UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

New York Independent System Operator, Inc.

Docket No. ER03-647-000

New York Independent System Operator, Inc. Report on Withholding Behavior Under the ICAP Demand Curve

Executive Summary

In the short time since the implementation of the ICAP Demand Curve¹, the NYISO has not observed significant economic or physical withholding in the Installed Capacity market. As predicted, it appears that the ICAP Demand Curve has reduced the incentive to withhold capacity, because the Market-Clearing Prices are not significantly affected by reductions in the amount of capacity bid into the market. In fact, the NYISO has observed that offers of capacity in the NYCA, particularly from imports, have increased since implementation of the ICAP Demand Curve. The NYISO's Market Monitoring and Performance Department ("MMP") is continuing to investigate unique offering behavior in the Long Island ICAP Spot Market Auction. This behavior is discussed further below.

Study of Offering Behavior

<u>Data Collected</u>: MMP conducted a study of the impact of the ICAP Demand Curve on offering behavior in the NYISO's Installed Capacity market. As part of the study, MMP collected data regarding certification, Unforced Capacity requirements, offers, and results from the 2002 and 2003 Summer Capability Period Installed Capacity auctions.

Certification data included data used to determine the amount of capacity that each Market Participant could offer into auctions each month and the total megawatts committed to Bilateral Transactions by each Market Participant owning generation. Installed Capacity requirements included those established for the 2002-2003 and 2003-2004 Capability Years. Offer data included the names of offerors, the amount of capacity that they offered, the locality into which the capacity was offered, and the amount of capacity purchased in each auction. Auction results included those from the 2002 and 2003 Summer Capability Period Installed Capacity auctions.

<u>Analysis of Data Collected</u>: The Services Tariff requires that owners of In-City generation subject to capacity market mitigation measures offer all such capacity into Installed Capacity auctions. All others may offer into auctions or commit capacity to Bilateral Transactions. There are no restrictions on which Installed Capacity auction (Capability Period, Monthly or ICAP Spot Market) Market Participants must use.

¹ Unless otherwise specified, capitalized terms used herein have the meanings specified in the NYISO Market Administration and Control Area Services Tariff (the "Services Tariff").

MMP, in consultation with Dr. David Patton, the independent Market Advisor, has studied the certification and offer data of Market Participants to identify offering trends and withholding behavior that may have occurred after implementation of the ICAP Demand Curve in the 2003 Summer Capability Period Installed Capacity auctions. MMP subtracted the amount of capacity offered, committed to Bilateral Transactions, and sold in prior auctions from the amount of capacity certified by Market Participants, to determine if Market Participants could have offered more capacity into an individual auction.

Results of Analysis

<u>Offering Trends</u>: Figure 1 shows that patterns of offers vary across the three localities of the NYCA for the 2003 Summer Capability Period (May is excluded from the discussion, because there was no ICAP Spot Market Auction in May.) In New York City, the activity in two of the three Installed Capacity auctions was similar: on average, 2469 MW cleared in the ICAP Spot Market Auction, 2501 MW cleared in the Capability Period Auction, and 595 MW in the Monthly Auction. On Long Island, the Capability Period and Monthly Auction average capacity sales totaled 7 MW, while 385 MW cleared in the ICAP Spot Market Auction. In Rest of State, the amount of capacity sold was virtually the same in the Capability Period Auction and the ICAP Spot Market Auction, each clearing within 1 MW of 2890 MW. By comparison, 1453 MW were sold in the Monthly Auction.

Figure 1





Stated in percentage terms, in New York City, the capacity purchases in the Capability Period Auction accounted for 45% of total auction purchases, capacity purchases in the ICAP Spot Market Auction 44%, and capacity purchases in the Monthly Auction 11%. In Rest of State, the capacity purchases in the Capability Period Auction accounted for 40% of total auction purchases, capacity purchases in the ICAP Spot Market Auction 40%, and capacity purchases in the ICAP Spot Market Auction 40%, and capacity purchases in the ICAP Spot Market Auction 40%, and capacity purchases in the Monthly Auction 20%. In Long Island, capacity purchases in the Capability Period Auction accounted for .9% of total auction purchases, capacity purchases in the ICAP Spot Market Auction 99%, and capacity purchases in the Monthly Auction .1%. Note that the Capability Period Auction for the 2003 Summer Capability Period was conducted prior to implementation of the ICAP Demand Curve. These percentages, therefore, may vary in the future. In fact, although MMP did not conduct a formal analysis of the 2003-2004 Winter Capability Period, it appears that capacity purchases shifted toward the ICAP Spot Market Auction during the first Obligation Procurement Period for the Winter.

Although a large share of the generation is not sold in the Capability Period or Monthly Auctions, the prices in these auctions have generally been lower than the prices in the ICAP Spot Market Auction. Figure 2 shows that in New York City and Rest of State, from June to October, the ICAP Spot Market Auction Market-Clearing Price exceeded the Capability Period Auction Market-Clearing Price. In New York City the difference was \$0.46 per kW-month; in Rest of State the difference ranged from \$0.34 to \$0.67 per kW-month. On Long Island, the pattern was reversed, with the ICAP Spot Market Auction price being \$4.24 to \$5.38 less than the Capability Period Auction price. The ICAP Spot Market Auction Market-Clearing Price was also generally greater than the Monthly Auction Market-Clearing Price in New York City and Rest of State. There was not enough Monthly activity on Long Island to make a valid comparison. See also Figure 3 for a summary of activity in the 2003 Capability Period Installed Capacity auctions.

Figure 2



Summer Capability 2003 Capacity Prices

Figure 3

2003 Summer Capability Period Installed Capacity Auction Activity

New York City	Capability Period (Strip)*		Monthly		ICAP Spot Market	
Month	MW	Price	MW	Price	MW	Price
May	2501.7	\$11.22	3016.3	\$10.00	110.2	\$12.36
June	2501.7	\$11.22	683.0	\$13.78	2375.5	\$11.46
July	2501.7	\$11.22	527.9	\$11.57	2558.0	\$11.46
August	2501.7	\$11.22	567.9	\$11.56	2497.9	\$11.46
September	2501.7	\$11.22	558.1	\$11.56	2499.5	\$11.46
October	2501.7	\$11.22	638.8	\$11.55	2415.1	\$11.45
Long Island	Capability		Monthly		ICAP Spot	
	Period (Strip)				Market	
Month	MW	Price	MW	Price	MW	Price
May	6.6	\$9.41	2.2	\$24.00	0.2	\$23.00
June	6.6	\$9.41	0		341.9	\$5.17
July	6.6	\$9.41	1	\$5.00	344.7	\$5.14
August	6.6	\$9.41	1.1	\$5.00	441.8	\$4.03
September	6.6	\$9.41	0		397.8	\$4.55
October	6.6	\$9.41	0		397.8	\$4.55
Rest of State	Capability		Monthly		ICAP Spot	
	Period (Strip)				Market	
Month	MW	Price	MW	Price	MW	Price
May	2889.2	\$1.67	1634.8	\$1.30	101.5	\$0.25
June	2889.2	\$1.67	1866.0	\$1.06	2148.7	\$2.34
July	2889.2	\$1.67	1249.2	\$2.01	2824.2	\$2.28
August	2889.2	\$1.67	1344.1	\$2.04	3096.6	\$2.25
September	2889.2	\$1.67	1396.7	\$1.97	3134.1	\$2.08
October	2889.2	\$1.67	1408.4	\$1.93	3253.2	\$2.01
*Capability Period awards are for a six-month periods:						

*Capability Period awards are for a six-month periods: May through October 2003 NYC = 15010.2 MW; LI = 39.6 MW; ROS = 17335.2 MW <u>Economic Withholding</u>: MMP has concluded that there was no significant economic withholding in the 2003 Summer Capability Period. Figure 4 summarizes auction outcomes for each month of the 2003 Summer Capability Period for the ICAP Spot Market Auctions. For purposes of this report, economic withholding can be defined as MW of capacity offered into the monthly ICAP Spot Market Auctions, but not purchased because the offer price exceeded the price on the ICAP Demand Curve at that MW total. Figure 4 shows that New York City experienced the most economic withholding at 4.7%, while Long Island and Rest of State both experienced less than 1% economic withholding.



Figure 4

On an average MW basis, approximately 122 MW out of 2591 MW offered were economically withheld in New York City, 23 MW out of 2692 MW offered were economically withheld in Rest of State, and 1 MW out of 386 MW offered was economically withheld on Long Island. Since Special Case Resources ("SCRs") are also part of the auction process, the economic withholding represents SCRs, as well as traditional generation offered at prices above the ICAP Demand Curve.

MMP notes that in a relatively competitive auction it is difficult for an offeror to know exactly where the market will clear. As a result, withholding may represent an incorrect assessment on the part of the offeror rather than any gaming strategies. Overall, MMP, in consultation with the independent Market Advisor, Dr. David Patton, has discerned no deliberate withholding from offers submitted at anomalous prices.

<u>Physical Withholding</u>: MMP has concluded that there was no significant physical withholding in the 2003 Summer Capability Period. Figure 5 summarizes the physical disposition of capacity available to the NYCA. As a technical note, Dependable Maximum Net Capability ("DMNC") (and, consequently, qualified capacity) can change from month to month as the appropriate test

information is updated and provided to the NYISO. To determine whether physical withholding occurred, MMP used the following formula: qualified capacity *less* all capacity sold prior to the ICAP Spot Market Auction (including Capability Period and Monthly auction sales and Bilateral Transactions for the current month) *less* capacity offered into the ICAP Spot Market Auction *equals* capacity physically withheld. On average for the 2003 Summer Capability Period, approximately 2155 MW out of 39850 MW (or 5.4%) available to the NYCA was physically withheld. MMP notes that almost all of this withheld capacity represents external capacity, much of which had not been offered into the NYCA prior to the 2003 Summer Capability Period.

Figure	5
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Physical disposition of capacity

The data shows that, since the implementation of the ICAP Demand Curve, capacity has been offered primarily into the ICAP Spot Market Auction. The NYISO believes that this trend reflects the ICAP Demand Curve in place in the ICAP Spot Market Auction. As a result of the ICAP Demand Curve, the NYISO assigns excess capacity purchases in the ICAP Spot Market Auction to load serving entities ("LSEs"). The NYISO does not assign excess capacity to LSEs in the Capability Period or Monthly Auctions. Based on advice from the NYISO's Independent Market Advisor, MMP does not consider capacity withheld from the market unless it is clear that the capacity is physically or economically unavailable in the ICAP Spot Market Auction. The NYISO, therefore, does not categorize this behavior as the sort of potential withholding contemplated by the Commission's May 20, 2003 Order.

MMP reports that capacity generally was not offered into the 2003 Summer Capability Period Auction and the May and June Monthly Auctions. The NYISO, however, anticipated that Market Participants would not offer some amount of capacity into these auctions, first because approval of the NYISO's Demand Curve Filing was pending and then because it would initially be unclear how the ICAP Demand Curve would affect auction prices going forward.

The NYISO predicts that Market Participants will continue to act cautiously in the Installed Capacity markets in the first year of the implementation of the ICAP Demand Curve. The NYISO does not believe that this behavior is an attempt by any Generator to "game" the auctions. Rather, the NYISO believes that this behavior is typical of Market Participants

attempting to determine the impact of a market innovation. The NYISO believes that the ICAP Demand Curve is itself an effective market power mitigation measure.²

<u>Report on the Supplemental Supply Fee</u>: In response to the Commission's concerns regarding the supplemental supply fee proposed in the NYISO's Demand Curve Filing, the NYISO eliminated the original supplemental supply fee provisions for the 2003 Summer Capability Period, thereby further reducing the incentive for Market Participants to withhold capacity from the ICAP Spot Market Auction. The Commission subsequently approved an ICAP Spot Market Auction supplemental supply fee less than or equal to the ICAP Spot Market Auction Market-Clearing Price. The NYISO believes that this change eliminates the supplemental supply fee as a potential incentive for withholding, because Market Participants who withhold capacity from the ICAP Spot Market Auction will not receive more than the ICAP Spot Market Auction Market-Clearing Price. During the 2003 Summer Capability Period, the NYISO purchased supplemental capacity in New York City after each ICAP Spot Market Auction at a price that was slightly below the Market-Clearing Price.

<u>Offer Rules Being Evaluated</u>: MMP observed unique offering behavior in the Long Island market which resulted in higher prices in the Long Island ICAP Spot Market Auction. After consultation with the independent Market Advisor, Dr. David Patton, the NYISO is currently evaluating whether the rules regarding offers should be revised to assure a competitive outcome in the market. The NYISO will pursue any changes through the committee structure.

Respectfully Submitted,

NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.

² See also *New York Independent System Operator, Inc. Report on Implementation of the ICAP Demand Curve* also submitted in this filing for an analysis of declining prices and price stability in the ICAP Spot Market Auction.