

THIS FILING LETTER <u>DOES NOT</u> CONTAIN ANY PRIVILEGED OR CONFIDENTIAL INFORMATION. THE BODY OF REPORT, ATTACHMENTS I - IV AND ATTACHMENTS VII – IX <u>DO NOT</u> CONTAIN ANY PRIVILEGED OR CONFIDENTIAL INFORMATION. ATTACHMENTS V AND VI CONTAIN PRIVILEGED AND CONFIDENTIAL INFORMATION, AND ARE CLEARLY MARKED.

February 14, 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 V and VI

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"). 

The Commission granted the NYISO request to extend the filing date from December 20, 2012 to February 15, 2013. 

By Order dated February 3, 2010, the Commission directed the NYISO to file this report for informational purposes only.

#### 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 Attachments V and VI redacted. Separately, the NYISO is submitting as confidential Attachments V and VI. 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.

<sup>&</sup>lt;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>&</sup>lt;sup>2</sup> New York Independent System Operator, Inc., 130 FERC ¶ 61,237 (2010).

<sup>&</sup>lt;sup>3</sup> See New York Independent System Operator, Inc., "Notice Granting Extension of Time", Docket Nos. ER01-3001-000 and ER03-647-000 (issued December 13, 2012).

<sup>&</sup>lt;sup>4</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 V and VI

In accordance with Sections 388.107 and 388.112 of the Commission's Regulations,<sup>5</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 V and VI (the "Confidential Attachments"). The NYISO also requests that Confidential Attachments be exempted from public disclosure under the Freedom of Information Act ("FOIA"), 5 U.S.C. §522.

The Confidential Attachments contain 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, 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 offers, and the basis therefor, and costs of the Installed Capacity Suppliers. 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 public version of the contents of Attachment V is included in the Report as Attachment IV. Attachment IV masks the confidential and commercially sensitive data that is displayed in Confidential Attachment V.

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 VI. The NYISO incorporated into the body of Report Section I.4.5.2 a masked or aggregated version of the information that is contained in Attachment VI and thereby makes publicly available the information contained in Confidential Attachment VI that is not confidential and commercially sensitive. In that regard, the NYISO has provided a redacted version of the information contained in Attachment VI within the body of the report.

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

<sup>&</sup>lt;sup>5</sup> 18 C.F.R. §§ 388.107, 388.112 (2012).

<sup>&</sup>lt;sup>6</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>&</sup>lt;sup>7</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

Copies of correspondence concerning this filing should be addressed to:

Robert E. Fernandez, General Counsel Raymond Stalter, Director of Regulatory Affairs \*Gloria Kavanah, Senior Attorney New York Independent System Operator, Inc. 10 Krey Boulevard Rensselaer, N.Y. 12144

Tel: (518) 356-6000 Fax: (518) 356-4702 rfernandez@nyiso.com rstalter@nyiso.com gkavanah@nyiso.com

Respectfully submitted,

/s/ Gloria Kavanah

Gloria Kavanah Counsel for New York Independent System Operator, Inc.

cc: Travis Allen
Michael A. Bardee
Gregory Berson
Anna Cochrane
Jignasa Gadani
Morris Margolis
Michael McLaughlin
Joseph McClelland
Daniel Nowak

<sup>\*</sup> persons designated to receive service.

#### **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 (2012). I have also electronically served the foregoing on all market participants, on each participant in its stakeholder committees, on the New York State Public Service Commission, and on the electric utility regulatory agency of New Jersey.

Dated at Rensselaer, NY this 14<sup>th</sup> day of February 2013.

/s/ Joy A. Zimberlin

Joy A. Zimberlin New York Independent System Operator, Inc. 10 Krey Blvd. Rensselaer, NY 12144 (518) 356-6207



# 2012 Annual Installed Capacity Report

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

February 14, 2013

# Contents

	l.1.	Capacity Market Report	2
	l.1.1.	Overview	
	1.2.	Market Design and Regulatory Developments	4
	I.2.1.	Market Design	
	1.2.2.	Regulatory and Other Developments	
	I.3.	Recent Installed Capacity Auction Results	
	1.4.	Capacity Withholding Analysis	
	l.4.1.	All Capacity Areas in the NYCA	
	1.4.2.	Unoffered Capacity	
	1.4.3.	Unsold Capacity	
	1.4.4.	New York City Locality	
	1.4.5.	Rest of State	
		Overview	
		Analysis of Unoffered Capacity	
		Analysis of Unsold Capacity	
		Monthly Price Impacts	
	l.5.	Class Average Going Forward Costs	
	I.5.1.	Unsold Capacity Impact Analysis	
	I.6.	Conclusions	
	II.	NYISO Report on New Generation Projects	
	III.	New Generation Projects and Net Revenue Analysis	
	III.1.	Overview	
	III.2.	Market Design Developments to Enhance Demand Curve Performance	
	III.3.	Interconnection Queue Projects	
	III.4.	Proposed Resource Additions	
	III.5.	Revenue Analysis	
	III.5.1.		
	III.5.2.	Measure of Revenues	37
	Attachr	nent I: Existing Generating Facilities	i
	Attachr	nent II: Class Average Avoidable Costs	ii
		nent III: Class Average Going Forward Costs	
		nent IV: Unsold Capacity Offers (Masked)	
		nent V: Confidential. Unsold Capacity Offers (Unmasked)	
		nent VI: Confidential. Market Participant Explanations	
		nent VII: Interconnection Queue	
		nent VIII: Status Key for Interconnection Queue	
		nent IX: November 1999 – October 2012 Installed Capacity Auction Activity	
	Attaorii	ment ix. November 1999 Gelober 2012 installed Sapacity Adelion Activity	AI
Tabl	es		
	Table 1	: List of Mothballed and Retired Units	14
	Table 2	2: Installed Reserve Margin Percentage by Locality	19
	Table 3	3: Unoffered and Unsold MW	19
		ROS Unoffered and Unsold Capacity MW by Type of Market Participant	
		i: Maximum Price Impact of ROS Unoffered Capacity (15MW+)	
		: Maximum Price Impact of ROS Unsold MW	
		': Going Forward Cost Definitions	
		B: Unsold MW Used for GFC Calculations	
		b: Price Impact Analysis Results	
	Table 1	0: January 2013 Status of the 2008 CRP Market – Based Solutions and Transmission	0
		Plans	35
		1: Available Capacity vs. Required Capacity	
	Table 1	2: Annual Revenue Requirements in UCAP terms (\$/MW)	33 37
	i abio i	2.7 miles (4/1919)	51

Table 13: Benchmark Annual Revenues in UCAP terms (\$/MW)	38
Table 14: Revenue Margins	38
<b>C</b>	
Charts	
Chart 1: NYCA Market Clearing Prices	8
Chart 2: NYCA Offered MW	9
Chart 3: NYC Market Clearing Prices	
Chart 4: NYC Offered MW	
Chart 5: Long Island Market Clearing Prices	12
Chart 6: Long Island Offered MW	13
Chart 7: Average Percent of Unoffered MW	17
Chart 8: Average Percent of Unoffered MW	18
Chart 9: NYC Mitigation Results 2011/2012	20
Chart 10: NYC Generator and SCR UCAP	21
Chart 11: Rest of State Capacity Available, Offered, Sold and Exported	22
Chart 12: NYISO Interconnection Queue Projects	
Chart 13: UCAP-based Revenue Margins	39
Chart 14: UCAP-based Capacity Margins	40
Chart 15: Capacity Market Revenues Relative to CONE Requirements	40

### I.1. Capacity Market Report

#### I.1.1. Overview

This report (the "February 2013 Report") reviews the outcomes of the Installed Capacity 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 area").<sup>2</sup> The February 2013 Report covers the Winter 2011-2012 and Summer 2012 Capability Periods, which span from November 2011 through October 2012.<sup>3</sup> Similar NYISO reports filed in previous years cover earlier periods.

Capacity prices during the Winter 2011-2012 Capability Period were similar, on average, to those of the previous Winter Capability Period for each of the three capacity areas. The average ICAP Spot Market Auction prices over the Winter 2011-2012 Capability Period were \$0.17/kW-month, \$4.05/kW-month, and \$0.17/kW-month, for NYCA, NYC, and LI, respectively. These prices compare with \$0.35/kW-month, \$3.73/kW-month, and \$0.35/kW-month during the previous winter.

Capacity prices during the Summer 2012 Capability Period were higher in all three areas than the previous Summer Capability Period. The average Spot Market Auction prices over the Summer 2012 Capability Period were \$2.27/kW-month, \$11.88/kW-month, and \$3.19/kW-month, for NYCA, NYC, and LI, respectively. These prices compare with \$0.29/kW-month, \$8.34/kW-month, and \$0.29/kW-month during the previous summer.

The average of NYC Spot Market Auction prices for the Summer 2012 was \$3.54/kW-month higher than the Summer 2011 average. The higher summer monthly prices were driven by a decrease in available capacity and a higher ICAP Demand Curve reference point. The mothballing of Astoria Unit 2 and Astoria Unit 4 more than offset the addition of the Bayonne Energy Center. The Summer 2012 Demand Curve reference point was \$3.69/kW-month higher than the reference point in May 2011 to August 2011, and \$0.31/kW-month higher than the reference point in September 2011 to October 2011. New Demand Curves were first implemented for the October 2011 ICAP Spot Market Auction.

The average of NYCA Spot Market Auction prices for the Summer 2012 was \$1.98/kW-month higher than the Summer 2011 average. The increase was driven by reductions to available capacity throughout NYCA from both generation and Special Case Resources (SCRs).

<sup>&</sup>lt;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"), and if not defined therein, then in the Open Access Transmission Tariff ("OATT").

<sup>&</sup>lt;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.

<sup>&</sup>lt;sup>3</sup> As explained in the transmittal letter, this report is the report due annually on December 20. On December 13, 2012, the Commission granted the NYISO's request for an extended the filing date to February 15, 2013. See New York Independent System Operator, Inc., "Notice Granting Extension of Time", Docket Nos. ER01-3001-000 and ER03-647-000 (issued December 13, 2012).

The lower level of available capacity resulted in capacity that had been unsold in previous Capability Periods clearing. A 391.9 MW higher NYCA UCAP requirement also contributed to an increase in clearing prices. The higher UCAP requirement for the 2011-2012 Capability Year was caused by a 582.4 MW increase in the NYCA load forecast and a 0.5% higher NYCA Installed Reserve Margin ("IRM"), and it was partly offset by a 0.98% increase to the NYCA weighted average system derating factor, which reduces the amount of capacity that LSEs have to procure. A \$0.88/kW-month decrease in the NYCA ICAP Demand Curve reference price had a downward impact on prices.

The average of Long Island Spot Market Auction prices for the Summer 2012 was \$2.90/kW-month higher than the Summer 2011 average. The Long Island Spot Market Auction prices were set by the NYCA Spot Market Auction prices for the months of November 2011 through June 2012; Long Island cleared \$1.38/kW-month higher, on average, over July 2012 through October 2012. In the months that the NYCA price set the Long Island price, the Long Island price was affected by the same dynamics in the NYCA discussed above. In the other four months, reductions to available capacity in Long Island caused the price to clear on the Demand Curve at a higher price than the NYCA price.

For the Winter 2011-2012 and Summer 2012 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 UCAP terms, in the Winter 2011-2012 Capability Period, 46.8% of LSE Capacity requirements were met through bilateral transactions, while the remaining percent of LSE obligations were met through purchases in the NYISO-administered auctions. Similarly, in the Summer 2012 Capability Period, 46.1% of LSE capability requirements were met through bilateral transactions, while the remaining LSE obligations were satisfied through purchases made in the NYISO-administered auctions.

In the NYC and LI Localities, the seasonal average quantities of unoffered capacity were less than 2% of available supply (see Chart 7). The seasonal average quantities of unsold capacity (*i.e.*, capacity that was offered but unsold,) while below 1% for LI Locality, was 4.8% for NYC Locality. Unsold and unoffered capacity quantities from ROS resources were about 5.7% in Winter 2011-2012, and below 1% in Summer 2012 (see Chart 8).<sup>5</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 reference point on the ICAP Demand Curves.

Overall, the clearing prices resulting from the ICAP Demand Curves 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 Requirements. The NYISO understands that developers will look to anticipated future revenues when making near-term investment decisions.

<sup>5</sup> Section I. C. 3. of this report provides information and analysis of the unoffered and unsold capacity from ROS resources.

2012 Annual Installed Capacity Report | February 14, 2013 | 3

<sup>&</sup>lt;sup>4</sup> Pursuant to the NYISO rules, if the Market Clearing Price in a Locality is lower than the NYCA, the Locality Market Clearing Price is set at the NYCA clearing price.

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 NYISO's 2012 Reliability Needs Assessment (RNA) identified transmission security needs by 2013 and resource adequacy needs by 2020. The results of the 2012 RNA are currently being used in the development of the Comprehensive Reliability Plan (CRP), which is under review in the stakeholder process.

As a result of the needs identification, the Responsible Transmission Owners in those locations 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 SCR 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.

### I.2. Market Design and Regulatory Developments

### I.2.1. Market Design

Over the past year, there have been several ICAP market design initiatives. These include: (i) tariff revisions on the process by which the need for new capacity zones would be examined and new capacity zones would be established; (ii) proposed tariff revisions on the market mitigation rules that would apply to a new capacity zone; (iii) the selection of a consultant to conduct the Demand Curve reset process to establish Demand Curves for Summer 2014 through Winter 2016-2017; and (iv) the presentation of a draft study on the NYISO's ICAP market prepared by an independent consultant to the NYISO.

The NYISO has also been developing tariff provisions in the stakeholder governance process on the application of buyer-side mitigation rules to increases in capacity at existing facilities and to existing generators that repower or are replaced. These items are explained below in detail. The topic of new capacity zones was discussed numerous times throughout the year in the ICAP Working Group. Following a FERC order on September 8, 2011, the NYISO made a compliance filing on June 30, 2012, with tariff provisions to apply ICAP market mitigation measures to new capacity zones. The proposed measures are generally similar to the current NYC ICAP market mitigation measures. In accordance with the Services tariff, the NYISO performed the NCZ Study to determine whether there were Highway constraints, which would trigger the creation of a new capacity zone. The NYISO issued a report, the 2013 New Capacity Zone Study, on January 14, 2013, identifying a binding constraint on the Leeds-Pleasant Valley 345 KV line that limits generation moving from Zones A to F to Zones G through I at the UPNY-SENY interface. This constraint triggers a requirement that the NYISO file tariff provisions to create a new capacity zone to be effective for the Summer 2014 Capability Period.

<sup>7</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) ("Proposed NCZ Mitigation Measures").

<sup>&</sup>lt;sup>6</sup> See New York Independent System Operator. "2012 Reliability Needs Assessment Final Report" Issued on September 18, 2012, available at: <a href="http://www.nyiso.com/public/webdocs/media\_room/press\_releases/2012/Child\_pr\_09182012\_2012\_rna/2012\_RNA\_Final\_Report\_9-18-12\_PDF.pdf">http://www.nyiso.com/public/webdocs/media\_room/press\_releases/2012/Child\_pr\_09182012\_2012\_rna/2012\_RNA\_Final\_Report\_9-18-12\_PDF.pdf</a>.

In accordance with the Services Tariff, the Demand Curve independent consultant will study and propose parameters for an ICAP Demand Curve for the New Capacity Zone, concurrent with its study and proposed parameters for the NYCA, NYC, and LI curves. The NYISO will include a proposed Demand Curve for the New Capacity Zone in its triennial filing, which will be made by November 30, 2013.

In 2011 the NYISO retained an independent consultant, FTI Consulting, to perform an independent review of the NYISO's Installed Capacity markets. FTI Consulting was selected through a request for proposals. The study's scope was developed with stakeholder input. The focus of the study was to evaluate: (a) selected features of current New York ISO Capacity market design, (b) the impact of differences in capacity market design across New York, ISO New England, and PJM on portability, and (c) the desirability of implementing a forward capacity market in New York. In September 2012, FTI Consulting presented preliminary findings at a stakeholder meeting, and stakeholder comments were elicited. FTI then issued a draft report and stakeholders were invited to provide written comments. FTI Consulting is presently reviewing those comments and will be issuing a final report.

The NYISO made several presentations to stakeholders regarding a proposed application of buyer-side mitigation measures to generation and UDR projects that request to increase their CRIS MW. The proposal has evolved over time and is continuing through the stakeholder process as of the filing of this report. The NYISO also made numerous presentations to stakeholders on the application of the buyer-side mitigation measures to projects seeking to repower or replace existing capacity. The repowering and replacement buyer-side mitigation proposals are continuing through the stakeholder process.

### I.2.2. Regulatory and Other Developments

As discussed in this section, over the period since the December 2011 Annual Report, there have been filings with and orders issued by FERC related to the NYISO Installed Capacity market. These include a NYISO compliance filing of tariff revisions on certain aspects of computations that are part of the buyer-side mitigation analyses.<sup>8</sup> Also, two Transmission Owners entered into agreements with different generators to provide reliability support services. New York Governor Andrew Cuomo initiated an "Energy Highway" initiative with purposes of upgrading and modernizing the New York State electric power system.

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 buyer-side market power mitigation provisions. FERC ruled on the need for consistency of adjustments for inflation between adjustments used in the Demand Curves in effect at certain times and those used in the application of the buyer-side mitigation measures. The NYISO and other parties have requested clarification of the Order. On August 6, 2012, as referenced above, the NYISO filed the tariff revisions regarding certain buyer-side mitigation computations in accordance with directives in the June 22 Order. The June 22 Order also required the NYISO to publish a numerical example and narrative explanation of the buyer-side mitigation measures, which the NYISO posted on its

<sup>9</sup> Astoria Generating Company, LP et al. vs. New York Independent System Operator, Inc., 139 FERC ¶61,244 (2012) ("June 22 Order").

<sup>&</sup>lt;sup>8</sup> New York Independent System Operator, Inc., *Compliance Filing*, Docket No. ER12-2414-000 (filed August 6, 2012).

website on August 7, 2012.<sup>10</sup> On November 6, 2012, also in accordance with the June 22 Order, the NYISO issued a redetermination regarding a proposed new capacity market entrant, the Hudson Transmission Partners 660 MW controllable transmission line project. The NYISO determined it is subject to an Offer Floor, and the Market Monitoring Unit issued a report on the NYISO's redetermination.<sup>11</sup>

On September 10, 2012, FERC issued an Order on complaint regarding the NYISO's administration of the former buyer-side mitigation measures in the evaluation of Astoria Energy II and the Bayonne Energy Center.<sup>12</sup> The Order directed the NYISO to revise certain inputs used in those determinations, and issue new determinations. In accordance with the Order, the NYISO issued the redeterminations on November 6, 2012. The NYISO determined that Bayonne Energy Center is exempt, and Astoria Energy II is subject to an Offer Floor.<sup>13</sup>

On August 3, 2012, the Hudson Transmission Partners filed a complaint against the NYISO regarding certain aspects of the NYISO's application of the buyer-side mitigation test to its project.<sup>14</sup> The NYISO answered the complaint, and as of the date of this report, FERC has not yet ruled on the complaint.

On April 20, 2012, Astoria Generating Company, L.P. filed a complaint against the NYISO alleging that the NYISO violated its tariff by not issuing going-forward cost determinations for its NYC generators for the March, April, and May 2012 ICAP Spot Market Auctions.<sup>15</sup> FERC issued an order dismissing the complaint finding that the NYISO was justified in not issuing going-forward cost determinations.<sup>16</sup>

In his 2012 State of the State address, Governor Cuomo recommended a public-private initiative, the "Energy Highway," to upgrade and modernize New York State's electric power system by adding 1,000 MW of additional AC transmission capability between upstate and downstate New York, and by implementing a contingency plan to add sufficient resources to the system to mitigate adverse reliability impacts if the Indian Point Nuclear Power Plant were to close by summer 2016 if is not relicensed by the Nuclear Regulatory Commission or for any

<sup>&</sup>lt;sup>10</sup> "Buyer Side Mitigation Narrative and Numerical Example," NYISO, August 7, 2012, available at <a href="http://www.nyiso.com/public/webdocs/markets\_operations/market\_data/icap/In-City\_Mitigation\_Documents/In-City\_Mitigation\_Documents/BSM\_Narrative\_and\_Numerical\_Example.pdf">Numerical\_Example.pdf</a>.

<sup>&</sup>lt;sup>11</sup> "Assessment of the Buyer-Side Mitigation Exemption Test for the Hudson Transmission Partners Project," Potomac Economics, Ltd., November 6, 2012; available at <a href="http://www.nyiso.com/public/webdocs/markets\_operations/market\_data/icap/In-City\_Mitigation\_Documents/In-City\_Mitigation\_Documents/HTP\_Report\_11-6-12\_Final.pdf">http://www.nyiso.com/public/webdocs/markets\_operations/market\_data/icap/In-City\_Mitigation\_Documents/In-City\_Mitigatio

<sup>&</sup>lt;sup>12</sup> Astoria Generating Company, LP et al. vs. New York Independent System Operator, Inc., 140 FERC ¶61,189 (2012).

<sup>&</sup>lt;sup>13</sup> "Buyer-side Mitigation Exemption and Offer Floor Determinations," NYISO, November 6, 2012 http://www.nyiso.com/public/webdocs/markets\_operations/market\_data/icap/ln-City\_Mitigation\_Documents/In-City\_Mitigation\_Documents/NYISO\_Notice\_of\_BSM\_Determinations\_Nov\_6\_2012.pdf

<sup>&</sup>lt;sup>14</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).

<sup>&</sup>lt;sup>15</sup> Astoria Generating Company, L.P. vs. New York Independent System Operator, Inc., *Complaint of Astoria Generating Company, L.P.*, Docket No. EL12-58-000 (filed April 20, 2012).

 $<sup>^{16}</sup>$  New York Independent System Operator, Inc., Docket No. EL12-58-000, Order Denying Complaint, 140 FERC  $\P$  61,179 ( 2012).

other reason.<sup>17</sup> The Governor appointed a task force to oversee the initiative. The task force issued a request for information on April 11, 2012, and received responses from 85 entities. The task force then issued an Energy Highway Blueprint in October 2012 including its recommendations on transmission upgrades, accelerated construction and repair of transmission, distribution and generation, clean energy, reliability, and technology innovation.

# 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 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 half of the NYCA ICAP Demand Curve reference price, particularly in the Winter, when prices were consistently near \$0.00/kW-month.

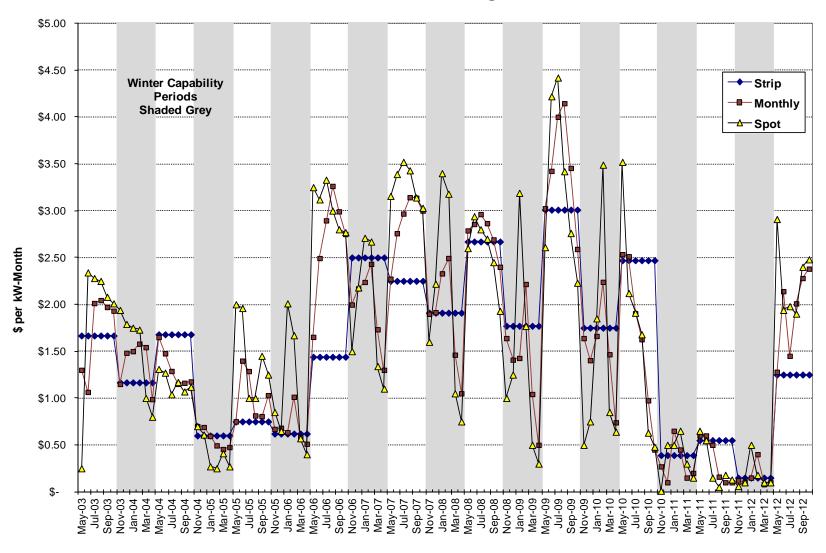
The amount of capacity committed to the NYCA, including imports, continues to be high relative to the minimum ICAP requirements. The monthly average import levels into the entire NYCA were 1,843.5 MW in the Winter 2011-2012 Capability Period and 2,099.7 MW in the Summer 2012 Capability Period. Those values represent a 62 MW monthly average decrease over levels imported for the previous Winter Capability Period and a 26 MW monthly average increase relative to the 2011 Summer Capability Period.

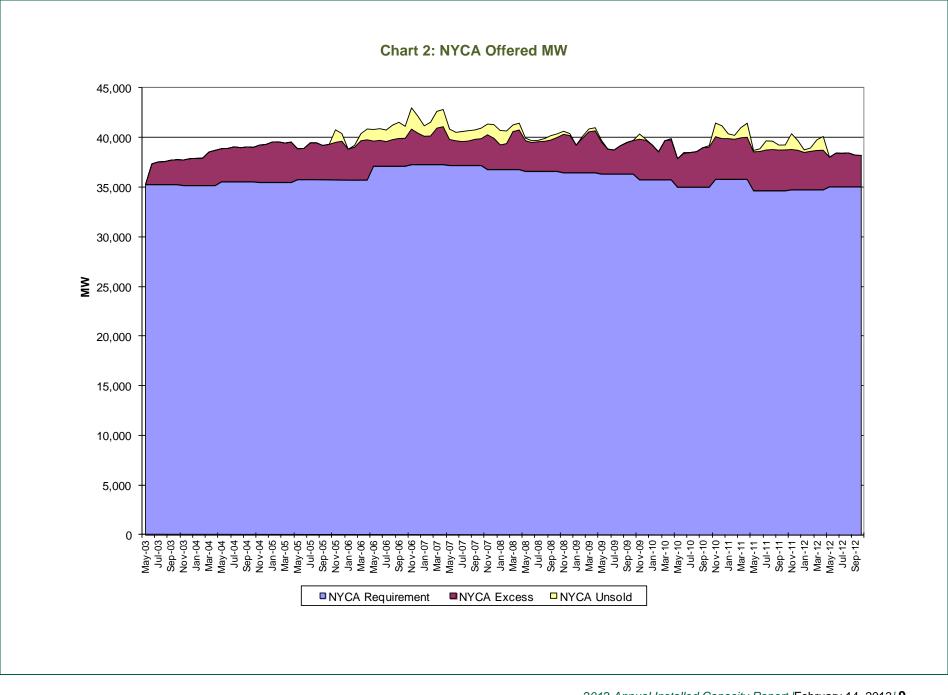
ICAP Market Clearing Prices and auction activity levels from November 1999 through October 2012 for the NYCA, NYC, and LI are summarized in tabular form in Attachment IX. Market Clearing Prices are depicted graphically in Charts 1, 3, and 5, and the amount of capacity committed, MW that were offered, and unsold MW are depicted in Charts 2, 4, and 6. The NYCA unsold MW depicted in Chart 2 include unsold MW located in Rest of State, as well as the unsold MW depicted in Charts 4 and 6 for the NYC, and LI Localities, respectively.

2012 Annual Installed Capacity Report | February 14, 2013 | 7

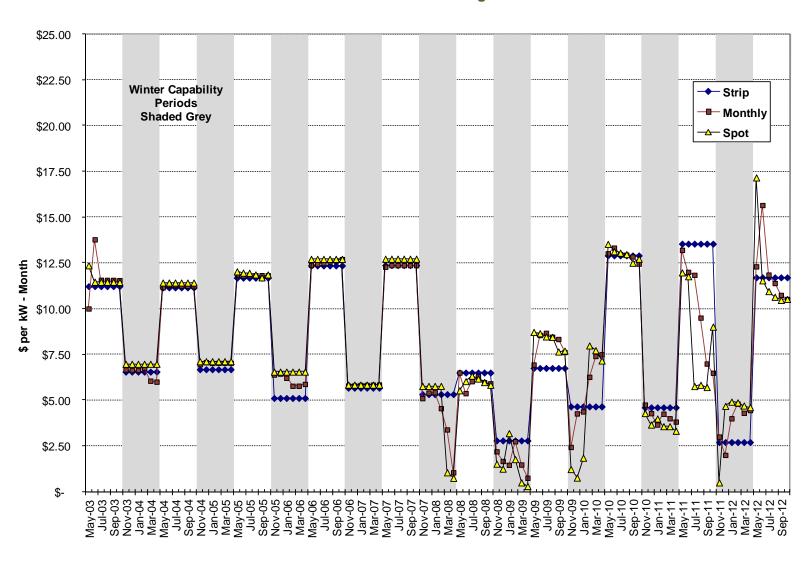
 $<sup>^{\</sup>rm 17}$  Information on the New York Energy Highway proposal and initiative is available at <a href="http://www.nyenergyhighway.com">http://www.nyenergyhighway.com</a>>.

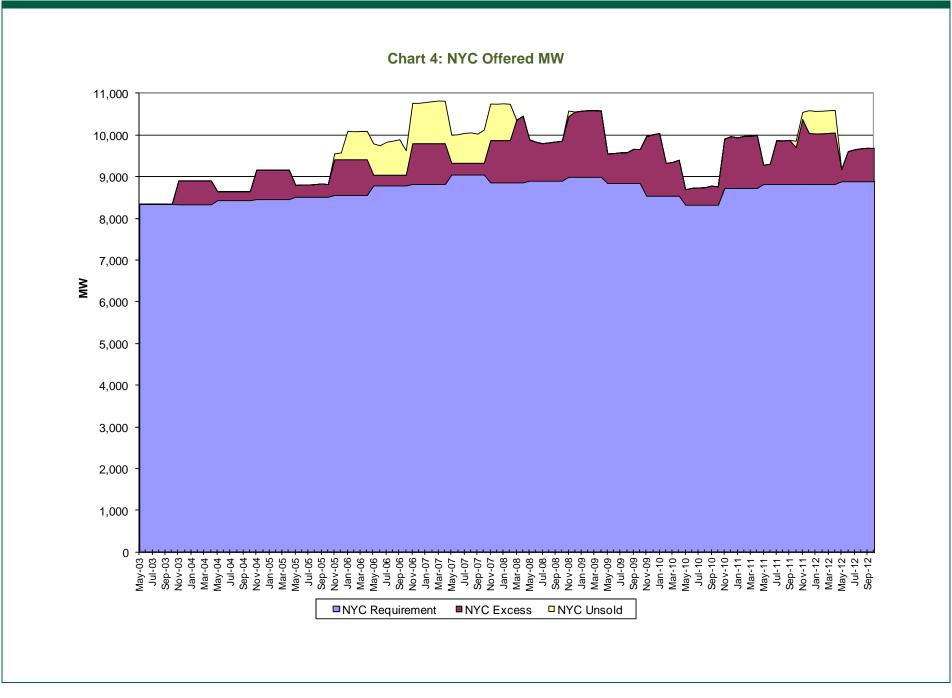


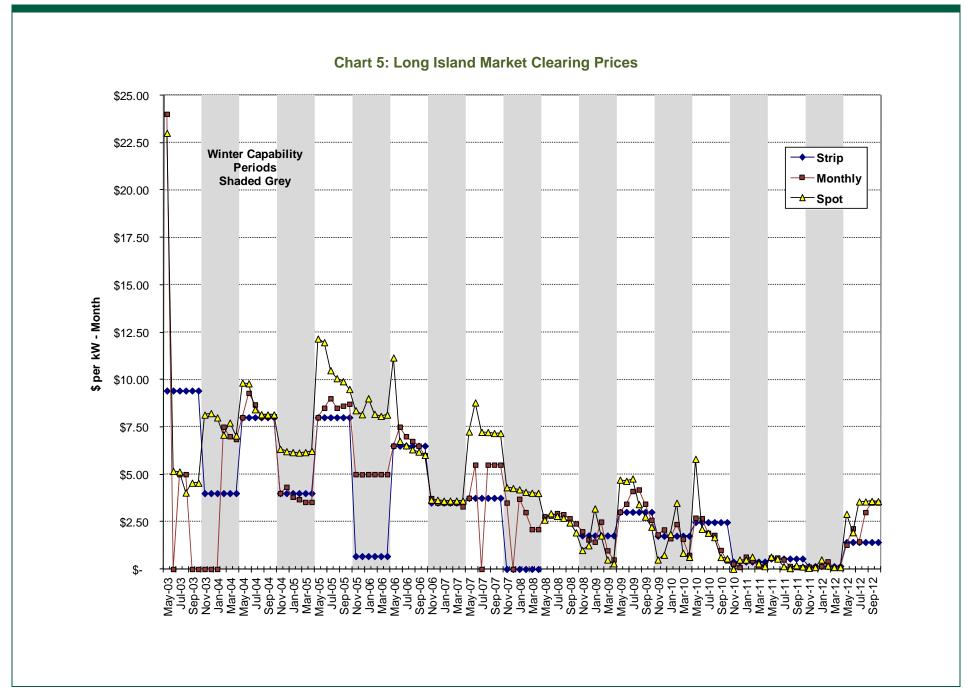


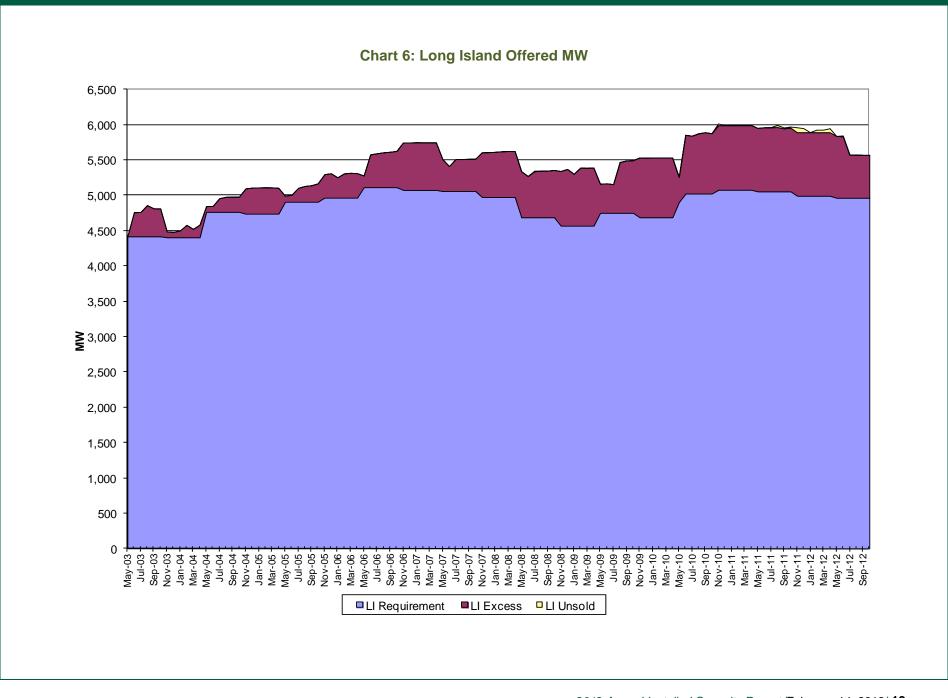












Another notable market development is the mothballing and retirement of a large amount of generating capacity throughout the NYCA relative to prior years. Over the last 3 Capability Years, there were 22 generators that were retired, laid-up, or mothballed, totaling about 2,800 MW. For the period November 2011 through October 2012, there were 6 mothballed (1,002 MW); 8 retired (580 MW), including 2 that retired (190 MW) after being in protective lay-up for a lengthy period of time. These units are shown in Table 1. Due to increased emission restrictions in environmental regulations, and the age of generators in the NYCA fleet, 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>18</sup>	Status <sup>19</sup>	Capability Period
AES Eastern Energy LP	AES Westover Unit 7	С	43.5	R	Winter 2009-2010
AES Eastern Energy LP	AES Greenidge Unit 3	С	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	Α	82.0	R	Winter 2010-2011
Project Orange Associates	Project Orange_1	С	43.6	R	Winter 2010-2011
Project Orange Associates	Project Orange_2	С	44.0	R	Winter 2010-2011
Long Island Power Authority	Ravenswood GT 3-4	K	35.8	М	Summer 2011
Long Island Power Authority	Barrett 07	K	17.3	R	Summer 2011
Standard Binghamton LLC	Binghamton Cogen	С	43.8	R	Winter 2011-2012
Rochester Gas& Electric Corp.	Beebee GT	В	15.0	R	Winter 2011-2012
Astoria Generating Company LP	Astoria 2	J	177.0	М	Summer 2012
Astoria Generating Company LP	Astoria 4	J	375.6	М	Summer 2012
NRG Power Marketing LLC	Astoria GT 10	J	24.9	М	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	М	Summer 2012
AES Eastern Energy LP	AES Eastern Energy LP AES Westover Unit 8		83.8	М	Summer 2012
AES Eastern Energy LP	AES Greenidge Unit 4	С	106.1	М	Summer 2012
NRG Power Marketing LLC	Dunkirk 3	С	201.4	М	Summer 2012
NRG Power Marketing LLC	Dunkirk 4	С	199.1	М	Summer 2012
New York Power Authority	Kensico Hydro Project	Ī	1.8	R	Summer 2012

# 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 starting November 2011 through October 2012: NYCA except for the NYC and LI Localities (Rest of State), NYC, and LI. For the purposes of this report, in order to identify whether any potential withholding

2012 Annual Installed Capacity Report | February 14, 2013 | 14

<sup>&</sup>lt;sup>18</sup> The capacity values listed are the MW values stated in the NYISO's Load and Capacity Data Report (referred to as the "Gold Book").

<sup>&</sup>lt;sup>19</sup> "R" stands for "retired", and "M" indicates "mothballed".

occurred, the NYISO analyzed the differences between available capacity<sup>20</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 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 2011-2012 for the entire NYCA was 486 MW, which was 151 MW higher than the Winter 2010-2011. The seasonal monthly average amount of unsold MW for the Summer 2012 for the entire NYCA was nearly zero, while it was 187 MW in the Summer 2011.

In Long Island, historical levels of unsold capacity have averaged near zero. The monthly average level of unsold capacity is 42 MW in the Winter 2011-2012 (5.1 MW per month on average in the Winter 2010-2011), and 2 MW per month, on average, in the Summer 2012. In NYC, the seasonal monthly average amount of unsold MW for the Winter 2011-2012 was 478 MW, and zero MW in the Winter 2010-2011. For the Summer 2012 that number is zero MW, compared to 25 MW in the Summer 2011.

There are three types of ICAP auctions in each Capability Period: a Capability Period Auction (also referred to as the "six-month strip auction"), six Monthly Auctions, and six ICAP Spot Market 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. Local reliability rules require LSEs in NYC and on Long Island to procure minimum levels of capacity from Installed Capacity Suppliers that are electrically located within the respective Locality. Such capacity is also credited toward each NYC and Long Island LSE's overall NYCA obligation. The NYISO establishes NYCA and 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

-

<sup>&</sup>lt;sup>20</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.

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. Capacity resources constructed subsequent to the Commission's approval of the bid caps were not subject to bid caps or mandated to offer into the auctions. The NYC capacity as well as capacity inside and outside of the NYC Locality could be either sold through bilateral transactions or offered in one or more of the NYISO's ICAP auctions. The Commission's March 7, 2008 Order<sup>21</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"). The Supply-side Mitigation Measures in the Proposed NCZ Mitigation Measures are largely similar in nature to the measures that apply to NYC.

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 2012, which ended October 31, 2012. 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 Unforced Capacity Obligation, and UCAP committed through bilateral transactions.

# I.4.2. Unoffered Capacity

Chart 7 presents seasonal averages of unoffered capacity as a percentage of available Capacity for each of the three capacity areas.

<sup>&</sup>lt;sup>21</sup> New York Independent System Operator, Inc., Docket No. EL07-39-000, Order Conditionally Approving Proposal, 122 FERC ¶ 61,211 (2008).

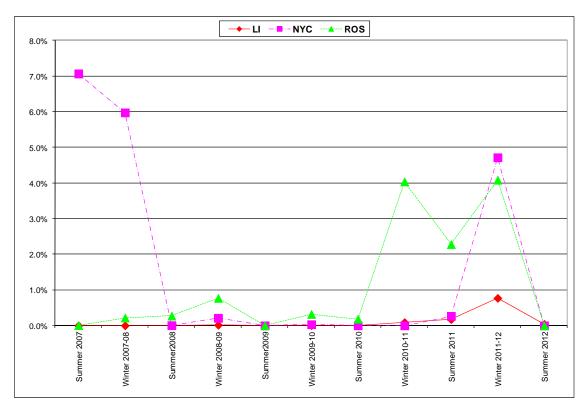
→ LI - - NYC --- ROS 8.0% 7.0% 6.0% 5.0% 4.0% 3.0% 2.0% 1.0% 0.0% . 2012 Winter 2009-10 Summer 2010 Summer 2007 Winter 2007-08 Winter 2008-09 Summer 2009 Winter 2011-12 Summer 2008 Winter 2010-11 2 Summer

**Chart 7: 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 7. 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.

Chart 8 displays unsold capacity as a percent of available UCAP in each of the three capacity areas.



**Chart 8: Average Percent of Unoffered 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 percentage of available capacity trended at near zero levels from the start of the Summer 2008, 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, which is the price at which the Spot Market Auction would clear if all available capacity was offered and sold. For the Summer 2007 through October 2012, nearly all of the capacity offered into the ICAP auctions was sold, except for the Winter 2011-2012, when there was a significant amount of capacity beyond the NYCA Demand Curve zero-crossing point, which caused much of it not to clear even though the capacity was offered at relatively low prices. This result has persisted despite the variability in the NYCA Installed Reserve Margin shown in Table 2.

Table 2: Installed Reserve Margin Percentage by Locality<sup>22</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	116.1

Table 3 displays the breakdown of unsold and unoffered for each Locality and Rest of State. As part of the NYISO's August 24, 2010 ICAP compliance filing, <sup>23</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

		Unoffered			Unsold	
Month	NYC	LI	ROS	NYC	LI	ROS
Nov-11	55.7	81.6	366.2	169.5	69.1	1,596.0
Dec-11	20.9	82.9	415.3	539.2	56.2	974.0
Jan-12	42.2	113.6	549.9	539.2	0.0	257.6
Feb-12	36.0	78.5	381.2	539.2	35.1	333.7
Mar-12	35.4	74.3	261.7	539.2	35.1	1,079.0
Apr-12	34.3	82.2	273.3	539.2	55.1	1,387.8
May-12	63.7	4.8	126.9	0.0	0.0	0.0
Jun-12	34.1	4.6	159.9	0.0	11.9	0.0
Jul-12	33.9	3.0	260.3	0.0	0.0	0.0
Aug-12	23.1	2.5	258	0.0	0.0	0.0
Sep-12	26.7	2.5	186.3	0.0	0.0	0.0
Oct-12	31.3	2.5	231.4	0.0	0.0	0.0

# 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

<sup>&</sup>lt;sup>22</sup> The New York State Reliability Council issues an annual IRM Study Report, which presents the lowest feasible locational requirements for the NYCA Localities. 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 Requirements 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 atñhttp://www.nysrc.org/pdf/MeetingMaterial/ECMeetingMaterial/ECAgenda163/2013%20IRM%20Report%20clean% 2011-5-12.pdf>.

<sup>&</sup>lt;sup>23</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 ("August 2010 Compliance Filing") at p. 16.

Entities, Controls in excess of the pivotal control threshold.<sup>24</sup> The UCAP under the Control of Pivotal Suppliers ("Mitigated UCAP") must be offered into the 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"). The NYISO issued Going-Forward Cost determinations for In-City generators for auction months covered in the November 2011 to October 2012 reporting period.

Chart 9 illustrates the effects of the Supply-side Mitigation Measures. The UCAP Offer Reference Level, as shown in Chart 9, becomes the cap that the Pivotal Supplier must offer at or below in the ICAP Spot Market Auction unless the Pivotal Supplier's GFCs are higher than it.

The level of unoffered and unsold MW can be inferred from Chart 9 by comparing the NYC Spot Market Auction price to the UCAP Offer Reference Level; while Chart 10 depicts the levels of available generator and SCR UCAP in the NYC Locality. The difference between the Spot Market Auction 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.

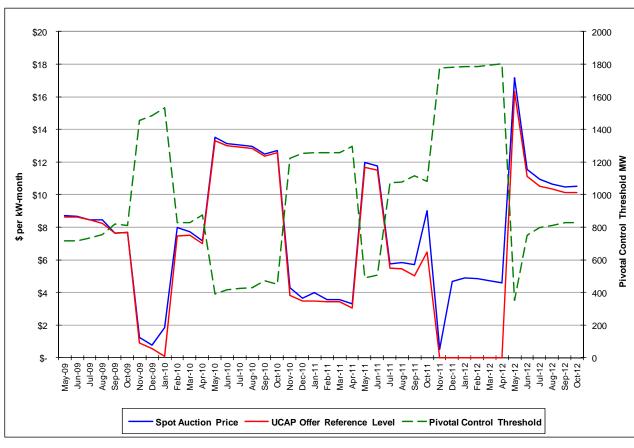


Chart 9: NYC Mitigation Results 2011/2012

<sup>&</sup>lt;sup>24</sup> See Services Tariff Attachment H Sections 23.2.1 and 23.4.5.

11,000 600 10,500 500 10,000 400 9,500 NYC Gen UCAP MW SCR UCAP MW 9,000 8,500 8.000 7,500 Jul-09
Aug-09
OSep-09
OSep-09
Dec-09
Jan-10
Amr-10
Jul-10
Jul-11
Jul-11
Aug-11
Jul-11
Aug-11
Jul-11
Jul-11
Aug-11
Jul-11
Jul-11
Jul-11
Jul-11
Jul-11
Jul-11
Jul-11
Sep-11 Dec-11
Jan-12
Mar-12
Apr-12
Jun-12
Jul-12
Sep-12
Sep-12 -NYC SCR UCAP NYC Generator UCAP

Chart 10: 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 2011 through October 2012. 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 11 shows the monthly average values over each Capability Period for four ROS capacity types: available, offered, sold, and exported MW.

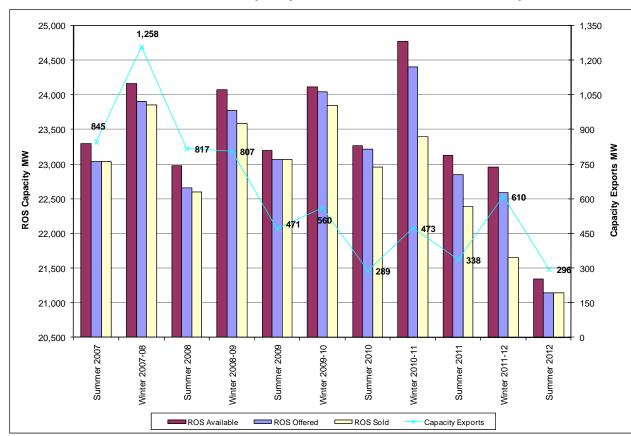


Chart 11: Rest of State Capacity Available, Offered, Sold and Exported

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 February 2013 Report summarizes the monthly averages of unoffered and unsold capacity since the Summer 2008. The ROS generation owners grouping was updated to include all ROS generation owners in addition to the five selected ROS companies reported in prior annual ICAP reports.<sup>25</sup> The data in Table 4 for all Capability Periods reflects the new groupings and thus may be different than the data presented in prior ICAP annual reports.

2012 Annual Installed Capacity Report | February 14, 2013 | 22

<sup>&</sup>lt;sup>25</sup> This adjustment was made because the historic grouping of ROS generation owners no longer encompassed the majority of ROS generators due to changes in ownership.

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

Capability Period	MW	GenCo <sup>26</sup>	% GenCo	<b>TO</b> <sup>27</sup>	% TO	Others <sup>28</sup>	% Others	Capability Period Average
	Unoffered	114.22	32.7%	204.37	58.6%	30.32	8.7%	348.90
Summer 2008	Unsold	92.43	99.5%	0.00	0.0%	0.48	0.5%	92.90
	Unoffered	236.80	78.5%	64.13	21.3%	0.57	0.2%	301.50
Winter 2008-2009	Unsold	214.41	97.7%	0.00	0.0%	5.15	2.3%	219.56
	Unoffered	49.23	40.4%	69.25	56.8%	3.47	2.8%	121.95
Summer 2009	Unsold	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00
	Unoffered	93.27	48.1%	91.02	47.0%	9.45	4.9%	193.73
Winter 2009-2010	Unsold	110.14	95.3%	0.00	0.0%	5.43	4.7%	115.57
	Unoffered	98.07	37.1%	158.22	59.9%	7.87	3.0%	264.15
Summer 2010	Unsold	23.03	35.6%	0.00	0.0%	41.73	64.4%	64.75
	Unoffered	212.55	57.4%	127.45	34.4%	30.35	8.2%	370.35
Winter 2010-2011	Unsold	895.19	89.5%	0.00	0.0%	105.09	10.5%	1,000.28
	Unoffered	54.13	25.8%	78.97	37.6%	76.70	36.6%	209.80
Summer 2011	Unsold	479.94	91.0%	2.50	0.5%	44.91	8.5%	527.35
	Unoffered	138.53	37.0%	142.42	38.0%	93.65	25.0%	374.60
Winter 2011-2012	Unsold	811.26	86.5%	38.35	4.1%	88.42	9.4%	938.03
	Unoffered	60.08	29.5%	68.40	33.6%	75.32	37.0%	203.80
Summer 2012	Unsold	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00

#### Salient facts from the above tables are:

- The group of all ROS generation-owning Transmission Owners consistently had unoffered capacity which ranged from 21% to 60% of total unoffered capacity.
- The group of all ROS generation-owning Transmission Owners had no offered and unsold capacity.
- The group of five generation owners consistently had unoffered capacity which ranged from 6% to 35% of total unoffered capacity.
- The group of five 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 18% to 60% of total unoffered capacity for the period Summer 2008 through Summer 2011.
- The group of all others including SCRs had capacity that was offered and unsold capacity that ranged from 0% to 93%.

<sup>&</sup>lt;sup>26</sup> "GenCo" represents all ROS generating companies

<sup>&</sup>lt;sup>27</sup> "TO" stands for all ROS Transmission Owners

<sup>&</sup>lt;sup>28</sup> "Others" includes Special Case Resources

# 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 2011-2012 or Summer 2012 for an explanation of why it did not offer all of its capacity. There were 17 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>29</sup>

Nine of the Market Participants cited administrative oversight as their reason for failing to offer their capacity. The instances of administrative oversight had unoffered capacity ranging from 15 to 60 MW, and 7 out of the 8 were under 25 MW. Most months had no unoffered capacity, with January 2012 being the month with the most unoffered capacity due to administrative error. 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 Spot Market Auction. The Market Participants cited scheduling mistakes, over-procurement, overestimation, and procedural and personnel issues. Many of the responses included explanations as to how the organization planned to avoid such administrative errors in the future. The following responses were provided to the NYISO:

- In one instance, a Market Participant did not offer 17 to 23 MW of capacity for 8 months due to a misunderstanding of the NYISO rules. This Market Participant stated it had no intention or incentive to withhold capacity and regretted the lost opportunity for revenue.
- Another Market Participant (a net buyer of capacity) did not offer capacity for two aging units totaling approximately 40 MW for the Winter Capability Period. It stated it did not offer to ensure sufficient run hours for reliability purposes in light of environmental run hour restrictions.
- There were two ROS generators with under 100 MW that was not offered in two months due to scheduling not being coordinated with the generators' planned operational changes.
- A renewable generation owner routinely does not offer approximately 22 MW of UCAP due to a neighboring state's rules.
- A hydro generation facility had unoffered capacity ranging between 28 MW and 113 MW due to low water levels, conservative strategy, water use agreements, and lack of storage capabilities.
- A Market Participant that serves as a scheduling and bidding agent for a facility had unoffered capacity associated with the resources being temporarily withdrawn from the ICAP market due to environmental restrictions.

-

<sup>&</sup>lt;sup>29</sup> Confidential Attachment VI provides a more detailed summary of the Market Participants' explanations for having unoffered capacity.

- A Market Participant did not offer an amount of capacity that ranged from approximately 18 MW to 76 MW in each month. It stated not offering was primarily due to a conservative operating approach, and some of the unoffered capacity was due to inadvertent failure to timely submit Average Coincidental Load (ACL) data to NYISO.
- A generation owner has a PURPA contract that prohibits it from selling any Capacity above the level of the bilateral contract. The amount of unoffered capacity ranges from 22 MW in the Summer Capability Period months to 74 MW in winter months.

Table 5 shows the maximum price impact of the unoffered capacity based on the slopes of the ICAP Demand Curves for the relevant Capability Periods. The maximum price impact is calculated as the greater 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 2011-2012 and Summer 2012 Capability Periods, was \$0.17/kW-mo and \$0.48/kW-mo, respectively.

Month	Total Unoffered MW	Monthly Maximum Price Impact	Seasonal Average Maximum Price Impact
Nov-11	366.2	\$0.06	
Dec-11	415.3	\$0.10	
Jan-12	549.9	\$0.50	\$0.17
Feb-12	381.2	\$0.18	φυ.17
Mar-12	261.7	\$0.10	
Apr-12	273.3	\$0.10	
May-12	126.9	\$0.30	
Jun-12	159.9	\$0.38	
Jul-12	260.3	\$0.61	\$0.48
Aug-12	258.0	\$0.61	ψυ.46
Sep-12	186.3	\$0.44	
Oct-12	231.4	\$0.54	

# I.4.5.3. Analysis of Unsold Capacity

This section of the report analyzes and reports on unsold capacity in the ICAP Spot Market Auction. It also presents the maximum price impact of the 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 more than 15 MW of unsold capacity in a given month and (b) 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 ("GFCs with half net revenues". Going Forward Cost terminology and elements for purposes of this analysis are defined in Table 7.In addition to calculating the monthly maximum and average maximum price impacts, the following metrics were calculated in this report 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.

### 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 4 did not exceed the NYISO's threshold for determining whether GFCs are evaluated in all months of the analysis period, November 2011 through October 2012. Specifically, none of the Capability Period impacts exceeded the \$0.20/kW-month threshold. The average price impacts were \$0.17/kW-month and \$0.00/kW-month in Winter 2011-2012 and Summer 2012, respectively.

Month	Total Unsold MW	Monthly Maximum Price Impact	Seasonal Average Maximum Price Impact
Nov-11	1,596.0	\$0.06	
Dec-11	974.0	\$0.10	
Jan-12	257.6	\$0.50	\$0.17
Feb-12	333.7	\$0.18	φ0.17
Mar-12	1,079.0	\$0.10	
Apr-12	1,387.8	\$0.10	
May-12	0.0	\$0.00	
Jun-12	0.0	\$0.00	
Jul-12	0.0	\$0.00	\$0.00
Aug-12	0.0	\$0.00	\$0.00
Sep-12	0.0	\$0.00	
Oct-12	0.0	\$0.00	

Table 6: Maximum Price Impact of ROS Unsold MW

# I.5. Class Average Going Forward Costs

The NYISO calculated class average GFCs for generator classes that had at least 15 MW of unsold capacity in a given month. Only one generator class had unsold capacity that met this criterion: natural gas combined cycle, Class A, in January 2012. The NYISO reviewed the ROS generating units listed in the Gold Book applicable to November 2011 through October 2012, and assigned the units to classes based on primary fuel and technology. Attachment I to this report, "Existing Generating Facilities", shows the generating units in ROS that the NYISO assigned to Class A for which class average GFCs were calculated.

For purposes of this report, class average GFCs are defined as costs (other than production costs) that could be reasonably expected to be avoided if the plant was mothballed for at least one year. These GFCs may provide insight into why a generator offered its capacity at a non-zero offer price. In this analysis, GFCs are calculated for the entire capacity of the plant. For this report, GFCs are calculated from industry data, such as labor rates, expenses for contract services, administrative and general, and insurance costs. Attachment II to this report,

Class Average Avoidable Costs, presents the avoidable fixed cost components of the class average GFCs for Class A.

Generators face uncertainty about net revenues, among other things, which may influence the prices at which they offer capacity. To account for this uncertainty, the NYISO calculated class average GFCs including varying levels of net revenues: full, half, and no net revenues. Attachment III to this report, Class Average Going Forward Costs, shows the class average GFCs for Class A, calculated as the avoidable costs from Attachment II less the varying levels of net revenues.

**Table 7: Going Forward Cost Definitions** 

Going Forward Costs (GFCs)	Costs that would be avoided or deferred if a generator was mothballed for a year or more, based on the calculation of the industry average cost data for the type of generator.
Net energy and ancillary services revenues (net revenues)	Estimated energy plus ancillary services revenues minus estimated production costs, with a minimum value of zero.
GFCs with full net revenues	GFCs minus net revenues. This value is used to represent Net GFCs with certainty of net revenues.
GFCs with half net revenues	GFCs minus 0.5 times net revenues. This value is used to represent Net GFCs with some uncertainty.
GFCs with no net revenues	GFCs. This value is used to represent Net GFCs without certainty of net revenues.
Unit Specific Net GFCs with Recognized Adjustments	GFCs plus unit-specific adjustments (i.e., the dollar amount identified by the generator for an adjustment that is readily recognizable as an appropriate adjustment), minus the unit specific net revenues.
Unit Specific Net GFCs with all Adjustments	GFCs plus all unit-specific adjustments identified by the generator, minus the unit specific net revenues.

The NYISO estimated net Energy and Ancillary Services revenues for the units in Class A over the analysis period. Net revenues were equal to estimated Energy revenues plus Ancillary Services revenues minus estimated production costs. A minimum value of zero was used for net revenues; that is, if production cost exceeded Energy and Ancillary Services revenues, a value of zero was used for the net revenue figure.

GFCs with full net revenues were calculated for use as a proxy for net going forward costs with certainty of net revenues. Annual going forward costs minus full net revenues for the November 2011 to October 2012 period were \$0.00/kW-year for Class A because the net revenues exceeded the avoidable costs. Likewise, the Summer and Winter Capability Period values were \$0.00/kW-month.

A GFC value with half net revenues was calculated for use as a proxy for net going forward costs with some uncertainty. Annual going forward costs minus half net revenues for the November 2011 to October 2012 period were \$0.00/kW-year for Class A, because half of net revenues still exceeded the avoidable costs. Likewise, the Summer and Winter values were \$0.00/kW-month.

A GFC value with no net revenues was calculated for use as a proxy for net going forward costs without certainty of net revenues. Annual going forward costs with no net revenues for the November 2011 to October 2012 period were \$15.82/kW-year for Class A. Summer value was \$1.64/kW-month, and the Winter value was \$0.82/kW-month.

Table 8 shows the amount of unsold capacity by month for which class average net GFCs were calculated and the amount of unsold capacity for which class average net GFCs were not calculated (*i.e.*, generators within classes with less than 15 MW of unsold capacity in each month). The total unsold capacity values in the second column are for the entire NYCA; they are equal to the monthly sums of unsold capacity across all three locations in Table 1. The unsold capacity used in the maximum price impact calculation in Table 4 is based on the ROS location only.

Month	Total Unsold MW	Total Unsold MW for which class average GFCs calculated (Unsold MW > 15)	Total Unsold MW for which class average GFCs not calculated (Unsold MW < 15)
Nov-11	1,834.6	0.0	1,834.6
Dec-11	1,569.4	0.0	1,569.4
Jan-12	796.8	141.3	655.5
Feb-12	908.0	0.0	908.0
Mar-12	1,653.3	0.0	1,653.3
Apr-12	1,982.1	0.0	1,982.1
May-12	0.0	0.0	0.0
Jun-12	11.9	0.0	11.9
Jul-12	0.0	0.0	0.0
Aug-12	0.0	0.0	0.0
Sep-12	0.0	0.0	0.0
Oct-12	0.0	0.0	0.0

Table 8: Unsold MW Used for GFC Calculations

## I.5.1. Unsold Capacity Impact Analysis

For the period November 2011 through October 2012, there was only one generator that had unsold MW in exceedance of the pre-defined thresholds that require further analysis. This generator was in Class A – a combined cycle plant with natural gas as its primary fuel. The generator had 141.3 MW of unsold capacity in January 2012, which had a \$0.32/kW-month impact on the ICAP Spot Market Auction price. That is, if all of the capacity had been sold, the January 2012 ICAP Spot Market Auction price would have been \$0.18/kW-month instead of \$0.50/kW-month. The values of the GFCs with half net revenues calculated for Class A are shown in Attachment III.

As part of this process, the NYISO provided the generation owner the class average avoidable costs and gave it the opportunity to provide information regarding adjustments to the class average values to reflect its unit-specific avoidable costs. The response received by the NYISO is included in Confidential Attachment VI. The Market Participant's explanation for the unsold capacity included that it was managing maintenance costs and risks, and gas price risks.

The NYISO performed ICAP Spot Market Auction simulations in order to get a more detailed understanding of how the non-zero price offers may have affected Market Clearing Prices. Because the one generator that was contacted did not have any adjustments to the NYISO's class average GFC calculations, the NYISO did not analyze any scenarios with adjustments to GFCs. Therefore, the NYISO simulated auction outcomes under three scenarios: GFCs with full net revenues, GFCs with half net revenues, and GFCs with no net revenues. These scenarios are labeled scenarios 1, 2, and 3 in Table 9.

The NYISO performed the simulations by replacing offers that originally did not clear with the unit-specific GFC at varying levels of net revenues in each of the three scenarios. The offers that were analyzed for purposes of the simulations are provided in Attachment IV.<sup>30</sup>

Table 9 shows the results of the auction simulations in each of the three scenarios. Simulations were run for January 2012, the only month in which the total amount of unsold capacity exceeded the \$0.35/kW-month threshold. As noted above, the average monthly impacts over the Winter and Summer Capability Periods were less than the \$0.20/kW-month threshold. Column B shows the original NYCA ICAP Spot Market Auction prices. Columns C, D, and E show the simulated NYCA price under each of the three scenarios. Columns F, G, and H show the price reduction relative to the original clearing price.

Α	В	С	D	Е	F	G	Н
Month	Original MCP	S1 <sup>31</sup>	S2 <sup>32</sup>	S3 <sup>33</sup>	S1 delta	S2 delta	S3 delta
Nov-11	0.06	0.06	0.06	0.06	0.00	0.00	0.00
Dec-11	0.10	0.10	0.10	0.10	0.00	0.00	0.00
Jan-12	0.50	0.43	0.43	0.50	(0.07)	(0.07)	0.00
Feb-12	0.18	0.18	0.18	0.18	0.00	0.00	0.00
Mar-12	0.10	0.10	0.10	0.10	0.00	0.00	0.00
Apr-12	0.10	0.10	0.10	0.10	0.00	0.00	0.00
May-12	2.91	2.91	2.91	2.91	0.00	0.00	0.00
Jun-12	1.94	1.94	1.94	1.94	0.00	0.00	0.00
Jul-12	1.98	1.98	1.98	1.98	0.00	0.00	0.00
Aug-12	1.90	1.90	1.90	1.90	0.00	0.00	0.00
Sep-12	2.40	2.40	2.40	2.40	0.00	0.00	0.00
Oct-12	2.48	2.48	2.48	2.48	0.00	0.00	0.00

**Table 9: Price Impact Analysis Results** 

### I.6. Conclusions

The results of the simulations shown in Table 9 indicate that the NYCA ICAP Spot Market Auction price in January 2012 would have potentially been \$0.07/kW-month lower if the unsold capacity was offered at a price equal to the GFC with net revenues (scenario 1) or at a

<sup>&</sup>lt;sup>30</sup> The unmasked unsold capacity offers are provided in Confidential Attachment V

<sup>31</sup> GFCs with full net revenues

<sup>32</sup> GFCs with half net revenues

<sup>&</sup>lt;sup>33</sup> GFCs with no net revenues

price equal to the GFC with half net revenues (scenario 2). There was no impact in the third scenario; that is, the calculated GFC with no net revenues exceeded the original Spot Market Auction price of \$0.50/kW-month.

The above effect, though seemingly large when expressed as percentage reductions against the original price, is relatively insignificant in terms of dollar value, since the maximum potential market clearing price impact is \$0.07/kW-month. The analysis shows that there does not appear to be any significant economic withholding that occurred over the analysis period. During the Winter 2011-2012 Capability Period – the months in which there was unsold capacity in ROS – the NYCA ICAP Spot Market Auctions cleared well below the estimated GFCs for the majority of the ROS generators with unsold capacity, which indicates the absence of significant economic withholding in the ROS area.

#### **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." 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 VII to this report, which is dated December 31, 2012. 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>35</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 VIII 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.

-

<sup>&</sup>lt;sup>34</sup> New York Indep. Sys. Operator, Inc., 117 FERC ¶ 61,086, at P 14 (2006)

<sup>35</sup> See <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

The NYISO is presently implementing the tariff process to create a new capacity zone which would be effective beginning with the Summer 2014 Capability Period. The new capacity zone will have an ICAP Demand Curve specific to it, which will be set concurrent with the Demand Curves for Zone J, Zone K, and the NYCA. The creation of new capacity zones is expected to enhance the Demand Curve price signals for constrained areas that meet the requirements and become a new capacity zone.

As described in Section 1.2.1 of this February 2012 Report, the NCZ Study Report identified a highway constraint, which triggered the Services Tariff requirement for the creation of a new capacity zone. The NYISO is in the process of identifying the boundaries for the new zone and an Indicative Locational Minimum Installed Capacity Requirement ("Indicative LCR"). The Indicative LCR will be utilized solely for purposes of establishing a proposed ICAP Demand Curve for the new zone. The NYISO is making a series of presentations to and receiving input from its stakeholders regarding the new capacity zone and tariff revisions specific to it. The NYISO will file proposed tariff revisions to establish the new capacity zone on March 29, 2013.

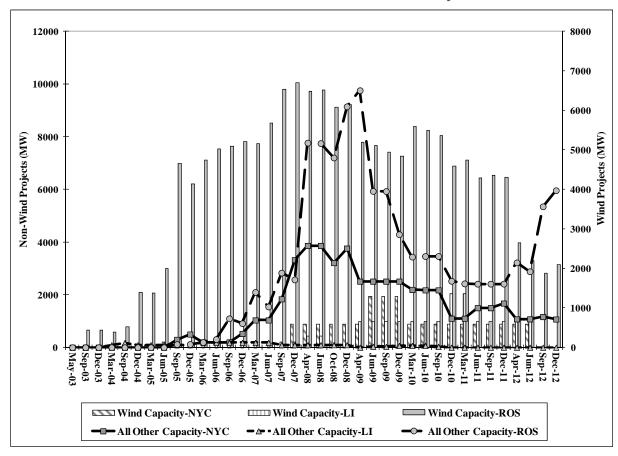
The NYISO is also reviewing with stakeholders a proposal to revise the Services Tariff to broaden the capacity resource technology that can anchor the ICAP Demand Curves. Presently, the tariff requires that it be a peaking plant. The proposal also would change the current requirement that the Demand 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 would 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." 37

<sup>&</sup>lt;sup>36</sup> Prior to the effectiveness of the new capacity zone, an actual LCR will be established by the NYISO for the new capacity zone, current with the establishment of the NYCA Minimum Installed Capacity Requirement and the LCR for the other Localities.

<sup>&</sup>lt;sup>37</sup> 2011 State of the Market Report for the New York ISO Markets, April 2012, at p. 39, <a href="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</a> >

#### III.3. Interconnection Queue Projects

In the summer of 2012, an approximately 500 MW combustion turbine facility entered the New York City capacity market, and an existing nuclear facility increased its CRIS by 96 MW. The projects currently being evaluated in the interconnection study processes are listed on the NYISO's interconnection queue. In-service dates stated on the interconnection queue for projects are provided by the developers. Chart 12 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.



**Chart 12: NYISO Interconnection Queue Projects** 

This chart was compiled using the NYISO's interconnection queue, which is periodically updated, and reports only those projects that were placed on the queue after May 1, 2003.<sup>38</sup>

<sup>&</sup>lt;sup>38</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 being in 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* 

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 deemed 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 amount of generation 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 (measured on the left Y-axis, above) did not increase significantly until the summer of 2005. Chart 12 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 2011 Annual Installed Capacity Report, of the projects in the interconnection queue, there has been an increase in the total amount of Rest of State non-wind generation, a decrease in NYC non-wind generation, and a decrease in wind generation in Rest of State, NYC and LI. Chart 12 does not include proposed HVDC connections into Zones F, J and K, which currently total 4,160 MW.

#### III.4. Proposed Resource Additions

In January 2011, the NYISO Board of Directors approved the 2010 Comprehensive Reliability Plan (CRP), which was the fifth CRP since its introduction in 2006. Like the 2009 report, the 2010 CRP determined that there are no additional resource needs through the tenyear Study Period under the base case modeling assumptions.<sup>39</sup> The NYISO continues to track on a quarterly basis the market-based solutions reported in the 2008 CRP, the last year of which resource needs were identified. Table 10 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 January 2013, 520 MW of generation solutions are still being reported to the NYISO as moving forward with development. There are a number of other projects in the NYISO interconnection queue that are also moving forward in the interconnection process, but were not offered as market-based solutions in the NYISO's Comprehensive Reliability Planning Process (CRPP).

On September 17, 2012, the NYISO Board of Directors approved the 2012 Reliability Needs Assessment<sup>40</sup> (RNA), a biennial review of the New York bulk power system's reliability over the next 10-year planning horizon (2013-2022). If the RNA identifies any violation of the reliability criteria, the NYISO reports a reliability need and requests market-based, regulated backstop, and alternative regulated solutions from interested parties to address the identified reliability need. The CRP then reports the proposed solutions to meet the reliability needs identified in the RNA. The 2012 RNA identified reliability needs and indicated that unless certain measures are taken, the current system will violate resource adequacy criteria beginning

FES=Feasibility Study Available, SRIS=System Reliability Impact Study Available, FS=Facilities Study and/or ATRA Available.

<sup>&</sup>lt;sup>39</sup> The 2010 CRP is available at <a href="http://www.nyiso.com/public/webdocs/markets\_operations/services/planning/Planning\_Studies/Reliability\_Planning\_Studies/Reliability\_Assessment\_Documents/CRP\_2010\_FINAL\_REPORT\_January\_11\_\_2011.pdf>

<sup>&</sup>lt;sup>40</sup> The 2011 RNA is available at <a href="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</a>.

in 2020. The main reason that the 2012 RNA finds there are reliability needs when the 2010 RNA/2011 CRP did not is that generation modeled in the 2012 RNA is about 1,000 MW less due to retirements or mothballing of generating units.<sup>41</sup> In addition, the load forecast for 2020 is slightly higher, and the amount of projected demand-side resources is slightly lower, than identified in the prior reports.

As part of the CRPP process, pursuant to Section 31.2.4 of OATT Attachment Y, the NYISO solicited market-based and alternative regulated solutions to the Reliability Needs identified in the 2012 RNA on September 25, 2012. The NYISO received three market-based solutions totaling a potential of 875 MW<sup>43</sup> of resources and five Alternative Regulated Solutions. The viability and efficacy of the proposed solutions will be reported in the 2012 CRP report, which will be submitted to the NYISO Operating and Management Committees early in 2013. The NYISO is presently reviewing the draft report with its stakeholders.

Table 10: January 2013 Status of the 2008 CRP Market – Based Solutions and Transmission Owner Plans<sup>45</sup>

Project Type	NYISO Queue #	Submitted	MW	Zone	Original In- Service Date	Current Status
		Resource	Proposa	ıls		
Gas Turbine NRG Astoria Re- powering	IRG Astoria Re-		520	J	Jun - 2010	New Target June 2016
Empire Generation Project	69	CRP 2008	635	F	Q1 2010	Placed in Service September 2010
		Transmissio	on Propo	sals		
Back-to-Back HVDC, AC Line HTP	HVDC, AC Line 206		660	PJM - J	Q2 2011 PJM Queue O66	New Target Q2 2013 Article VII approved
		TOs'	Plans			
ConEd M29 Project	153	CRP 2005	N/A	J	May - 2011	Placed in Service February 2011

#### 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

2012 Annual Installed Capacity Report | February 14, 2013 | 35

<sup>&</sup>lt;sup>41</sup> The RNA did not reflect the retirement of the Danskammer units which occurred after November 1, 2012.

<sup>&</sup>lt;sup>42</sup> NYISO's September 25, 2012 Letter to NYISO Transmission Owners, other Customers and Interested Parties., soliciting Market based and alternative regulated solutions to the Reliability Needs identified in the 2012 RNA. This letter is available at

<sup>&</sup>lt;a href="http://www.nyiso.com/public/webdocs/markets\_operations/services/planning/Planning\_Studies/Reliability\_Planning\_Studies/Reliability\_Assessment\_Documents/2012\_Solicitation\_for\_Reliability\_Needs.pdf">http://www.nyiso.com/public/webdocs/markets\_operations/services/planning\_Planning\_Studies/Reliability\_Planning\_Studies/Reliabilit

<sup>&</sup>lt;sup>43</sup> Of these three market-based solutions, two are generators and one is a Demand Response resource.

<sup>&</sup>lt;sup>44</sup> The five responses that are Alternative Regulated Solutions are transmission and Demand Response.

<sup>&</sup>lt;sup>45</sup> 2009 and 2010 CRPs did not generate any tracked projects

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 past years, 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:

Capacity margin % = 
$$\frac{\text{Availability}}{\text{Requirement}}$$
 x 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>46</sup> The following table displays the required and available amounts of UCAP as calculated from detailed data from monthly certified capacity, auction offers, and sales awards.

		2008	2009	2010	2011	2012
	Requirement (MW)	36,633	36,362	35,045	34,684	35,076
NYCA	Available Cap. (MW)	38,192	38,217	37,272	38,041	37,881
	Capacity margin %	104.3%	105.1%	106.4%	109.7%	108.0%
	Requirement (MW)	8,911	8,855	8,336	8,832	8,897
NYC	Available Cap. (MW)	9,858	9,612	8,753	9,660	9,696
	Capacity margin %	110.6%	108.5%	105.0%	109.4%	109.0%
	Requirement (MW)	4,685	4,749	5,021	5,052	4,961
LI	Available Cap. (MW)	5,353	5,331	5,864 <sup>47</sup>	5,952	5,858
	Capacity margin %	114.3%	112.3%	116.8%	117.8%	118.1%

Table 11: Available Capacity vs. Required Capacity

In Table 11, 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

<sup>47</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, the Capacity margin for Long Island in the 2010 Annual Report should have been stated as 116.8%.

<sup>&</sup>lt;sup>46</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.

ratings excluding the amount imported via external transactions.<sup>48</sup> In 2012, the NYCA Capacity margin reported in the table decreased from 2011, in part due to an increase in the IRM from 15.5% to 16.1%.

#### 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. Like 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 2008 through 2012.

Table 12 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 2008 - 2012 Demand Curves were based on an LMS 100 unit.

			-		
	2008	2009	2010	2011	2012
NYCA	\$103,835	\$103,312	\$105,115	\$110,577	\$122,650
NYC	\$209,747	\$213,943	\$244,147	\$233,486	\$282,388
LI	\$180.914	\$194,743	\$211.069	\$214.785	\$263,070

Table 12: Annual Revenue Requirements in UCAP terms (\$/MW)

Table 13 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>49</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

<sup>&</sup>lt;sup>48</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.

<sup>&</sup>lt;sup>49</sup> The assumed parameters for the 2012 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

 $<sup>&</sup>lt; http://www.nyiso.com/public/webdocs/markets\_operations/committees/bic\_icapwg/meeting\_materials/2010-12-01/Demand\_Curve\_Study\_Report\_11-15-10\_Revised.pdf>.$ 

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%.

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 report 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 14 and Chart 13 utilize data from Table 13, the adjustment reflected in Table 13 also affected the corresponding NYCA revenue margins in Table 14 and Chart 13 for years 2008 – 2012.

Revenue Elements in \$ Revenue Elements as % of Total 2011 2012 2008 2008 2009 2010 2009 2010 2011 \$20,815 Energy \$6,251 \$5,291 \$16,646 \$35,147 15% 14% 52% 80% 70% A/S \$8,641 \$4,058 \$1,161 \$341 \$666 21% 11% 3% 2% 1% Capacity \$26,050 \$27,920 \$18,420 \$3,820 \$14,650 64% 75% 46% 18% 29% NYCA<sup>51</sup> Total \$40.942 \$37,269 \$40,397 \$20,807 \$50,463 100% 100% 100% 100% 100% \$59,052 37% 25% 34% 41% 35% Energy \$41,243 \$24,221 \$59,028 \$55,634 \$17,894 \$12,892 \$9,300 16% 15% 4% 9% 6% A/S \$14,155 \$7,648 Capacity \$58,640 47% 61% 50% 60% \$51,980 \$104,600 \$72,440 \$95,550 60% NYC Total \$111,117 \$97,016 \$171,299 \$144,360 \$160,483 100% 100% 100% 100% 100% Energy \$48,229 \$32,795<sup>52</sup> \$84,130 \$95,780 \$117,016 49% 43% 76% 86% 81% A/S \$16,998 \$11,829 \$5,356 \$11,400 \$6,971 17% 16% 5% 10% 5% Long Capacity \$33,970 \$30,800 \$20,790 \$3,840 \$20,180 34% 41% 19% 3% 14% Island 100% 100% Total \$99,197 \$75,424 \$110,276 \$111,020 \$144,168 100% 100% 100%

Table 13: Benchmark Annual Revenues in UCAP terms (\$/MW)<sup>50</sup>

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:

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

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.

	2008	2009	2010	2011	2012
NYCA	39%	36%	38%	19%	41%
NYC	53%	45%	70%	62%	57%
LI	55%	39%	52%	52%	55%

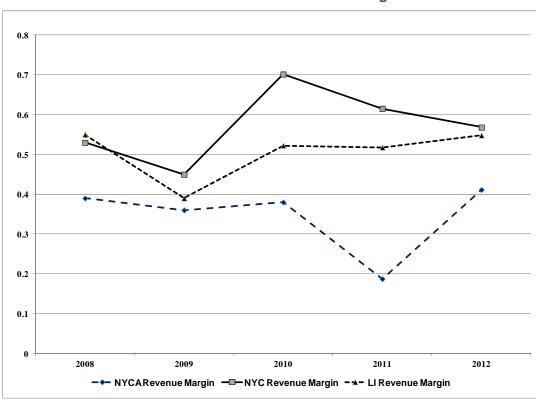
Table 14: Revenue Margins

<sup>&</sup>lt;sup>50</sup> Because of the change in methodology beginning with the 2011 annual ICAP report, the Ancillary Services revenues shown in Table 13 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>&</sup>lt;sup>51</sup> These values are for the Capital Zone (Zone F), which is used as a representation for revenues in the NYCA.

 $<sup>^{52}</sup>$  The Energy and Ancillary Services revenues for Long Island (LI) in 2009 have been updated to \$32,759 and \$11,829/MW from the \$48,229 and \$16,998/MW stated in previous annual ICAP reports

In 2012, Revenue Margins increased from prior levels in NYCA and LI, largely due to the increase in capacity revenues. In NYC, Revenue Margins declined due to a 21% increase in the annual revenue requirement as compared to an 11% increase in benchmark revenues. The increase in NYC benchmark revenues from prior levels is due to a 32% increase in Capacity revenues. This increase offsets declines seen in Energy and Ancillary Services 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 Tables 11 and 14 are graphed below, showing revenue (Chart 13) and Capacity (Chart 14) margins. Chart 15 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. In Chart 14, the high levels of excess capacity in 2008 through 2010 do not lead to corresponding declines in capacity revenue. The reason they do not is the market rules provide that the UCAP Market Clearing Price is the greater of the NYCA or the respective Locality Market Clearing Price. The magnitude of excess capacity peaked in NYCA, NYC, and LI in 2011, and as a result, the capacity market revenues relative to the CONE requirements shown in Chart 15 dropped precipitously, thereby appropriately signaling to the market that sufficient capacity already existed<sup>53</sup>. Market Participants elected to retire, mothball or lay-up more than 1500 MW of generating capacity in 2012<sup>54</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 2011/April 31, 2012 ICAP Demand Curves. The effect of the reduced level of excess is reflected in higher revenue margins in 2012.

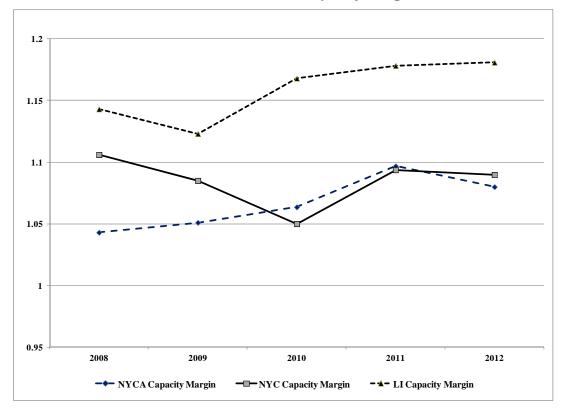


**Chart 13: UCAP-based Revenue Margins** 

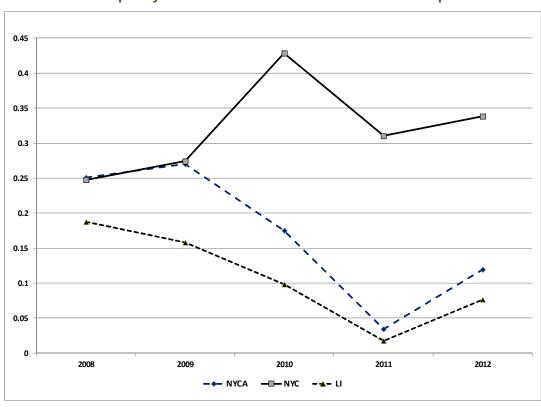
<sup>54</sup> Table 1 is a list of mothballed and retired Units

<sup>53 2011</sup> SOM Report, Page A-13

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



**Chart 15: Capacity Market Revenues Relative to CONE Requirements** 



# **Attachments**

### **Attachment I: Existing Generating Facilities**

		2012 Capability Year																	
	Owner,							Name	SUM	201	2							2010	
REF.	Operator,				Location	Location I		Plate	CRIS	Capability		Co-				Fuel		Net	
NO.	and t or						Date	Rating	Cap (A)	(Megav	atts)	Gen	Unit	F	Туре	Туре	Туре	Energy	
	Billing Organization	Station Unit	Zone	PTID	Town Cnty	St		(MV)	(MV)	Summer	∀inter	Y/N	Туре	Т :	1	2	3	(GVh)	CF
1066	Athens Generating Company, LP	Athens 1	F	23668	Athens 7 039	36	2004-05-01	441.0	316.6	302.9	401.2		cc		NG			451.4	14.6%
1067	Athens Generating Company, LP	Athens 2	F	23670	Athens 7 039	36	2004-05-01	441.0	315.6	305.1	397.9		CC		NG			1,920.5	62.4%
1068	Athens Generating Company, LP	Athens 3	F	23677	Athens 7 039	36	2004-05-01	441.0	312.8	308.6	400.5		CC		NG			1,753.8	56.5%
1661		Bethlehem Energy Center 1	F	23843	Bethlehem 7 001	36	2005-07-01	893.1	756.9	757.2	844.8		CC		NG	FO2		4,239.6	60.4%
	Class A Averages						2004-08-15	554	425	418	511							2,091	51.4%

# **Attachment II: Class Average Avoidable Costs**

	Class A
Technology	Combined Cycle
Primary Fuel	Natural Gas
Total Units in Group	4
Dual-Fueled Units in Group	1
Average Capacity Factor	51.4%
Average In-Service Date	15-Aug-2004
Average Nameplate Rating (MW)	554.0
Net Plant Capacity - Summer, CRIS-adjusted (MW)	418.4
Net Plant Capacity - Winter (MW)	511.1
Net Plant Capacity - Summer/Winter Average (MW)	464.7
Fixed O&M and Fixed Cost Assumptions	
·	Class A
Average Labor Rate, incl. Benefits (2012\$/hour)	61.25
Number of Operating and Maintenance Staff	27.00
Labor - Routine O&M (2012\$/year)	3,439,556
Routine Materials and Contract Services (2012\$/year)	2,651,484
Administrative and General (2012\$/year)	510,656
Other Fixed Cost Assumptions	
Insurance Rate	0.30%
Market value of plant (2012\$/kW)	1,080
Insurance (2012\$/year)	1,795,431
Total Fixed O&M and Fixed Costs	8,397,127
\$/kW-year (2012\$)	\$18.07
Avoidable Cost Percentages for a Mothballed Unit	
	Class A
Labor - Routine O&M	82.18%
Materials and Contract Services - Routine	90.00%
Administrative and General	84.46%
Insurance	60.00%
	Combined Cycle
PJM Category for Percent Avoidable	2 on 1, Frame F
Annual Avoidable Costs for a Mothballed Unit (2012\$	• •
-	Class A
Labor - Routine O&M	2,826,627
Materials and Contract Services - Routine	2,386,336
Administrative and General	431,300
	4 077 050
Insurance	1,077,258
Insurance Total Annual Avoidable Costs	6,721,522

### **Attachment III: Class Average Going Forward Costs**

November 2011 - October 2012 (2012 \$)

	Class A ROS
Technology	Combined Cycle
Primary Fuel	Natural Gas
Avoidable Costs - Mothball (\$/kW-yr)	14.46
Avoidable Costs - Mothball (\$/kW-yr) - UCAP basis <sup>1</sup>	15.82
Net Revenues (\$/kW-yr) - Actual	41.77
Going forward costs minus full net revenues (\$/kW-yr) <sup>2</sup>	0.00
Summer (\$/kW-month)	0.00
Winter (\$/kW-month)	0.00
Going forward costs minus half net revenues (\$/kW-yr)	0.00
Summer (\$/kW-month)	0.00
Winter (\$/kW-month)	0.00
Going forward costs minus zero net revenues (\$/kW-yr)	15.82
Summer (\$/kW-month)	1.64
Winter (\$/kW-month)	0.82

Note 1. All remaining values in this table are expressed in UCAP terms

Note 2. The three GFC calculations reflect the average costs and revenues of the underlying generators within the class. Because individual generator GFCs are assigned a minimum value of zero, averaging across a group produces a different result from showing the results individually.

### **Attachment IV: Unsold Capacity Offers (Masked)**

Masked PTID Name	AUCTION TYPE	AUCTION MONTH	LOCATION DESCRIPTION	OFFER CAPACITY	OFFER PRICE	AWARDED CAPACITY	MARKET CLEARING PRICE	UNSOLD
Unit 23	Spot	Nov-11	ROS	111.2	0.06	75.557	0.06	35.643
Unit 28	Spot	Nov-11	ROS	21.8	0.07	0	0.06	21.8
Unit 24	Spot	Nov-11	ROS	111.1	0.09	0	0.06	111.1
Unit 29	Spot	Nov-11	ROS	21.8	0.09	0	0.06	21.8
Unit 06	Spot	Nov-11	ROS	30	0.09	0	0.06	30
Unit 27	Spot	Nov-11	ROS	16.2	0.1	0	0.06	16.2
Unit 26	Spot	Nov-11	ROS	6	0.1	0	0.06	6
Unit 20	Spot	Nov-11	ROS	5.2	0.1	0	0.06	5.2
Unit 21	Spot	Nov-11	ROS	4	0.1	0	0.06	4
Unit 12	Spot	Nov-11	ROS	4	0.1	0	0.06	4
Unit 11	Spot	Nov-11	ROS	3.6	0.1	0	0.06	3.6
Unit 13	Spot	Nov-11	ROS	4.5	0.1	0	0.06	4.5
Unit 14	Spot	Nov-11	ROS	4.5	0.1	0	0.06	4.5
Unit 08	Spot	Nov-11	ROS	100	0.1	0	0.06	100
Unit 22	Spot	Nov-11	ROS	5	0.1	0	0.06	5
Unit 09	Spot	Nov-11	ROS	6.4	0.11	0	0.06	6.4
Unit 30	Spot	Nov-11	ROS	21.8	0.12	0	0.06	21.8
Unit 04	Spot	Nov-11	ROS	21.1	0.12	0	0.06	21.1
Unit 08	Spot	Nov-11	ROS	51.1	0.12	0	0.06	51.1
Unit 08	Spot	Nov-11	ROS	30	0.12	0	0.06	30
Unit 23	Spot	Nov-11	ROS	111.2	0.13	0	0.06	111.2
Unit 24	Spot	Nov-11	ROS	111.3	0.14	0	0.06	111.3
Unit 15	Spot	Nov-11	ROS	9.9	0.14	0	0.06	9.9
Unit 17	Spot	Nov-11	ROS	391.7	0.15	0	0.06	391.7
Unit 07	Spot	Nov-11	ROS	12.4	0.13	0	0.06	12.4
Unit 25	Spot	Nov-11	ROS	70	0.2	0	0.06	70
Unit 18	Spot	Nov-11	ROS	385.8	0.93	0	0.06	385.8
OTIIL TO	Эрог	11/1/2011 Total	ROS	1671.6	0.93	U	0.00	1596.043
Unit 17	Spot	Dec-11	ROS	391.7	0.1	154.759	0.1	236.941
	<u> </u>				0.1		0.1	
Unit 27	Spot	Dec-11	ROS	16.2		6.401		9.799
Unit 26	Spot	Dec-11	ROS	6	0.1	2.371	0.1	3.629
Unit 20	Spot	Dec-11	ROS	5.2	0.1	2.055	0.1	3.145
Unit 21	Spot	Dec-11	ROS	4	0.1	1.58	0.1	2.42
Unit 12	Spot	Dec-11	ROS	4	0.1	1.58	0.1	2.42
Unit 14	Spot	Dec-11	ROS	4.5	0.1	1.778	0.1	2.722
Unit 13	Spot	Dec-11	ROS	4.5	0.1	1.778	0.1	2.722
Unit 11	Spot	Dec-11	ROS	3.6	0.1	1.422	0.1	2.178
Unit 08	Spot	Dec-11	ROS	61.1	0.1	24.14	0.1	36.96
Unit 04	Spot	Dec-11	ROS	78.2	0.1	30.896	0.1	47.304
Unit 08	Spot	Dec-11	ROS	100	0.11	0	0.1	100
Unit 15	Spot	Dec-11	ROS	9.9	0.15	0	0.1	9.9
Unit 09	Spot	Dec-11	ROS	6.4	0.15	0	0.1	6.4
Unit 08	Spot	Dec-11	ROS	20	0.15	0	0.1	20
Unit 25	Spot	Dec-11	ROS	25	0.5	0	0.1	25
Unit 18	Spot	Dec-11	ROS	385.8	0.6	0	0.1	385.8
Unit 02	Spot	Dec-11	ROS	76.7	1.5	0	0.1	76.7
		12/1/2011 Total		1202.8				974.04
Unit 19	Spot	Jan-12	ROS	391	0.5	249.699	0.5	141.301
Unit 25	Spot	Jan-12	ROS	45	0.5	28.738	0.5	16.262
Unit 01	Spot	Jan-12	ROS	50	0.55	0	0.5	50
Unit 01	Spot	Jan-12	ROS	50	0.65	0	0.5	50
		1/1/2012 Total		536				257.563

Unit 03 Unit 09 Unit 05 Unit 15 Unit 17 Unit 07 Unit 18 Unit 25	Spot Spot Spot Spot Spot Spot Spot Spot	Apr-12	ROS	391 150 100 150 2.4 200 9.9 391.7 4.4 385.8 45 7.3 1885.5 7110.2	0.1 0.1 0.1 0.1 0.12 0.15 0.2 0.27 0.5 0.7	231.268 88.721 59.148 88.721 1.42 0 0 0 0 0	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	159.732 61.279 40.852 61.279 0.98 200 9.9 391.7 4.4 385.8 45 7.3
Unit 03 Unit 09 Unit 05 Unit 15 Unit 17 Unit 07 Unit 18 Unit 25	Spot Spot Spot Spot Spot Spot Spot Spot	Apr-12	ROS	391 150 100 150 2.4 200 9.9 391.7 4.4 385.8 45	0.1 0.1 0.1 0.1 0.1 0.12 0.15 0.2 0.27 0.5	231.268 88.721 59.148 88.721 1.42 0 0 0 0	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	61.279 40.852 61.279 0.98 200 9.9 391.7 4.4 385.8
Unit 03 Unit 09 Unit 05 Unit 15 Unit 17 Unit 07 Unit 18 Unit 25	Spot Spot Spot Spot Spot Spot Spot Spot	Apr-12	ROS	391 150 100 150 2.4 200 9.9 391.7 4.4 385.8 45	0.1 0.1 0.1 0.1 0.1 0.12 0.15 0.2 0.27 0.5	231.268 88.721 59.148 88.721 1.42 0 0 0 0	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	61.279 40.852 61.279 0.98 200 9.9 391.7 4.4 385.8
Unit 03 Unit 09 Unit 05 Unit 15 Unit 17 Unit 07 Unit 18	Spot Spot Spot Spot Spot Spot Spot Spot	Apr-12	ROS	391 150 100 150 2.4 200 9.9 391.7 4.4	0.1 0.1 0.1 0.1 0.1 0.12 0.15 0.2 0.27 0.5	231.268 88.721 59.148 88.721 1.42 0 0 0	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	61.279 40.852 61.279 0.98 200 9.9 391.7 4.4
Unit 03 Unit 09 Unit 05 Unit 15 Unit 17 Unit 07	Spot Spot Spot Spot Spot Spot Spot Spot	Apr-12 Apr-12 Apr-12 Apr-12 Apr-12 Apr-12 Apr-12 Apr-12 Apr-12	ROS ROS ROS ROS ROS ROS ROS ROS ROS	391 150 100 150 2.4 200 9.9 391.7 4.4	0.1 0.1 0.1 0.1 0.1 0.12 0.15 0.2	231.268 88.721 59.148 88.721 1.42 0 0 0	0.1 0.1 0.1 0.1 0.1 0.1 0.1	61.279 40.852 61.279 0.98 200 9.9 391.7 4.4
Unit 03 Unit 09 Unit 05 Unit 15 Unit 17	Spot Spot Spot Spot Spot Spot Spot Spot	Apr-12 Apr-12 Apr-12 Apr-12 Apr-12 Apr-12 Apr-12 Apr-12	ROS ROS ROS ROS ROS ROS ROS	391 150 100 150 2.4 200 9.9	0.1 0.1 0.1 0.1 0.1 0.12 0.15 0.2	231.268 88.721 59.148 88.721 1.42 0 0	0.1 0.1 0.1 0.1 0.1 0.1 0.1	61.279 40.852 61.279 0.98 200 9.9
Unit 03 Unit 09 Unit 05	Spot Spot Spot Spot Spot Spot	Apr-12 Apr-12 Apr-12 Apr-12 Apr-12 Apr-12	ROS ROS ROS ROS	391 150 100 150 2.4 200	0.1 0.1 0.1 0.1 0.1 0.12 0.15	231.268 88.721 59.148 88.721 1.42 0	0.1 0.1 0.1 0.1 0.1	61.279 40.852 61.279 0.98 200
Unit 03 Unit 09	Spot Spot Spot Spot	Apr-12 Apr-12 Apr-12 Apr-12 Apr-12	ROS ROS ROS	391 150 100 150 2.4	0.1 0.1 0.1 0.1 0.1	231.268 88.721 59.148 88.721 1.42	0.1 0.1 0.1 0.1	61.279 40.852 61.279 0.98
Unit 03	Spot Spot Spot	Apr-12 Apr-12 Apr-12 Apr-12	ROS ROS	391 150 100 150	0.1 0.1 0.1 0.1	231.268 88.721 59.148 88.721	0.1 0.1 0.1	61.279 40.852 61.279
	Spot Spot	Apr-12 Apr-12 Apr-12	ROS ROS	391 150 100	0.1 0.1 0.1	231.268 88.721 59.148	0.1 0.1	61.279 40.852
OTHE OO	Spot	Apr-12 Apr-12	ROS	391 150	0.1 0.1	231.268 88.721	0.1	61.279
Unit 30		Apr-12		391	0.1	231.268		
Unit 05	Spot		ROS				0.1	159.732
Unit 19								
Unit 26	Spot	Apr-12	ROS	6	0.1	3.549	0.1	2.451
Unit 27	Spot	Apr-12	ROS	16.2	0.1	9.582	0.1	6.618
Unit 20	Spot	Apr-12	ROS	5.2	0.1	3.076	0.1	2.124
Unit 21	Spot	Apr-12	ROS	4	0.1	2.366	0.1	1.634
	Spot	Apr-12	ROS	4.5	0.1	2.662	0.1	1.838
Unit 13	Spot	Apr-12	ROS	4.5	0.1	2.662	0.1	1.838
Unit 11	Spot	Apr-12	ROS	3.6	0.1	2.129	0.1	1.471
Unit 12	Spot	Apr-12	ROS	4	0.1	2.366	0.1	1.634
		3/1/2012 Total		1480.6				1079.025
Unit 02	Spot	Mar-12	ROS	76.7	1.5	0	0.1	76.7
Unit 07	Spot	Mar-12	ROS	7.3	0.91	0	0.1	7.3
Unit 25	Spot	Mar-12	ROS	53	0.5	0	0.1	53
Unit 17	Spot	Mar-12	ROS	391.7	0.3	0	0.1	391.7
Unit 16	Spot	Mar-12	ROS	100	0.19	0	0.1	100
Unit 19	Spot	Mar-12	ROS	391	0.16	0	0.1	391
Unit 15	Spot	Mar-12	ROS	9.9	0.15	0	0.1	9.9
Unit 08	Spot	Mar-12	ROS	14.6	0.12	0	0.1	14.6
Unit 21	Spot	Mar-12	ROS	4	0.1	3.681	0.1	0.319
Unit 20	Spot	Mar-12	ROS	5.2	0.1	4.785	0.1	0.415
Unit 14	Spot	Mar-12	ROS	4.5	0.1	4.141	0.1	0.359
Unit 13	Spot	Mar-12	ROS	4.5	0.1	4.141	0.1	0.359
	Spot	Mar-12	ROS	3.6	0.1	3.313	0.1	0.287
	Spot	Mar-12	ROS	4	0.1	3.681	0.1	0.319
Unit 26	Spot	Mar-12	ROS	6	0.1	5.521	0.1	0.479
Unit 27	Spot	Mar-12	ROS	16.2	0.1	14.907	0.1	1.293
Unit 18	Spot	Mar-12	ROS	385.8	0.1	355.013	0.1	30.787
Unit 10	Spot	Mar-12	ROS	2.6	0.1	2.392	0.1	0.208
	5,50	2/1/2012 Total		333.7				333.7
Unit 02	Spot	Feb-12	ROS	76.7	1.5	0	0.18	76.7
	Spot	Feb-12	ROS	6.2	1	0	0.18	6.2
Unit 09	Spot	Feb-12	ROS	0.7	0.65	0	0.18	0.7
	Spot	Feb-12	ROS	55	0.5	0	0.18	55
Unit 18	Spot	Feb-12	ROS	100.1	0.5	0	0.18	100.1
Unit 18	Spot	Feb-12	ROS	70	0.4	0	0.18	70
Unit 09 Unit 09	Spot Spot	Feb-12 Feb-12	ROS ROS	20 5	0.35 0.4	0	0.18 0.18	20 5

Attachment V: Confidential. Unsold Capacity Offers (Unmasked)
(Not included with the public filing.)

Attachment VI: Co	onfidential. Market Participant Explanations
	(Not included with the public filing.)

#### **Attachment VII: Interconnection Queue**

Queue		l I	Date	SP	WP	Type/	Location		Interconnection			I .	Availability	Pronosec	In-Service
Pos.	Owner/Developer	Project Name	of IR	(MW)	(MW)	Fuel	County/State	z	Point	Utility	s	Last Update	of Studies	Original	Current
	Central Hudson Gas & Electric	East Fishkill Transformer	4/24/02	N/A	(14144)	AC	Dutchess, NY			CONED/CHG&E		8/19/08	None	2007/06	2012
119	ECOGEN. LLC	Prattsburgh Wind Farm	5/20/02	78.2		W	Yates, NY	С	Eelpot Rd-Flat St. 115kV	NYSEG	10	3/31/12	SRIS, FS	2005/02	2012/12
127A	Airtricity Munnsville Wind Farm, LLC	•	10/9/02	6		W	Madison, NY	E	46kV line	NYSEG	11	4/30/11	SRIS, FS	2005/02	2013/12
154	KeySpan Energy for LIPA	Holtsville-Brentwood-Pilgrim	8/19/04	N/A		AC	Suffolk, NY	K	Holtsville & Pilgrim 138kV	LIPA	5	6/1/12	None	2007/06	2018
161	Marble River, LLC	Marble River Wind Farm	12/7/04	83	83		Clinton, NY	D	Willis-Plattsburgh WP-1 230kV	NYPA		11/30/12		2006	I/S
166	Cape Vincent Wind Power, LLC		2/8/05	75.9	75.9	W	Jefferson, NY	Е	Rockledge Substation 115kV	NM-NG	10	8/31/12	SRIS, FS	2006/12	2014/12
171	Marble River, LLC	Marble River II Wind Farm	2/8/05	132.2	132.2	W	Clinton, NY	D	Willis-Plattsburgh WP-2 230kV	NYPA	14	11/30/12	•	2007/12	I/S
180A	Green Power	Cody Rd	3/17/05	10	10	W	Madison, NY	С	Fenner - Cortland 115kV	NM-NG	11	12/31/11	None	None	2013/Q4
189	Atlantic Wind, LLC	Horse Creek Wind	4/8/05	126	126	W	Jefferson, NY	Е	Coffeen St-Thousand Island 115k	NM-NG	9	7/31/12	FES, SRIS	2006/12	2013/10
197	PPM Roaring Brook, LLC / PPM	Roaring Brook Wind	7/1/05	78	78	W	Lewis, NY	Е	Boonville-Lowville 115kV	NM-NG	11	12/31/12	FES, SRIS, FS	2009/12	N/A
198	New Grange Wind Farm, LLC	Arkwright Summit Wind Farn	7/21/05	79.8	79.8	W	Chautauqua, NY	Α	Dunkirk-Falconer 115kV	NM-NG	9	12/31/11	FES, SRIS	2008/12	2013/09
201	NRG Energy	Berrians GT	8/17/05	200	200	CC-NG	Queens, NY	J	Astoria West Substation 138kV	CONED	9	6/30/11	FES, SRIS	2008/02	2014/06
204A	Duer's Patent Project, LLC	Beekmantown Windfarm	10/31/05	19.5	19.5	W	Clinton, NY	D	Kents Falls - Sciota 115kV	NYSEG	10	4/30/11	None	2008/06	2013/06
205	National Grid	Luther Forest	11/2/05	40	40	L	Saratoga, NY	F	Round Lake 115kV	NM-NG	6	5/31/11	SIS	2007/08	2012/Q2
206	Hudson Transmission Partners	Hudson Transmission	12/14/05	660	660	DC/AC	NY, NY - Bergen, NJ	J	West 49th Street 345kV	CONED	12	11/30/11	FES, SRIS, FS	2009/Q2	2013/05
207	Cape Vincent Wind Power, LLC	Cape Vincent	1/12/06	209.3	209.3	W	Jefferson, NY	Ε	Rockledge Substation 115kV	NM-NG	10	8/31/12	FES, SRIS, FS	2009/Q4	2014/12
213	Noble Environmental Power, LLC	Ellenburg II Windfield	4/3/06	21	21	W	Clinton, NY	D	Willis-Plattsburgh WP-2 230kV	NYPA	10	10/31/11	SRIS, FS	2007/10	N/A
216	Nine Mile Point Nuclear, LLC	Nine Mile Point Uprate	5/5/06	168	168	NU	Oswego, NY	С	Scriba Station 345kV	NM-NG	14	7/31/12	SRIS, FS	2010/Q3	I/S
222	Ball Hill Windpark, LLC	Ball Hill Windpark	7/21/06	90	90	W	Chautauqua, NY	Α	Dunkirk-Gardenville 230kV	NM-NG	10	4/30/12	FES, SRIS, FS	2008/10	2014/Q1
224	NRG Energy, Inc.	Berrians GT II	8/23/06	50	90	CC-NG	Queens , NY	J	Astoria West Substation 138kV	CONED	9	6/30/11	FES, SRIS	2010/06	2014/06
227A	Laidlaw Energy Group Inc.	Laidlaw Energy & Env.	10/30/06	7	7	Wo	Cattaraugus, NY	Α	13.2kV	NM-NG	7	10/28/09	None		N/A
232	Bayonne Energy Center, LLC	Bayonne Energy Center	11/27/06	500	500	CT-D	Bayonne, NJ	J	Gowanus Substation 345kV	ConEd	14	6/1/12	FES, SRIS, FS	2008/11	I/S
237	Allegany Wind, LLC	Allegany Wind	1/9/07	72.5	72.5	W	Cattaraugus, NY	Α	Homer Hill – Dugan Rd. 115kV	NM-NG	11		FES, SRIS, FS	2009/10	2013/12
239A	Innovative Energy System, Inc.	Modern Innovative Plant	1/31/07	6.4	6.4	М	Niagara, NY	Α	Youngstown – Sanborn 34.5kV	NM-NG	8	12/31/12		2007/12	N/A
250	Seneca Energy II, LLC	Ontario	7/2/07	5.6	5.6	М	Ontario, NY	С	Haley Rd Hall 34.5kV	NYSEG		12/31/11	None	2009/10	2012/11
251	CPV Valley, LLC	CPV Valley Energy Center	7/5/07	677.6	690.6		Orange, NY	G	Coopers – Rock Tavern 345kV	NYPA	9	3/31/12	FES/SRIS	2012/05	2016/05
263	Stony Creek Wind Farm, LLC	Stony Creek Wind Farm	10/12/07	94.4	94.4	W	Wyoming, NY	С	Stolle Rd - Meyer 230kV	NYSEG	11		FES, SRIS, FS	2010/01	2013/09
264	RG&E		10/23/07	2.8	2.8	Н	Monroe, NY	В	11kV	RG&E	9	3/31/12	None	2008/04	2013Q1
266	NRG Energy, Inc.		11/28/07	250			Queens, NY	J	Astoria 345kV	NYPA	9	7/31/12	•	2010/06	2016/06
270	Wind Development Contract Co LLC		12/13/07	244.8	244.8		Jefferson, NY	E	Fitzpatrick - Edic 345kV	NYPA	6	4/30/12	FES, SRIS	2010/09	2015/12
284	Broome Energy Resources, LLC		3/6/08 4/7/08	1.6 20	1.6 20	М	Broome, NY	C F	Nanticoke Landfill Plant 34.5kV	NYSEG NM-NG	11	8/31/12 11/30/11	None	2008/07 2009/12	2012/12 2012/Q4
290A 294	Green Island Power Authority Orange & Rockland	Green Island Power Ramapo-Sugarloaf	4/7/08	N/A	N/A	L AC	Albany, NY Orange/Rockland, NY	г G	Maplewood - Johnson Rd 115kV Ramapo - Sugarloaf 138kV	O&R	6 6	3/1/12	SIS SIS	2009/12	2012/Q4 N/A
305	Transmission Developers Inc.	Champlain Hudson Power Express	7/18/08	1000	1000	DC	Quebec - NY, NY	J	Astoria Substation 345kV	NYPA	9	12/31/12		2009/00 2014/Q1	2016/Q2
310	Cricket Valley Energy Center, LL		9/22/08	1019.9				G	Pleasant Valley - Long Mt. 345kV		9	3/1/12	FES, SRIS	2014/Q1	2015/09
311	New York State Electric & Gas	Concord Casino	9/24/08	48.0	48.0	1	Sullivan, NY	E	Coopers Corner - Rock Hill	NYSEG	5	10/28/09	None	2009/09	N/A
322	Rolling Upland Wind Farm, LLC		1/13/09	59.4	59.4	w	Madison, NY	E	County Line - Brothertown 115kV		9	7/31/12	FES. SRIS	2012/12	2014/12
	NYSEG/RG&E	Rochester SVC/PST Trans.	3/9/09	N/A	N/A		Monroe, NY	В	Station 124 115kV	NYSEG	6	3/31/11	SIS	2011/12	2012-2013
331	National Grid	Northeast NY Reinforcemen	4/22/09	N/A	N/A	AC	Saratoga, NY	F	NGrid 230kV	NM-NG		10/31/11	SIS	2010-2019	2010-2019
333	National Grid	Western NY Reinforcement	5/5/09	N/A	N/A	AC	Cattaraugus, NY		NGrid 115kV	NM-NG	5	7/31/09	None	2014/Q2	2014/Q2
337	Long Island Power Authority	Northport Norwalk Harbor	7/14/09	N/A	N/A	AC	Suffolk, NY	K	Northport 138kV	LIPA	6	1/31/11	SIS	2016	2016
338	RG&E	Brown's Race II	8/11/09	8.3	8.3	Н	Monroe, NY	В	Station 137 11kV	RG&E	9	8/31/12	None	2011/08	2013/Q1
339	RG&E	Transmission Reinforcement	8/17/09	N/A	N/A	AC	Monroe, NY	В	Niagara - Kintigh 345kV	RG&E	6	3/1/12	SIS	2015/09	2016/W
342	Albany Energy, LLC	Albany Landfill	9/3/09	6.4	6.4	М	Albany, NY	F	34.5kV	NM-NG	10	1/31/12	None	2010/12	2012/Q1 - 2015/12
347	Franklin Wind Farm, LLC	Franklin Wind	12/2/09	50.4	50.4	W	Delaware, NY	Е	Oakdale - Delhi 115kV	NYSEG	5	9/30/12	FES	2012/12	2015/12

#### **Attachment VII: Interconnection Queue**

Queue			Date	SP	WP	Type/	Location		Interconnection			Last	Availability	Proposed	In-Service
Pos.	Owner/Developer	Project Name	of IR	(MW)	(MW)	Fuel	County/State	z	Point	Utility	s	Update	of Studies	Original	Current
349	Taylor Biomass Energy, LLC	Taylor Biomass	12/30/09	19	22.5	SW	Montgomery, NY	G	Maybrook - Rock Tavern	CHGE	9	8/31/12	SRIS	2012/04	2013/12
351	Linden VFT, LLC	Linden VFT Uprate	3/2/10	15	15	AC	Richmond, NY-NJ	J	Goethals 345kV	CONED	9	6/30/11	SRIS	2010/11	N/A
354	Atlantic Wind, LLC	North Ridge Wind	5/13/10	100	100	W	St. Lawrence, NY	Е	Nicholville - Parishville 115kV	NM-NG	6	10/31/12	FES, SRIS	2014/12	2014/12
355	Brookfield Renewable Power	Stewarts Bridge Hydro	8/3/10	3	3	Н	Saratoga, NY	F	Spier Falls - EJ West	NM-NG	9	7/31/12	SRIS	2012/10	2012/12
357	West Point Partners, LLC	NY Power Pathway	9/10/10	1000	1000	DC	Albany, Orange or Westchester, NY	F, G or H	New Scotland - Roseton or Buchanan 345kV	NM-NG/CenHud or Coned	4	12/31/12	FES	2016/07	2017/07
358	West Point Partners, LLC	West Point Transmission	9/13/10	1000	1000	DC	NY	F, H	Leeds - Buchanan North 345kV	NM-NG/ConEd	4	11/30/12	FES	2015/05-2016/05	2017/07
360	NextEra Energy Resources, LLC	Watkins Glen Wind	12/22/10	122.4	122.4	W	Schuyler, NY	С	Bath - Montour Falls 115 kV	NYSEG	5	11/30/12	FES	2013/09	2015/07
361	US PowerGen Co.	Luyster Creek Energy	2/15/11	401	444	CC	Queens, NY	J	Astoria West Substation 138kV	CONED	4	12/31/12	FES	2014/06	2015/06
362	Monticello Hills Wind, LLC	Monticello Hills Wind	3/7/11	18	18	W	Otsego, NY	Е	W. Winfield - Richfield Spring 46k	NYSEG	10	11/30/12	None	2012/11	2014/12
363	Poseidon Transmission, LLC	Poseidon Transmission	4/27/11	500	500	DC	Suffolk, NY	K	Werner - Ruland Rd. 230kV	LIPA	4	9/30/12	FES	2016/05	2016/05
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	2016/06
368	Consolidated Edison Co. of NY	Feeder 76 Ramapo to Rock Tavern	10/13/11	TBD	TBD	AC	Orange, Rockland, N	G	Ramapo to Rock Tavern 345 kV	ConEd/CenHud	6	12/31/12	SIS	2016/08	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. Subsation 138kV	ConEd	3	6/1/12	None	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	8/31/12	None	2013/12	2013/12
371	South Mountain Wind, LLC	South Mountain Wind	10/31/11	18	18	W	Delaware, NY	Е	River Rd Substation 46kV	NYSEG	9	11/30/12	None	2013/11	2014/12
372	Dry Lots Wind, LLC	Dry Lots Wind	10/31/11	33	33	W	Herkimer, NY	Е	Schuyler - Whitesboro 46kV	NM-NG	5	9/30/12	FES	2014/11	2014/11
373	New York Power Authority	Coopers Corners Shunt Reactor	12/21/11	N/A	N/A	AC	Sullivan, NY	Е	Coopers Corners 345 kV	NYSEG	6	12/31/12	SIS	2014	2014
374	CPV Valley, LLC	CPV Valley II	2/21/12	820	820	CC	Wawayanda, NY	G	Rock Tavern to Coopers Corners	NYPA	5	6/1/12	None	2017/05	2017/05
375	Eagle Creek Hydro, LLC	Eagle Creek Hydro	3/6/12	8.0	8.0	Н	Sullivan, NY	Е	Rio 69kV Switchyard	O&R	10	6/1/12	None	2013/10	2013/10
377	Monroe County	Monroe County Mill Seat	3/16/12	3.2	3.2	M	Monroe, NY	В	Sanford Rd. 34.5kV	NM-NG	3	7/31/12	None	2013/Q4	2013/Q4
378	Invenergy NY LLC	Marsh Hill Wind	3/29/12	16.2	16.2	W	Steuben, NY	С	Jasper - South Canisteo 34.5kV	NYSEG	5	7/31/12	None	2015/12	2015/12
379	Seneca Energy II, LLC	Seneca II Expansion	4/24/12	6.4	6.4	M	Seneca, NY		Seneca - Waterloo 34.5kV	NYSEG	9	7/31/12	None	2012/12	2013/07
380	New York Power Authority	Marcy South Reinforcement	5/14/12	N/A	N/A	AC	Oneida-Sullivan, NY	Е	Marcy/Edic-Coopers Corners 345		5	10/31/12	None	TBD	TBD
382	Astoria Generating Co.	South Pier Improvement	5/30/12	88			Kings, NY	J	Gowanus Substation 138kV	ConEd	5	9/30/12	None	2015/07	2015/07
383	GenOn Energy, Inc.	Bowline Gen. Station Unit #3		775			Rockland, NY		Ladentown Subsation 345kV	O&R/ConEd		10/31/12	None	2016/06	2016/06
384	National Grid	Knickerbocker Pleasant Valley	6/15/12	TBD	TBD	AC	Columbia, NY	F	•	NM-NG/ConEd		7/31/12	None	2018	2018
385	National Grid	Hudson Valley Reinforcemer	6/15/12	TBD	TBD	AC	Columbia, NY		New Scotland - Leeds 345kV	NM-NG/ConEd	5	7/31/12	None	2018	2018
386	GII Development LLC	Grand Isle Intertie	6/28/12	400	400	AC	Clinton, NY - VT		Plattsburgh - Essex, VT 230kV	NYPA	3	11/30/12	None	2017/06	2017/06
387	Cassadaga Wind, LLC	Cassadaga Wind	7/19/12	150	150	W	Chautauqua, NY		Dunkirk – Moon Station 115 kV	NM-NG	3	11/30/12	None	2015/12	2015/12
	Trail Co.	Farmers Valley Substation	9/14/12	TBD	TBD	AC	Cattaraugus, NY - P/		Homer City - Stolle Rd. 345kV	NM-NG/NYSEG	•	12/31/12	None	2016/06	2016/06
391	North America Transmission, LLC		9/21/12	TBD	TBD	AC	Oneida-Delaware, N'		24.0 1.400.010.0	NM-NG/NYSEG	•	12/31/12	None	2017/11	2017/11
392	Exelon Corporation	Scriba-Volney	10/5/12	TBD	TBD	AC	Oswego, NY	С		NM-NG/NYSEG	-	10/31/12	None	TBD	TBD
	NRG Energy, Inc.	Berrians East Repower	10/16/12	500	580	CC	Queens , NY	J	Astoria East Substation 138kV	CONED	2	11/30/12	None	2018/06	20/18/06
	Trail Co.	Mainesburg Substation	10/16/12	TBD	TBD	AC	Chemung, NY - PA		Homer City - Watercure 345kV	NYSEG	4	12/31/12	None	2014/06	2014/06
395	Copenhagen Wind Farm, LLC	Copenhagen Wind	11/12/12	79.9	79.9	W	Lewis, NY		East Watertown 115kV	NM-NG	2	12/31/12	None	2014/10	2014/10
396	Baron Winds, LLC	Baron Winds	11/30/12	300	300	W	Steuben, NY	С	Hillside - Meyer 230kV	NYSEG	2	12/31/12	None	2015/10	2015/10

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.

<sup>•</sup> 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

<sup>•</sup> 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 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

<sup>•</sup> Proposed in-service dates are shown in format Year/Qualifier, where Qualifier may indicate the month, season, or quarter.

# **Attachment VIII: 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	

				N	IYCA												LI							
	Capal Period*		Mon Auct		Spot M	Iarket	Minimum Required	Excess Sold	Capal Period*	•	Mon Auct	•	Spot M	Iarket	Minimum Required	Excess Sold	Per	ability riod* trip)		nthly ction	Spot I	Market	Minimum Required	Excess Sold
Month	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	Inst	alled Ca	pacity M	arket Ex	isted but	all	35,563.1		Inst	alled Ca	pacity M	arket Ex	cisted but	all	8,305.6		Inst	alled Ca	pacity	Market E	xisted	but all	4,555.3	
Feb-00	J	purchase	es and sal	es were	bilateral		35,563.1			purchas	es and sal	es were	bilateral		8,305.6			purchase	es and s	sales were	e bilate	ral	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	1	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	1	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	1	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	1	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	1	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	1	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	

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

				N	NYCA								NYC								LI			
	Capal Period*		Mon Auct		Spot M	arket	Minimum Required	Excess Sold	Capal Period*	•	Mont Auct	•	Spot M	larket	Minimum Required	Excess Sold	Per	ability riod* trip)		nthly ction	Spot I	Market	Minimum Required	Excess Sold
Month	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

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

				1	NYCA								NYC				Ц								
	Capal Period*	(Strip)	Mont Auct	ion	Spot M		Minimum Required	Excess Sold	Capal Period*	(Strip)	Mont Auct	ion	Spot M		Minimum Required	Excess Sold	Per (St	ability riod* trip)	Au	nthly ction	_	Market	Minimum Required	Excess Sold	
Month	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	

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

				1	NYCA												LI							
	Capal Period*	(Strip)	Mon Auct	tion	Spot M		Minimum Required	Excess Sold	Capal Period*	(Strip)		ion	Spot M		Minimum Required	Excess Sold	Per (St	ability riod* trip)	Au	nthly ction		Market	Minimum Required	Excess Sold
Month	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

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

				1	NYCA								NYC								LI			
	Capal	oility	Mont	thly	Spot M	larket	Minimum	Excess	Capal	oility	Mon	thly	Spot M	larket	Minimum	Excess	Capa	ability	Mo	nthly	Spot N	Market	Minimum	Excess
	Period*	(Strip)	Auct	ion			Required	Sold	Period*	(Strip)	Auct	ion			Required	Sold		riod* rip)	Au	ction			Required	Sold
Month	MW	Price	MW	Price	MW	Price	MW	MW	MW	Price	MW	Price	MW	Price	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

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