,719.8	\$0.7	9,786.2	\$0.5	35,832.5	4,100.2	1,109.8	\$4.6	1,154.6	\$3.7	3,135.3	\$4.0	8,737.5	1,207.6	1.2	\$0.4	47.1	\$0.7	913.3	\$0.5	5,073.8	913.3
Feb-11	2,820.1	\$0.4	2,639.8	\$0.5	8,839.8	\$0.7	35,832.5	4,040.0	1,109.8	\$4.6	736.7	\$4.3	3,516.2	\$3.6	8,737.5	1,245.8	1.2	\$0.4	76.7	\$0.5	913.3	\$0.7	5,073.8	913.3
Mar-11	2,820.1	\$0.4	2,550.6	\$0.2	8,199.3	\$0.3	35,832.5	4,180.1	1,109.8	\$4.6	801.5	\$4.0	4,231.1	\$3.6	8,737.5	1,246.0	1.2	\$0.4	75.9	\$0.2	926.6	\$0.3	5,073.8	913.3
Apr-11	2,820.1	\$0.4	2,389.0	\$0.2	8,448.2	\$0.2	35,832.5	4,240.0	1,109.8	\$4.6	800.7	\$3.8	3,509.6	\$3.3	8,737.5	1,269.1	1.2	\$0.4	85.7	\$0.2	918.4	\$0.2	5,073.8	913.3
May-11	3,515.9	\$0.6	3,416.9	\$0.6	7,530.4	\$0.7	34,684.4	3,911.1	726.5	\$13.5	1,663.8	\$13.2	3,354.4	\$12.0	8,832.0	462.4	1.2	\$0.6	60.4	\$0.6	895.3	\$0.7	5,051.7	895.3
Jun-11	3,515.9	\$0.6	2,876.9	\$0.6	7,382.8	\$0.6	34,684.4	3,948.7	726.5	\$13.5	1,661.7	\$12.0	2,896.2	\$11.8	8,832.0	482.3	1.2	\$0.6	60.8	\$0.6	904.5	\$0.6	5,051.7	904.5
Jul-11	3,515.9	\$0.6	2,535.2	\$0.5	7,562.7	\$0.2	34,684.4	4,104.2	726.5	\$13.5	1,254.1	\$11.8	3,301.5	\$5.8	8,832.0	1,046.9	1.2	\$0.6	35.6	\$0.5	906.1	\$0.2	5,051.7	904.5
Aug-11	3,515.9	\$0.6	2,426.5	\$0.2	7,786.3	\$0.1	34,684.4	4,142.8	726.5	\$13.5	834.6	\$9.5	3,361.6	\$5.8	8,832.0	1,040.8	1.2	\$0.6	32.5	\$0.2	910.8	\$0.1	5,051.7	908.3
Sep-11	3,515.9	\$0.6	2,204.9	\$0.1	7,936.4	\$0.2	34,684.4	4,093.1	726.5	\$13.5	691.3	\$7.0	3,680.6	\$5.7	8,832.0	1,052.3	1.2	\$0.6	58.5	\$0.1	892.1	\$0.2	5,051.7	890.0
Oct-11	3,515.9	\$0.6	2,135.9	\$0.1	7,384.2	\$0.1	34,684.4	4,105.9	726.5	\$13.5	646.0	\$6.5	3,511.6	\$9.0	8,832.0	883.0	1.2	\$0.6	61.8	\$0.1	900.9	\$0.1	5,051.7	900.9

\* Starting May 2006, Monthly Auction prices and quantities are reported for the upcoming auction month only

## Attachment VI: November 1999 – October 2013 Installed Capacity Auction Activity

Month	NYCA								NYC								LI							
	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold	Capability Period* (Strip)		Monthly Auction		Spot Market		Minimum Required	Excess Sold
	MW	Price	MW	Price	MW	Price	MW	MW	MW	Price	MW	Price	MW	Price	MW	MW	MW	Price	MW	Price	MW	Price	MW	MW
Nov-11	2,008.0	\$0.2	4,091.0	\$0.1	9,356.7	\$0.1	34,778.9	4,147.4	1,031.2	\$2.7	1,089.8	\$3.0	4,279.6	\$0.5	8,833.0	1,550.7	3.6	\$0.2	49.7	\$0.1	900.7	\$0.1	4,989.3	898.1
Dec-11	2,008.0	\$0.2	4,005.3	\$0.1	8,957.9	\$0.1	34,778.9	4,130.0	1,031.2	\$2.7	763.1	\$2.0	3,767.2	\$4.7	8,833.0	1,222.5	3.6	\$0.2	48.2	\$0.1	902.3	\$0.1	4,989.3	898.1
Jan-12	2,008.0	\$0.2	4,285.4	\$0.2	9,381.7	\$0.5	34,778.9	3,956.1	1,031.2	\$2.7	647.3	\$4.0	3,886.5	\$4.9	8,833.0	1,205.0	3.6	\$0.2	29.1	\$0.2	923.7	\$0.5	4,989.3	898.1
Feb-12	2,008.0	\$0.2	3,796.3	\$0.4	9,173.5	\$0.2	34,778.9	4,095.2	1,031.2	\$2.7	1,020.3	\$4.8	3,172.1	\$4.9	8,833.0	1,208.1	3.6	\$0.2	24.2	\$0.4	900.4	\$0.2	4,989.3	898.1
Mar-12	2,008.0	\$0.2	3,624.5	\$0.1	8,976.3	\$0.1	34,778.9	4,130.0	1,031.2	\$2.7	988.5	\$4.3	2,991.7	\$4.7	8,833.0	1,221.0	3.6	\$0.2	0.6	\$0.1	922.2	\$0.1	4,989.3	898.1
Apr-12	2,008.0	\$0.2	3,795.0	\$0.1	8,961.0	\$0.1	34,778.9	4,130.0	1,031.2	\$2.7	967.6	\$4.5	2,958.9	\$4.6	8,833.0	1,228.5	3.6	\$0.2	6.6	\$0.1	921.4	\$0.1	4,989.3	898.1
May-12	2,421.3	\$1.3	3,682.7	\$1.3	9,194.6	\$2.9	35,076.3	2,970.8	530.8	\$11.7	1,335.1	\$12.3	3,028.7	\$17.2	8,896.9	288.8	2.5	\$1.4	12.9	\$1.3	877.2	\$2.9	4,961.1	873.5
Jun-12	2,421.3	\$1.3	3,104.8	\$2.1	9,517.8	\$1.9	35,076.3	3,386.1	530.8	\$11.7	596.6	\$15.7	3,991.5	\$11.5	8,896.9	718.6	2.5	\$1.4	13.7	\$2.1	868.2	\$1.9	4,961.1	868.2
Jul-12	2,421.3	\$1.3	3,784.3	\$1.5	8,423.9	\$2.0	35,076.3	3,367.3	530.8	\$11.7	1,074.6	\$11.9	3,397.6	\$11.0	8,896.9	763.7	2.5	\$1.4	4.5	\$1.5	609.3	\$3.6	4,961.1	608.7
Aug-12	2,421.3	\$1.3	3,439.0	\$2.0	8,205.5	\$1.9	35,076.3	3,401.0	530.8	\$11.7	858.5	\$11.4	3,234.6	\$10.6	8,896.9	787.5	2.5	\$1.4	4.5	\$3.0	616.0	\$3.6	4,961.1	608.5
Sep-12	2,421.3	\$1.3	3,536.1	\$2.3	9,023.0	\$2.4	35,076.3	3,190.1	530.8	\$11.7	572.9	\$10.7	3,230.1	\$10.5	8,896.9	800.4	2.5	\$1.4	13.9	\$3.5	606.8	\$3.6	4,961.1	606.8
Oct-12	2,421.3	\$1.3	3,402.8	\$2.4	7,771.3	\$2.5	35,076.3	3,154.5	530.8	\$11.7	699.2	\$10.5	2,998.9	\$10.5	8,896.9	796.7	2.5	\$1.4	17.0	\$3.5	607.5	\$3.6	4,961.1	607.0
Nov-12	1,815.7	\$0.8	4,428.8	\$0.5	11,660.7	\$0.7	35,852.6	3,988.0	275.1	\$4.5	1,093.6	\$3.0	4,579.7	\$3.4	9,057.3	1,364.4	28.4	\$2.3	0.4	\$0.5	877.1	\$0.7	4,959.4	876.7
Dec-12	1,815.7	\$0.8	4,696.1	\$1.1	10,630.9	\$1.5	35,852.6	3,636.9	275.1	\$4.5	1,420.2	\$4.9	4,785.4	\$4.9	9,057.3	1,241.1	28.4	\$2.3	0.6	\$1.1	891.8	\$1.5	4,959.4	891.8
Jan-13	1,815.7	\$0.8	5,452.4	\$2.0	9,874.2	\$3.5	35,852.6	2,756.2	275.1	\$4.5	2,202.4	\$4.9	3,851.5	\$4.9	9,057.3	1,241.1	28.4	\$2.3	7.7	\$2.0	891.8	\$3.5	4,959.4	891.8
Feb-13	1,815.7	\$0.8	5,684.1	\$3.0	9,183.2	\$2.7	35,852.6	3,125.2	275.1	\$4.5	2,398.4	\$4.9	3,521.2	\$4.9	9,057.3	1,241.1	28.4	\$2.3	22.1	\$3.0	892.7	\$2.7	4,959.4	892.7
Mar-13	1,815.7	\$0.8	6,064.9	\$2.2	9,420.3	\$2.1	35,852.6	3,372.6	275.1	\$4.5	2,350.1	\$4.9	3,641.7	\$4.9	9,057.3	1,241.1	28.4	\$2.3	1.4	\$2.2	892.7	\$2.1	4,959.4	892.7
Apr-13	1,815.7	\$0.8	6,067.1	\$1.7	9,154.8	\$1.5	35,852.6	3,634.2	275.1	\$4.5	2,323.2	\$4.9	3,840.8	\$4.9	9,057.3	1,241.1	28.4	\$2.3	1.1	\$1.7	892.7	\$1.5	4,959.4	892.7
May-13	2,635.9	\$4.2	2,898.7	\$4.5	8,112.9	\$5.8	35,466.8	1,817.2	953.1	\$14.8	931.1	\$15.5	4,065.1	\$16.3	9,325.0	378.0	40.5	\$7.2	10.2	\$6.0	342.0	\$7.2	5,394.3	340.3
Jun-13	2,635.9	\$4.2	3,486.2	\$5.8	7,399.9	\$6.1	35,466.8	1,685.8	953.1	\$14.8	1,250.1	\$16.2	3,796.8	\$16.5	9,325.0	365.5	40.5	\$7.2	20.2	\$5.9	340.2	\$7.2	5,394.3	340.2
Jul-13	2,635.9	\$4.2	3,908.6	\$5.8	7,043.3	\$5.8	35,466.8	1,804.3	953.1	\$14.8	1,447.0	\$16.3	3,553.8	\$16.1	9,325.0	393.6	40.5	\$7.2	34.8	\$6.1	341.4	\$7.2	5,394.3	341.4
Aug-13	2,635.9	\$4.2	4,048.4	\$5.7	6,777.2	\$5.6	35,466.8	1,870.7	953.1	\$14.8	1,513.6	\$16.0	3,533.5	\$15.8	9,325.0	417.3	40.5	\$7.2	45.4	\$6.1	350.7	\$7.1	5,394.3	350.7
Sep-13	2,635.9	\$4.2	4,160.1	\$5.5	6,498.4	\$5.6	35,466.8	1,877.0	953.1	\$14.8	1,107.0	\$15.7	3,923.9	\$15.7	9,325.0	428.3	40.5	\$7.2	51.4	\$6.0	354.7	\$7.0	5,394.3	354.7
Oct-13	2,635.9	\$4.2	4,238.3	\$5.6	6,507.2	\$5.9	35,466.8	1,742.8	953.1	\$14.8	1,269.8	\$15.7	3,790.9	\$16.1	9,325.0	392.6	40.5	\$7.2	52.7	\$6.1	348.6	\$7.1	5,394.3	348.6

\* Starting May 2006, Monthly Auction prices and quantities are reported for the upcoming auction month only