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# nyiso Installed Capacity Manual

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Version History

Version 1:
Installed Capacity manual

Version 2 - Stage 1

Version 3 - Stage 1A

Version 4

More detail and history to be added

# Installed Capacity Manual
# Table of Contents

# 1.0 Introduction

The New York Independent System Operator's Installed Capacity manual (the "Manual") contains the procedures that will be followed by the New York Independent System Operator (the "ISO") and its Customers with regard to the Installed Capacity markets and auctions administered by the ISO pursuant to the ISO Services Tariff. The Installed Capacity Market provisions are discussed generally at Sections 5.9 through 5.16 of the ISO Services Tariff as filed at FERC.

The ISO uses an Unforced Capacity methodology to determine the amount of Capacity that each Resource is qualified to supply to the NYCA, and to determine the amount of Capacity that LSEs must procure. The Unforced Capacity methodology estimates the probability that a Resource will be available to serve Load, taking into account forced outages. Section 2.194a of the ISO Services Tariff defines Unforced Capacity as follows:

> The measure by which Installed Capacity Suppliers will be rated, in accordance with formulae set forth in the ISO Procedures, to quantify the extent of their contribution to satisfy the NYCA Minimum Installed Capacity Requirement, and which will be used to measure the portion of that NYCA Minimum Installed Capacity Requirement for which each LSE is responsible.

While the ISO uses an Unforced Capacity methodology, this Manual and the ISO Services Tariff refer to the term "Installed Capacity" to describe the market as opposed to the product. For example, the ISO administers "Installed Capacity auctions" where "Installed Capacity Suppliers" offer "Unforced Capacity" that LSEs will purchase to meet their "NYCA Minimum Installed Capacity Requirements."

Every Capability Period, the ISO will translate the NYCA Minimum Installed Capacity Requirement and the Locational Minimum Installed Capacity Requirement into a NYCA Minimum Unforced Capacity Requirement and a Locational Minimum Unforced Capacity Requirement (see Sections 2.5 , 2.6, 3.1 and 3.2 of this Manual). From the NYCA Minimum Unforced Capacity Requirement and the Locational Minimum Unforced Capacity Requirement, the ISO will then calculate and establish each LSE's minimum Unforced Capacity requirement ("Minimum Unforced Capacity Requirement"). On the supply side, the ISO will compile 12-month rolling averages of Operating Data that it will use to determine the amount of Unforced Capacity that each Installed Capacity Supplier is qualified to supply to the NYCA (see section 4.5 of this Manual). Thus, Market Participants will transact Unforced Capacity in Installed Capacity auctions and Bilateral Transactions.

The ISO conducts three (3) types of Installed Capacity auctions: the Capability Period Auction, the Monthly Auction and the ICAP Spot Market Auction. LSEs may use Unforced Capacity procured in the Installed Capacity auctions to meet their respective

LSE Unforced Capacity Obligations for the applicable Obligation Procurement Period. Participation in the Monthly Auction and the Capability Period Auction shall consist of: (i) LSEs seeking to purchase Unforced Capacity; (ii) any other entity seeking to purchase Unforced Capacity; (iii) qualified Installed Capacity Suppliers; and (iv) any other entity that owns excess Unforced Capacity. Participation in the ICAP Spot Market Auction shall consist of all LSEs and any other entity that has an Unforced Capacity shortfall. Three ICAP Demand Curves shall be used in the ICAP Spot Market Auction: one to determine the locational component of LSE Unforced Capacity Obligations for the Long Island Locality, one to determine the locational component of LSE Unforced Capacity Obligations for the New York City Locality, and one to determine the total LSE Unforced Capacity Obligations for all LSEs.

Capitalized terms used in this Manual shall have the same meaning as prescribed in the ISO Services Tariff, unless otherwise defined, excepted, or noted in this Manual.

# 2.0 Overview of Installed Capacity Planning and Procurement Process

This section contains overviews of:

- The major elements of New York's Installed Capacity planning and procurement process;
- The New York Control Area ("NYCA") Installed Reserve Margin;
- The NYCA Minimum Installed Capacity Requirement, Locational Minimum Installed Capacity Requirements within the NYCA, and limitations on Unforced Capacity from External Control Areas; and
- The NYCA Minimum Unforced Capacity Requirement.

The ISO Services Tariff reference for this section of the Manual is Section 5.10.

# 2.1 Overview

- The New York State Reliability Council ("NYSRC") sets the Installed Reserve Margin and the ISO determines the NYCA Minimum Installed Capacity Requirement in accordance with the criteria and standards of the NYSRC, the Northeast Power Coordinating Council ("NPCC") and the New York Public Service Commission ("PSC").
- The ISO converts the NYCA Minimum Installed Capacity Requirement into a NYCA Minimum Unforced Capacity Requirement.
- The ISO determines Locational Minimum Installed Capacity Requirements and converts them into Locational Minimum Unforced Capacity Requirements.
- The ISO assigns Minimum Unforced Capacity Requirements, including Locational Minimum Unforced Capacity Requirements, to LSEs on a Transmission District basis.
- The ISO establishes, with the collaboration and assent of Market Participants, standards, qualifications and requirements that will apply to Transmission Owners, LSEs, and Installed Capacity Suppliers that are Internal and External to the NYCA.
- The ISO determines the amount of Unforced Capacity that Installed Capacity Suppliers may supply within the NYCA based upon these standards and qualifications.

- The ISO determines the amount of Unforced Capacity that may be supplied by Resources that are External to the NYCA, as specified in Section 2.7 of this Manual.

- The ISO conducts three (3) types of Installed Capacity auctions: the Capability Period Auction, the Monthly Auction and the ICAP Spot Market Auction.

- LSEs may procure adequate Unforced Capacity from Installed Capacity Suppliers, either bilaterally or through ISO-administered auctions, to meet their requirements.

- Participation in the Monthly Auction and the Capability Period Auction shall consist of: (i) LSEs seeking to purchase Unforced Capacity; (ii) any other entity seeking to purchase Unforced Capacity; (iii) qualified Installed Capacity Suppliers; and (iv) any other entity that owns excess Unforced Capacity.

- Three ICAP Demand Curves shall be used in the ICAP Spot Market Auction: one to determine the locational component of LSE Unforced Capacity Obligations for the Long Island Locality, one to determine the locational component of LSE Unforced Capacity Obligations for the New York City Locality, and one to determine the total LSE Unforced Capacity Obligations for all LSEs.

- Participation in the ICAP Spot Market Auction shall consist of all LSEs and any other entity that has an Unforced Capacity shortfall.

- The ISO monitors the compliance of Transmission Owners, LSEs, and Installed Capacity Suppliers with the rules and procedures set forth in the ISO Services Tariff and in this Manual**.**

# 2.2 Timeline

A detailed timeline is posted under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website. Throughout the text of this Manual, there are references to events that will occur on non-specific dates (e.g., "early in the month"). The specific dates for these events will be posted on the aforementioned page of the NYISO website.

# 2.3 The NYCA Installed Reserve Margin

The NYCA Installed Reserve Margin is established annually by the NYSRC and is based on the NPCC standard for Resource adequacy ("NPCC Resource Adequacy Standard"). The NPCC Resource Adequacy Standard requires the probability of disconnecting firm Load due to a Resource deficiency (Loss of Load Expectancy, or "LOLE") to be, on the average, no more than once in ten years after due allowance for:

- Scheduled and forced outages and scheduled and forced deratings;

- Assistance over interconnections with neighboring Control Areas and regions; and

- Capacity and/or Load relief from available operating procedures.

The ISO uses a base model of the NYCA electric power system and its interconnections with neighboring control areas to perform this analysis for the NYSRC.

# 2.4 The NYCA Minimum Installed Capacity Requirement

The ISO calculates the NYCA Minimum Installed Capacity Requirement in megawatts for the Capability Year as the product of the forecasted NYCA peak Load and the quantity one (1) plus the NYSRC Installed Reserve Margin. In deriving the Load forecast, the ISO uses the procedures in the Load Forecasting Manual.

# 2.5 The NYCA Minimum Unforced Capacity Requirement

For each Capability Period the ISO calculates the NYCA Minimum Unforced Capacity Requirement by multiplying the NYCA Minimum Installed Capacity Requirement by the quantity one (1) minus the average EFORd value of the six (6) most recent 12-month rolling average EFORds of all NY Resources in the NYCA.

# 2.6 Locational Minimum Installed Capacity Requirements

Due to transmission limitations into certain areas within the NYCA, LSEs serving Load in these areas must procure a percentage of their total Minimum Unforced Capacity Requirement from Installed Capacity Suppliers electrically located within the constrained areas. Currently, there are two areas, called Localities, within the NYCA where Locational Minimum Installed Capacity Requirements are imposed. These are the New York City and the Long Island zones. The Locational Minimum Installed Capacity Requirements are established annually by the ISO and are contained in Attachment B.

For each Capability Period the ISO converts the Locational Minimum Installed Capacity Requirements of LSEs into Locational Minimum Unforced Capacity Requirements by multiplying such Locational Minimum Installed Capacity Requirements by the quantity one (1) minus the average EFORd value of the six (6) most recent 12-month rolling average EFORds of all Resources located in the relevant Locality.

For the purpose of specifying Locational Minimum Installed Capacity Requirements, the remainder of the NYCA is grouped together as “All other NYCA Zones.” Locational

Minimum Installed Capacity Requirements are shown in Attachment B. Maps of the NYCA Transmission Districts and NYCA Zones can be found in Attachment C. Localities that are subject to ISO Services Tariff restrictions are also noted in Attachment C.

# 2.7 Limitations on Unforced Capacity from External Control Areas

The amounts of Unforced Capacity that can be supplied by Resources outside the NYCA are constrained by two factors. The first is the requirement in Section 5.12.2 of the ISO Services Tariff that an External Installed Capacity Supplier must:

- Demonstrate that the Installed Capacity Equivalent of the amount of Unforced Capacity it supplies to the NYCA is deliverable to the NYCA; and

- Demonstrate that the Installed Capacity Equivalent of the amount of Unforced Capacity it supplies to the NYCA will not be recalled or curtailed to satisfy the Load of the External Control Area, or that the External Control Area in which it is located will afford NYCA Load the same curtailment priority that it affords its own Control Area Native Load.

The Installed Capacity Equivalent of a given amount of Unforced Capacity supplied by a Supplier using a Resource is the portion of that Resource's Capacity that is subject to the requirements set forth in the Tariff and this Manual for Installed Capacity Suppliers. The Installed Capacity Equivalent of a given amount of Unforced Capacity may exceed that amount of Unforced Capacity, because a MW of Installed Capacity may translate into less than 1 MW of Unforced Capacity. Procedures for calculating the Installed Capacity Equivalent of the amount of Unforced Capacity provided by a given Installed Capacity Provider using a given Resource are set forth in Attachment J.

Only neighboring Control Areas that meet these criteria will be included in the modeling described in this Section 2.7 of this Manual.

The second constraint results from transmission limitations. The ISO will determine the amount of Unforced Capacity that may be supplied from Resources External to the NYCA while meeting the NPCC Resource Adequacy Standard described in Section 2.3. Starting with the forecast Loads for the upcoming Capability Year, known Capacity within the NYCA, grandfathered External Installed Capacity and accounting for a variety of assumptions and uncertainties in consultation with the NYSRC, a NYCA Installed Reserve Margin will be determined. Once the NYCA Installed Reserve Margin is established, the ISO will determine the total NYCA Minimum Installed Capacity Requirement.

The maximum Unforced Capacity that may be supplied by each qualified neighboring Control Area is determined as part of the process described in the paragraph above. This

is achieved by varying upstate NYCA Unforced Capacity with External Unforced Capacity from each adjacent Control Area. In subsequent simulations, an Unforced Capacity import amount from each Control Area is determined. To determine the simultaneous maximum External Unforced Capacity that may be procured from all neighboring Control Areas, the total of the maximum External Unforced Capacity determined above, for each neighboring Control Area, is reduced in direct proportion until the LOLE matches that of the base case.

The analyses used to determine the maximum amount of Unforced Capacity that can be provided from Resources located in neighboring Control Areas will be open to review by all Market Participants.

The allocation of Installed Capacity rights associated with transmission expansions is not addressed at this time.

# 3.0 Minimum Unforced Capacity Requirements of Load Serving Entities

This section contains information and procedures related to:

- Calculating the NYCA Minimum Installed Capacity Requirement;
- Calculating the NYCA Minimum Unforced Capacity Requirement;
- The Transmission District Minimum Unforced Capacity Requirements;
- Establishing an LSE's Minimum Unforced Capacity Requirement for an Obligation Procurement Period;
- Customer-switching;
- Procedures for calculating Locational Minimum Installed Capacity Requirements of LSEs;
- Procedures for calculating Locational Minimum Unforced Capacity Requirements of LSEs;
- Grandfathered External Installed Capacity Resources;
- The Capacity adjustment for firm Capacity sales by NYPA; and
- Calculating the LSE Unforced Capacity Obligation for each LSE.

The ISO Services Tariff reference for this section of this Manual is Section 5.11.

# 3.1 The NYCA Minimum Installed Capacity Requirement

The ISO calculates the NYCA Minimum Installed Capacity Requirement in megawatts for the Capability Year as the product of the forecast NYCA peak Load and the quantity one (1) plus the NYSRC Installed Reserve Margin.

For detailed Load forecasting methodology, refer to the ISO Load Forecasting Manual.

# 3.2 The NYCA Minimum Unforced Capacity Requirement

The ISO calculates the NYCA Minimum Unforced Capacity Requirement as described in Section 2.5 of this Manual.

# 3.3 Transmission District Minimum Unforced Capacity Requirements

The Minimum Unforced Capacity Requirement for each Transmission District will be calculated as the product of the NYCA Minimum Unforced Capacity Requirement and the ratio of the Transmission District's forecast peak Load to the sum of the forecast peak Loads for all Transmission Districts. In equation form:

$$UCR_t = UCR_{NYCA} * OIPL_t / \sum_{s \in T} OIPL_s$$

Where:

$UCR_t$ = Minimum Unforced Capacity Requirement for a Transmission District t;

$UCR_{NYCA}$ = NYCA Minimum Unforced Capacity Requirement;

$OIPL_t$ = Forecast Capability Year One-Hour independent Peak Load for TD t;

T = the set of all Transmission Districts; and

$OIPL_s$ = Forecast Capability Year One-Hour independent Peak Load for TD s within set T.

# 3.4 Establishing an LSE's Minimum Unforced Capacity Requirement for an Obligation Procurement Period

An LSE's minimum Installed Capacity requirement ("Minimum Installed Capacity Requirement") is the sum of the Installed Capacity Requirements of each of its customers. Each LSE's Minimum Installed Capacity Requirement is set before each Capability Year and remains constant throughout the Capability Year. Each LSE's Minimum Installed Capacity Requirement is translated into a Minimum Unforced Capacity Requirement as noted in Sections 2.5 and 2.6 of this Manual. Sections 3.5.1

and 3.5.2 of this Manual describe the only conditions that would require a change of an individual LSE's Minimum Installed Capacity Requirement during the Capability Year.

Every month, each LSE must procure sufficient Unforced Capacity to meet its Minimum Unforced Capacity Requirement for the following Obligation Procurement Period. As an interim measure, the ISO will calculate the Minimum Unforced Capacity Requirement of each LSE in two steps prior to the Summer Capability Period and in one step prior to the Winter Capability Period. The ISO will first calculate an initial Minimum Unforced Capacity Requirement and provide it to each LSE in March for the following Summer Capability Period reflecting verified customer-switching through the end of February. The ISO will perform a second calculation in early April, when the ISO provides each LSE with its binding Summer Capability Period Minimum Unforced Capacity Requirement. The ISO will perform a third calculation in early October and provide each LSE with a binding Winter Capability Period Minimum Unforced Capacity Requirement. These calculations will be made in accordance with this Section 3.4 and Sections 2.5 and 2.6 of this Manual. Each Capability Period Minimum Unforced Capacity Requirement will be adjusted every month following the initial Capability Period assignment to reflect customer-switching and is binding with regard to the LSE's obligation to procure Unforced Capacity for each Obligation Procurement Period within the corresponding Capability Period.

The Minimum Unforced Capacity Requirement for each LSE will be calculated separately for each Transmission District in which it serves Load. The requirement is based upon the LSE's contribution to each Transmission District's forecast peak based on actual contributions to the Transmission District's peak Load for the prior calendar year. Where an LSE serves end-use partial requirement customers (i.e., customers for whom the LSE provides service up to a specified amount), the portion of the LSE's contribution to the peak attributable to such partial requirement customers shall be equal to the lesser of their actual contribution to the peak or the contract demands of such partial requirement customers, if fully utilized, at the time of the Transmission District's peak.

The precise formulation of the requirement is as follows:

$$UCR_{x,t} = UCR_t * CPD_{x,t} / OIPL_t$$

where:

$UCR_{x,t}$ = Minimum Unforced Capacity Requirement for LSE x within TD t;

$UCR_t$ = Minimum Unforced Capacity Requirement for Transmission District t;

$CPD_{x,t}$ = Forecasted contribution to peak demand in Transmission District t for LSE x, as defined further below; and

$OIPL_t$ = Forecast Capability Year One-Hour independent Year Peak Load for TD t.

The forecasted contribution to peak demand of each LSE x within each Transmission District t is calculated according to the following equation:

$$CPD_{x,t} = GF_t \sum_{c \in FRC_{x,t}} HPD_{c,t} + \sum_{c \in PRC_{x,t}} \min(PRCA_{c,t}, GF_t HPD_{c,t}) + \sum_{c \in SRC_{x,t}} \max(GF_t HPD_{c,t} - PRCA_{c,t}, 0),$$

where:

$GF_t$ = the growth factor applied to each Load in Transmission District t to determine the Minimum Installed Capacity Requirement for LSEs serving that Load, equal to $OIPL_t / \sum_c HPD_{c,t}$;

$FRC_{x,t}$ = set of full-requirement retail customers of LSE x in Transmission District t;

$HPD_{c,t}$ = demand by retail customer c in Transmission District t during the Peak Demand hour for Transmission District t of the last calendar year;

$PRC_{x,t}$ = set of retail partial-requirement customers of LSE x in Transmission District t;

$PRCA_{c,t}$ = the maximum contractual purchase in Transmission District t by an retail partial requirements customer c; and

$SRC_{x,t}$ = set of supplemental-requirements retail customers of LSE x in Transmission District t.

Each month, LSEs must submit completed Installed Capacity certification forms to the ISO demonstrating the amount of Unforced Capacity they have obtained for the upcoming Obligation Procurement Period. The certification forms shall, at a minimum, require LSEs to: (i) designate the total amount of Unforced Capacity they have procured; (ii) specify how much Unforced Capacity is associated with Installed Capacity Suppliers located in each ISO defined Locality, the remainder of the NYCA and each External Control Area; and (iii) identify any Installed Capacity Supplier from which they have procured Unforced Capacity pursuant to Bilateral Transactions. Specific dates are provided under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website.

In addition, the ISO will make available to LSEs "Installed Capacity notification forms" for the remaining Obligation Procurement Periods of the Capability Period. The purpose of the Installed Capacity notification forms is to help the ISO in its Installed Capacity planning and reliability assessments. The format of the Installed Capacity notification forms will be similar to the Installed Capacity certification forms. Submission of the Installed Capacity notification forms to the ISO is voluntary.

# 3.5 Customer-Switching

## 3.5.1 General Requirements for Customer-Switching within a Capability Year

**Establishing Preliminary and Final LSE Minimum Unforced Capacity Requirements**

Each month (specific dates are provided under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website), Transmission Owners submit supporting data which reflects verified customer-switching that has occurred or is scheduled for the current month. In addition to forecasts and data submitted to the ISO, the Transmission Owner must provide to the ISO the electronic version of the notification letters sent to the affected LSEs demonstrating that such LSEs have been provided data regarding the customer changes assigned to them.

Each Transmission Owner shall also submit to the ISO aggregate peak Load data, coincident with the Transmission District peak, for all customers served by each LSE within its Transmission District, excluding those served by the municipal electric systems (see the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website). This data shall reflect verified customer-switching and may be derived from direct meters or Load profiles of customers served. This information shall also be submitted to each LSE affected by the customer-switching.

Based on documented customer-switching adjustments through the end of February, the ISO shall calculate a preliminary Minimum Unforced Capacity Requirement for each LSE. The ISO will provide each LSE with its preliminary Minimum Unforced Capacity Requirement estimate. The ISO will notify each LSE of its final Minimum Unforced Capacity Requirement for each year, which shall reflect documented customer-shifts as of April 1st that are scheduled to occur before May 1st. In the event of a dispute as of April 10th regarding a Transmission Owner's forecast, the ISO shall nevertheless establish each LSE's final Minimum Unforced Capacity Requirement, subject to possible adjustments required from a resolution of the dispute.

**Monthly Adjustments to LSE Minimum Unforced Capacity Requirement**

The Transmission Owners will update the ISO and affected LSEs on a monthly basis concerning customer-switching. Each Transmission Owner will provide updated aggregated LSE reports to the ISO and to each LSE serving Load in the Transmission District by the date provided under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website. It is each Transmission Owner's responsibility to submit all customer-switching information in a timely manner. The NYISO will determine the net change in Load for a Transmission Owner's Transmission District customer-switching if the NYISO has not received the appropriate customer-switching information in a timely manner.

The updated aggregated LSE reports, which are submitted early in each month, shall reflect all customer-switching through the end of the submittal month which were reported to Transmission Owners as of the last day of the previous month. In addition to customer switches scheduled for the month in which the report is submitted, the report will include previously unreported customer switches that occurred in past months and corrections for customer switches that were incorrectly reported in an earlier report.

As an example, a Transmission Owner will submit a LSE update report on July 7th which represents all customer-switching changes occurring through July 31st that the Transmission Owner received notice of by June 30th. This report might include the following customer switches: a customer switch scheduled to occur on July 20th, notification of a switch that occurred on June 5th that the Transmission Owner was unaware of when it submitted its report in June, and a date correction for a switch that occurred in May.

Based on customer-switching, the ISO will make monthly adjustments to each LSE's Minimum Unforced Capacity Requirement for the month or months remaining in the Capability Year which follows the month in which the Transmission Owner's report was submitted. These adjustments will reflect each individual LSE's gain and loss of customers. The adjustments will be made in such a way as to keep the total Minimum Unforced Capacity Requirement for the Transmission District constant.

To continue the example, in response to the Transmission Owners customer-switching report submitted in early July (based on changes reported to the Transmission Owner by June 30th), the ISO will recalculate affected LSE's Minimum Unforced Capacity Requirement for the months of August through April (the last month of the Capability Year). The ISO will inform affected LSEs of their new Minimum Unforced Capacity Requirement prior to the Monthly Auction occurring in July, allowing those LSEs affected ample time to acquire, as necessary, sufficient Unforced Capacity for the month of August.

See the Capability Period Timeline on the Installed Capacity (ICAP) Market page of the NYISO website for details concerning the schedule of updates and notification requirements related to monthly customer-switching.

## 3.5.2 Assignment of Minimum Installed Capacity Requirements for a New Customer in a Transmission District

A new customer is defined as any entity with a new service connection for which the Transmission Owner cannot identify the entity's contribution to the relevant prior peak period. The Minimum Unforced Capacity Requirements related to new customers are estimated by Transmission Owners and are reflected in the Load growth assumptions of the Capability Year forecasts provided by the Transmission Owners and approved by the ISO. Load growth assumptions typically include a component for new customers and a component for existing customers.

The Minimum Unforced Capacity Requirements of LSEs in each Transmission District shall initially reflect all Load growth for such Transmission District. Two different methods shall be used to adjust the Minimum Unforced Capacity Requirements of LSEs serving Load when new Loads enter that Transmission District.

- To the extent that a Transmission Owner has the ability to assign an estimated peak Load coincident with the Transmission District peak Load to a new customer in its Transmission District, it shall be permitted to do so. The LSE serving that new customer shall assume the Minimum Unforced Capacity Requirement. The Minimum Unforced Capacity Requirement of each LSE serving Load within that Transmission District shall then be reduced by its share of the new customer's total Unforced Capacity obligation which is assumed by the LSE serving that new customer. The ISO will notify each affected LSE of its new Minimum Unforced Capacity Requirement in accordance with the dates provided under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website.

- In the absence of a direct assignment mechanism, the Minimum Unforced Capacity Requirement of each LSE serving Load within that Transmission District will not be normalized.

The following procedures will be used to account for the direct assignment of an Unforced Capacity obligation for a new customer within the Capability Period.

- The relevant Transmission Owner shall notify the ISO and the relevant LSE of the new customer's Load based on its estimated peak Load coincident with the TD peak Load.

- The ISO shall normalize the Minimum Unforced Capacity Requirements of all LSEs serving Load in the Transmission District at the time of the new customer's assignment to the relevant LSE such that the total Minimum Unforced Capacity Requirement for the Transmission District remains constant. The ISO will notify each affected LSE of its new Minimum Unforced Capacity Requirement in accordance with the dates provided under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website.

If a dispute occurs concerning the assignment of Minimum Unforced Capacity Requirements related to new customers, it shall be resolved in accordance with Section 3.5.5 of this Manual. If the direct assignment of the Unforced Capacity obligation for a new customer takes place within the Capability Period, the LSE with the new customer obligation shall be required to have sufficient Unforced Capacity to cover that assignment on the first day of the month after the first Monthly Auction following the assignment and for each month thereafter in the Capability Year, in accordance with the monthly LSE certification requirements. For example, if the NYISO provides notification of an assignment of a new customer Minimum Unforced Capacity Requirement to an LSE on July 10th (prior to the Monthly Auction taking place in mid-July), that LSE is required to

have sufficient Unforced Capacity to cover that assignment from August through the following April, on a monthly basis.

## 3.5.3 Load Lost due to Departing Customers

To account for Load lost when a customer leaves a Transmission District, the ISO will:

- Reduce the Minimum Unforced Capacity Requirement of the Load-losing LSE within the Transmission District.

- Relieve the LSE responsible for the Unforced Capacity obligation of the departing customer of that obligation. The LSE may sell any excess Unforced Capacity. In order for the Load-losing LSE to be relieved of this obligation, the Transmission Owner must notify the ISO of the customer's departure, by providing adequate supporting documentation that it has left New York State. (For example, either a countersigned letter between the Transmission Owner and the departing customer or documentation that the departing customer has requested service disconnection would meet this requirement.)

- Normalize the Minimum Unforced Capacity Requirements of all LSEs serving Load (including the Load-losing LSE) in the relevant Transmission District such that the total Minimum Unforced Capacity Requirement for the Transmission District remains constant.

Within two (2) business days, the ISO will notify the LSE that (a) it has either been relieved of the LSE Unforced Capacity Obligation of that departing customer for the balance of that month and for the remaining months in the Capability Year, or (b) the notification and supporting documentation is deemed inadequate, in which case the LSE must continue to carry the Unforced Capacity associated with the departing customer until such time as it has satisfied the ISO's documentation requirement. When informing an LSE that its documentation is inadequate, the ISO will provide guidance as to how the documentation could be made acceptable.

## 3.5.4 Financial Arrangements to Cover Customer Switching

If a customer switches LSEs or if LSE Load is normalized pursuant to Section 3.5.1 of this Manual, the following financial arrangements will be executed. Refer to Section 5 of this Manual for details concerning the Monthly Installed Capacity Auctions referred to below. Also refer to Section 5.11.3 of the ISO Services Tariff and Attachment L of this Manual.

- The customer-gaining (or Load obligation-gaining) LSE will financially cover the portion of the LSE Unforced Capacity Obligation associated with its new customer by paying the customer-losing LSE for each day that the customer-gaining LSE serves that new customer, until the first day of the month following the month in which each LSE was notified by the ISO of its new Minimum

Unforced Capacity Requirement associated with the customer-switching (see the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website for the timing of such notification), at which time the Minimum Unforced Capacity Requirement of each LSE will reflect the switch. (This paragraph, and those following in this subsection, also apply to shifts in LSE Load obligations due to periodic normalizing. See Sections 3.5.2 and 3.5.3 above, and Attachment L to this Manual.)

- The ISO will use the monthly Installed Capacity billing cycle, in the same month in which the ISO notified each affected LSE, to bill the customer-gaining LSE, for the period referred to directly above.

- The rate that will be used to calculate this financial exchange for each month in which the obligation to procure Installed Capacity shifts, as described above, will be the monthly clearing price established for that month in the most recent, previous ICAP Spot Market Auction, prorated on a daily basis. (See Attachment L of this Manual for information in connection with the financial reconciliation process.)

- If the customer-losing LSE received a rebate associated with the lost customer (see Section 5.12 and Attachment L of this Manual for information concerning rebates), a proportionate share of the rebate will reduce the amount paid by the customer-gaining LSE.

For example, if a Transmission Owner is notified prior to the end of June of a customer switch in its Transmission District that will occur on July 20th, it will report this occurrence in early July to the ISO and affected LSEs. Shortly thereafter, the ISO will recalculate the Minimum Unforced Capacity Requirement of the affected LSEs and notify them prior to the Monthly Auction occurring in mid-July. Each affected LSE will be responsible for its new Minimum Unforced Capacity Requirement starting August 1st. In the meantime, in order to reflect the gain and loss of customers of each affected LSE during the month of July (in this instance, from July 20th through July 31st), in Unforced Capacity terms, the customer-gaining LSE will be required to cover the cost of the portion of the LSE Unforced Capacity Obligation previously procured by the customer-losing LSE for the month of July to satisfy the customer's Load by reimbursing the customer-losing LSE on a pro rata basis (in this case, for 12 days). This amount will be calculated using the clearing price for Installed Capacity for the month of July determined in the ICAP Spot Market Auction which took place in June. This financial reconciliation will be reflected in the July billing cycle.

## 3.5.5 Disputes Related to Customer Switching

Any disputes among Market Participants concerning customer-switching shall be resolved either by the ISO Expedited Dispute Resolution Procedures (as set forth in Section 5.16 of the ISO Services Tariff), or the relevant Transmission Owner's retail access procedures, as applicable.

If a dispute occurs, the ISO will make its monthly Unforced Capacity adjustments as if the customer-shift had occurred as reported by the Transmission Owner and will retroactively modify these adjustments based on the outcome of the applicable Dispute Resolution Process, if necessary.

# 3.6 Procedures for Calculating the Locational Minimum Unforced Capacity Requirements of LSEs

## 3.6.1 Minimum Requirements for LSEs Serving Loads within Localities

LSEs serving Loads within Localities will be required to obtain a certain percentage of their total Unforced Capacity from Installed Capacity Suppliers located in that Locality. The Locational Minimum Unforced Capacity Requirement for an LSE within a Locality will be calculated as follows:

$$LUCAP_{x,p} = UCR_{x,p} * (LP_p * PK_p) / UCR_p$$

where:

$LUCAP_{x,p}$ = the Locational Minimum Installed Capacity Requirement for LSE x for Locality p expressed in Unforced Capacity terms;

$UCR_{x,p}$ = the Unforced Capacity requirement for LSE x for Locality p (which is calculated by substituting the Locality p for the Transmission District t in the equations in Section 3.4);

$LP_p$ = the amount of Unforced Capacity that must be procured within the Locality p, expressed as a percentage of the Locality p forecast peak Load;

$PK_p$ = the forecast peak Load for Locality p; and

$UCR_p$ = Unforced Capacity requirement for all Load in Locality p (which is calculated by substituting the Locality p for the Transmission District t in the equations in Section 3.3).

# 3.7 Grandfathered External Installed Capacity Resources

The ISO will make adjustments to the allocations of External Capacity rights to LSEs to ensure that all LSEs holding rights to grandfathered External Installed Capacity

Resources will be able to claim these Resources to satisfy their Minimum Unforced Capacity Requirement.

# 3.8 Capacity Adjustment for Firm Capacity Sales by NYPA

*In cases in which NYPA sells firm Capacity to an existing New York Transmission Owner, a municipal or cooperative system or to a neighboring state bargaining agency from the Niagara, St. Lawrence or Fitzpatrick generating plants, an adjustment factor is applied by NYPA to determine the number of MW that each such purchaser of NYPA firm Capacity may count towards its Minimum Unforced Capacity Requirement. The adjustment factor shall be calculated separately for the Niagara, St. Lawrence and Fitzpatrick plants and each such adjustment factor shall be applied only to firm Capacity sales from that plant.*

$$\text{Adjustment Factor by plant} = \text{ICAF}_{\text{plant}} = \frac{\text{Demonstrated Net Plant Capability}}{\text{Sum of all firm Capacity Sales from Plant}}$$

*These adjustment factors cannot exceed one plus the NYSRC's Installed Reserve Margin. Once the Adjustment Factors are obtained, the Adjusted Unforced Capacity from NYPA plants is calculated as:*

$$\textit{Adjusted}\ \text{IC}_{\text{NYPA}} = \sum \left(\text{ICAF}_{\text{plant}} * \text{IC}_{\text{plant}}\right)$$

Where:

*Adjusted $UC_{NYPA}$ = The amount that the purchasers of firm capacity and NYPA use in their Unforced Capacity calculations.*

*$ICAF_{plant}$ = NYPA adjustment factor applied to the contractual amount from plant.*

*$IC_{plant}$ = The contractual Capacity amount purchased from plant.*

*Plant = Niagara, St. Lawrence, or Fitzpatrick.*

*Adjusted*

*The ISO will use this adjustment factor to determine whether an LSE purchasing from these NYPA Resources has procured sufficient Unforced Capacity to meet its Minimum Unforced Capacity Requirement.*

# 4.0 Installed Capacity Requirements Applicable to Installed Capacity Suppliers

## 4.1 Overview

Resources must follow certain procedures and provide pertinent information to the ISO in order to qualify as Installed Capacity Suppliers. The requirements necessary to qualify as an Installed Capacity Supplier can be found in Sections 4.2 and 4.3 below, and include DMNC testing and maintenance schedule reporting.

After completing the procedures listed above, Resources which have qualified as Installed Capacity Suppliers must fulfill certain requirements provided by the ISO in order to retain all of the privileges to which an Installed Capacity Supplier is entitled. These requirements are provided in detail in Sections 4.4 through 4.8 below. The requirements include reporting Operating Data; planned maintenance and forced outage notification requirements; the filing of monthly Installed Capacity certification forms; and bidding, scheduling, and notification responsibilities.

Certain Installed Capacity Suppliers must fulfill alternative or additional requirements provided by the ISO in addition to or in place of the requirements found in Sections 4.2 through 4.8. These alternative or additional requirements can be found in Sections 4.9 through 4.13. Each of these sections address a different individual Resource.

Installed Capacity Suppliers which fail to fulfill the requirements detailed in Sections 4.4 through 4.13 are subject to sanctions, as provided in Section 5.12.12 of the ISO Services Tariff. Details regarding these sanctions may be found in Section 6.1 of this Manual.

Resources may be physically located in the NYCA, or in an External Control Area which meets the recall and Curtailment requirements and the locational limitations specified in Section 2.7 of this Manual.

## 4.2 DMNC Test Procedures (Section 5.12.8 ISO Services Tariff)

Potential Installed Capacity Suppliers must perform DMNC tests in accordance with the procedures described below (unless exempt in accordance with the provisions of Section 4.4.3 of this Manual), and provide the ISO with the required documentation of those tests. Alternatively, potential Installed Capacity Suppliers, with the exception of new Resources, may use historical production data for the immediately preceding like Capability Period, no more than 12 months old, in lieu of DMNC test data. The completeness, accuracy, and validity of the DMNC test data or historical production data sent to the NYISO is the responsibility of the Resource making such data submission.

An Installed Capacity Supplier offering to supply Unforced Capacity as a System Resource must submit DMNC test data, or historical production data, for each Generator that it seeks to aggregate. Interruptible Load Resources must provide evidence of a one (1) hour disconnection period less than one (1) year old.

Beginning with the Winter 2000-2001 Capability Period, final DMNC Test results (see Attachment D) must be transmitted to the ISO not later than sixty (60) days following the end of the test period.

## 4.2.1 DMNC Test Periods

The DMNC Test Period for the Summer Capability Period is June 1 through September 15 and for the Winter Capability Period is November 1 through April 15.

New Resources may qualify as Installed Capacity Suppliers at any time during a Capability Year based on the results of an appropriate demonstration test, production data, or Special Case Resource commitment. New generating Resources must temperature-adjust the results of the appropriate demonstration test or production data, using the procedures noted in Attachment D to this Manual.

To qualify as Installed Capacity Suppliers in any Installed Capacity auction administered by the ISO, new Resources shall submit to the ISO the results of an appropriate demonstration test, production data or Special Case Resource commitment prescribed by this Manual by 5:00 PM at least two (2) calendar days before the administration of the relevant auction provided, however, that Resources shall submit such results by 5:00 PM on the Friday immediately preceding an auction when such auction is scheduled on a Monday. For example, if the ISO administers the auction on a Thursday, new Resources shall submit appropriate demonstration test, production data or Special Case Resource commitment by 5:00 PM on the Tuesday preceding the auction. If the ISO administers an auction on Monday, new Resources shall submit such results by 5:00 PM on the Friday preceding the auction.

In addition to the submission of the results of an appropriate demonstration test or production data required by the previous paragraph, new generating Resources that want to participate in ISO-administered auctions shall submit to the ISO a notification letter if they do not already have, and will require, a point ID to participate in the ISO market. The notification letter shall state the intention of the Resource to seek qualification as an Installed Capacity Supplier, and include the Resource's name, location, and other information as the ISO may reasonably request. This letter does not oblige a Resource to qualify as an ICAP Supplier; it allows the ISO to prepare and be able to accommodate a Resource should that Resource request qualification and submit appropriate demonstration test or production data shortly before an auction. A Resource shall submit the notification letter to the ISO by the first business day of the month in which it wishes to qualify as an Installed Capacity Supplier.

To qualify Installed Capacity for a Bilateral Transaction or for a self-supplying LSE, new Resources shall submit to the ISO the results of an appropriate demonstration test, production data or Special Case Resource commitment prescribed by this Manual by 5:00 PM at least two (2) calendar days before the day LSEs must certify that they have procured sufficient Installed Capacity for the following Obligation Procurement Period (in this paragraph, the "Certification Day") provided, however, that Resources shall submit the results of an appropriate demonstration test, production data or Special Case Resource commitment prescribed by this Manual by 5:00 PM on the Friday immediately preceding the Certification Day when such Certification Day is a Monday. For example, if the Certification Day is a Thursday, new Resources shall submit appropriate demonstration test, production data or Special Case Resource commitment results by 5:00 PM on the Tuesday preceding the Certification Day. If the Certification Day is a Monday, new Resources shall submit such results by 5:00 PM on the Friday preceding the Certification Day.

Existing Resources that have increased Capacity due to changes in their generating equipment may demonstrate the DMNC of the incremental Capacity for and within a Capability Period by following the procedures described above for new Generators.

The ISO shall inform each potential Installed Capacity Supplier that is required to submit DMNC data of ISO-documented DMNC ratings for the Summer Capability Period in February, and for the Winter Capability Period in August (See the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website).

## 4.2.2 Resource Specific Test Conditions

The Resources listed below must meet the applicable DMNC test conditions specified below in order to be qualified as Installed Capacity Suppliers. Resources must also report DMNC test results to the ISO using the appropriate form in Attachment D.

**Fossil Fuel and Nuclear Stations**

Valid DMNCs for fossil fuel or nuclear steam units are determined by the following:

(a) The unit's sustained maximum net output averaged over a four (4) consecutive hour period.

(b) For common-header turbine-generators, the DMNC is determined on a group basis. Each such turbine-generator is assigned a rating by distributing the combined Capacity among them.

(c) The sum of the DMNC of individual turbine-generators in a generating station cannot be greater than the DMNC of the whole station.

**Hydro Station**

Valid DMNCs for hydro units are determined by the following:

(a) The sustained net output averaged over a four (4) consecutive hour period using average stream flow and/or storage conditions within machine discharge Capacity.

(b) For a multi-unit hydro station, the DMNC is determined as a group and each hydro unit in such a station is assigned a rating by distributing the combined station DMNC among them.

(c) The sum of the DMNC of individual units in a multi-unit hydro station cannot be greater than the DMNC of the whole station.

**Internal Combustion Units and Combustion Turbines**

Valid DMNCs for internal combustion units and combustion turbines are determined by the following:

(a) The sustained maximum net output for a one (1) hour period.

(b) The unit's winter DMNC rating is determined on the basis of the average ambient and cooling system temperature experienced at the time of the Transmission District's winter peak during the previous four (4) Winter Capability Periods.

(c) The unit's summer DMNC is determined on the basis of the average ambient and cooling system temperature experienced at the time of the Transmission District's summer peak during the previous four (4) Summer Capability Periods.

**Combined Cycle Stations**

Valid DMNCs for combined cycle stations are determined by the following:

(a) The sustained maximum net output over four (4) consecutive hours.

(b) A combined cycle station's winter DMNC rating is determined on the basis of the average ambient and cooling system temperature experienced at the time of the Transmission District's winter peak during the previous four (4) Winter Capability Periods.

(c) A combined cycle station's summer DMNC rating is determined on the basis of the average ambient and cooling system temperature experienced at the time of the Transmission District's

summer peak during the previous four (4) Summer Capability Periods.

**Intermittent, Energy Limited, Other Stations**

Valid DMNCs for other units are determined by the following:

(a) The sustained maximum net output averaged over a four (4) consecutive hour period.

(b) For a multi-unit station, the DMNC is determined as a group and each unit in such a station is assigned a rating by distributing the combined station DMNC among them.

(c) The sum of the DMNCs of individual units in a multi-unit station cannot be greater than the DMNC of the whole station.

Valid DMNCs for Intermittent Power Resources may also be determined by the Intermittent Power Resources' unit's nameplate rating provided, however, that the ISO shall have the authority to review Intermittent Power Resources' production data.

## 4.2.3 Treatment of Station Service Load

In general, the DMNC rating for a Resource is the amount of power delivered to the transmission grid. The DMNC rating should reflect a reduction in gross output of the Resource for station service Load. In most cases, this determination is straightforward because the Resource is connected to the Transmission System, and the amount of power provided to the Transmission System reflects the station service Load reduction.

In other cases, a portion of the station service Load may be provided from sources other than the Resource. In these cases, separate measurements must be made of the station service Load and subtracted from the Resource's gross output measured at the generator leads at the time of the DMNC test.

In the event of disagreement concerning the station service Load for facilities that fall into the later category, the relevant Transmission Owners will provide to the ISO any information available to it which relates to the configuration of the Resource and its station service Load. If the disagreement concerning the station service Load is not resolved by the additional information the Transmission Owners provide, the ISO Expedited Dispute Resolution Procedures (as set forth in Section 5.16 of the ISO Services Tariff) shall be used to determine the station service Load in dispute.

## 4.2.4 Required DMNC Generating Capability Test Data

An entity that wants to establish a DMNC rating for its Resources must complete and report the test results for each of its Resources by sending the appropriate form provided in Attachment D to the ISO. The test reports include:

1. Kilowatt-hour meter readings from the tests to verify net output. Reproduced copies of actual log sheets are preferred where possible.

2. For internal combustion units, combustion turbine units, and combined cycle units, a curve of net capability vs. ambient and cooling systems temperatures, with the test result noted on the graph.

3. For steam units, test conditions as listed below (see also Attachment D):

    - Over pressure
    - Top feed water heater O/S.

# 4.3 Maintenance Scheduling Requirements (Section 5.12.3 ISO Services Tariff)

All Resources intending to supply Unforced Capacity to the NYCA must comply with the following procedures, unless specific exceptions are noted below.

1. Submit a confidential notification to the ISO of proposed outage schedules for the next two (2) calendar years by September 1st of the current calendar year.

2. If Operating Reserve deficiencies are projected to occur in certain weeks for the upcoming calendar year, based upon the ISO's reliability assessment, Resources may be requested to voluntarily reschedule planned maintenance.

3. The ISO will provide the Resource with alternative acceptable times for the rescheduled maintenance.

4. If the Resource is a Generator that qualifies as an Installed Capacity Supplier that does not voluntarily re-schedule its planned maintenance within the alternative acceptable times provided by the ISO, the ISO will invoke mandatory re-scheduling using the procedures prescribed in the ISO Outage Scheduling Manual.

5. A Resource that did not qualify as an Installed Capacity Supplier prior to the Obligation Procurement Period and that intends to be an Installed Capacity Supplier within the Obligation Procurement Period must provide the ISO with its proposed outage schedule for the current Capability Year and the following two (2) calendar years, no later than the first day of the

month preceding the month in which it intends to supply Unforced Capacity, so that it may be subject to the voluntary and mandatory re-scheduling procedures described above.

An Installed Capacity Supplier that refuses the ISO's forced rescheduling of its proposed outages shall not qualify as an Installed Capacity Supplier for that unit for any month during which it schedules or conducts an outage.

## 4.3.1 Interruptible Load Resources

Interruptible Load Resources must comply with the following procedures.

1. Notify the ISO at least thirty days prior to the beginning of an Obligation Procurement Period of scheduled maintenance that would reduce their ability to interrupt during the upcoming Obligation Procurement Period.

2. Notify the ISO of any major equipment which is out of service and therefore cannot be interrupted because it is already off, and notify the ISO when the equipment is coming back on.

3. Provide the ISO with a written commitment that any scheduled maintenance that would reduce their ability to interrupt without reducing Load will only be conducted from November 1st through March 31st of any calendar year.

Interruptible Load Resources that are Special Case Resources as defined in Section 4.12 of this Manual are not subject to the requirements of this Section 4.3.1.

## 4.3.2 External System Resources

The ISO and the External Control Area in which the External System Resource is located will coordinate the maintenance schedules for the interconnections that link these Resources to the NYCA. External System Resources are not subject to the voluntary and mandatory re-scheduling procedures described above.

## 4.3.3 Special Case Resources (Section 4.12 of this Manual)

Special Case Resources are not subject to maintenance scheduling requirements. However, a Special Case Resource must report a change of status that would affect its ability to provide Capacity to the ISO.

# 4.4 Operating Data Reporting Requirements (Section 5.12.5 ISO Services Tariff)

Installed Capacity Suppliers shall submit Operating Data to the ISO every month in accordance with the following subsections. The completeness, accuracy, and validity of the performance data sent to the NYISO is the responsibility of the Resource making such data submission. Installed Capacity Suppliers that do not comply with the following subsections shall be subject to the sanctions provided in Section 5.12.12 of the ISO Services Tariff.

When an Installed Capacity Supplier (the "Seller") sells Unforced Capacity to another Installed Capacity Supplier (the "Purchaser"), such as an Installed Capacity Marketer, the Seller and the Purchaser may designate the Purchaser as the entity responsible for fulfilling the obligations and requirements set forth in Section 4.4 of this Manual. Such designation shall be made in writing to the ISO at least five (5) calendar days before the date by which any of the relevant obligations or requirements must be fulfilled.

If no designation is made to the ISO, the Seller shall be responsible for fulfilling all the obligations and requirements set forth in this Section 4.4 of this Manual. The Purchasers that are designated pursuant to the preceding paragraph shall be subject to the sanctions provided in Section 5.12.12 of the ISO Services Tariff as if they were a Seller.

## 4.4.1 Generators

By the 20th day of each month, Generators shall submit to the ISO GADS Data or data equivalent to GADS Data pertaining to the previous month. For example, Generators shall submit by May 20, 2001 GADS Data or data equivalent to GADS Data pertaining to their operations during the month of April 2001. Generators shall submit GADS Data or data equivalent to GADS Data in accordance with the 82-character fixed format provided in Attachment K of this Manual.

## 4.4.2 System Resources

By the 20th day of each month, System Resources shall submit to the ISO GADS Data or data equivalent to GADS Data pertaining to the previous month. For example, System Resources shall submit by May 20, 2001 GADS Data or data equivalent to GADS Data pertaining to their operations during the month of April 2001. System Resources shall submit GADS Data or data equivalent to GADS Data in accordance with the 82-character fixed format provided in Attachment K of this Manual.

## 4.4.3 Control Area System Resources

By the 20th day of each month, Control Area System Resources or the purchasers of Unforced Capacity from those Resources shall submit to the ISO CARL Data pertaining

to the previous month. For example, Control Area System Resources shall submit by October 20, 2001 CARL Data pertaining to their operations during the month of September 2001.

CARL Data submitted on a monthly basis shall cover (1) the prior month and (2) each individual hour during that month in which the Control Area System Resource was unable to supply the Energy associated with the Installed Capacity Equivalent of the Unforced Capacity it supplied to the NYCA. CARL Data submitted for a Control Area System Resource providing Installed Capacity from Control Area *c* shall consist of actual data and include the following information for each hour identified above and for each month:

1. The maximum actual total generating Capacity in Control Area *c*;
2. The actual External firm Capacity purchases by Control Area *c*, other than purchases from Resources in the NYCA;
3. The actual amount of load management (*i.e.*, interruptible load) in Control Area *c*;
4. The actual peak Load for Control Area *c*, including system losses;
5. The actual External firm Capacity sales by Control Area *c*, other than firm capacity sales to the NYCA;
6. Actual losses, up to the border of the NYCA, that were incurred on transactions corresponding to sales of Unforced Capacity by that Control Area System Resource outside Control Area *c*;
7. The amount of generating Capacity in Control Area *c* that is actually unavailable due to planned maintenance;
8. The amount of generating Capacity in Control Area c that was actually unavailable due to forced outages; and
9. The amount of operating reserve that was actually available for Control Area *c*.

Forty-five (45) days prior to any Capability Period, Control Area System Resources shall submit forecasted CARL Data for items (1) through (8) above for each month of the following Capability Period. Control Area System Resources shall submit data for items (9) and (10) for each month within 20 days of the conclusion of each month.

During each Capability Period, a Control Area System Resources may submit revised forecasts of items (1) through (8) above for each month of that Capability Period. These forecasts may be revised to reflect changes in the allocation of planning reserve among the months of that Capability Period resulting from the amount of Installed Capacity actually sold by that Control Area System Resource earlier in the Capability Period. Such forecasts must be submitted by 25 days before a month if they are to be used to determine the amount of CARL Data for the whole Capability Period in light of the External firm Capacity engaged in the previous months.

## 4.4.4 Energy Limited Resources

By the 20th day of each month, Energy Limited Resources shall submit to the ISO GADS Data or data equivalent to GADS Data pertaining to the previous month. For example, Energy Limited Resources shall submit by May 20, 2001 GADS Data or data equivalent to GADS Data pertaining to their operations during the month of April 2001. Energy Limited Resources shall submit GADS Data or data equivalent to GADS Data in accordance with the 82-character fixed format provided in Attachment K of this Manual.

## 4.4.5 Interruptible Load Resources

Subject to Sections 4.4.7 of this Manual, Interruptible Load Resources shall submit documentation for each operation using the form provided in Attachment K.

By the 20th day of each month, Interruptible Load Resources shall submit to the ISO data in the format shown in Attachment K for each interruption. For example, they shall submit by May 20, data corresponding to their operations during the month of April 2001.

## 4.4.6 Intermittent Power Resources

Intermittent Power Resources shall submit to the ISO data pertaining to their net dependable Capacity, actual generation, maintenance hours, planned hours, periods hours, and other information as may be reasonably requested by the ISO such as the location and name of the Intermittent Power Resource. Intermittent Power Resources shall submit data pertaining to the previous month on the 20th day of each month and in accordance with the 82-character fixed format provided in Attachment K of this Manual. For example, Intermittent Power Resources shall submit by May 20, 2001 data pertaining to their operations during the month of April 2001.

## 4.4.7 Special Case Resources (Section 4.12 of this Manual)

Special Case Resources shall submit documentation to the ISO, each time they are called upon to operate, in the form of Figure 2 provided in Attachment K.

### 4.4.7.1 Special Case Resources that are Interruptible Load Resources

Special Case Resources that were requested to reduce Load in any month shall submit to the ISO by the 20th day of the following month data in the format shown in Figure 2 of Attachment K for each requested interruption. For example, Special Case Resources shall submit by May 20, 2001, their data pertaining to the month of April 2001 if they were called upon to reduce Load in April 2001.

### 4.4.7.2 Special Case Resources that are Generators

Special Case Resources that are Generators and were requested to operate in any month shall submit to the ISO by the 20th day of the following month data in the format shown in Figure 2 of Attachment K for each requested operating period. For example, Special Case Resources that are Generators shall submit by May 20, 2001, their data pertaining to the month of April 2001 if they were called upon to operate in April 2001.

## 4.4.8 Municipally-Owned Generation

By the 20th day of each month, municipally-owned generation shall submit to the ISO data equivalent to GADS Data pertaining to the previous month. For example, municipally-owned generation shall submit by May 20, 2001 data equivalent to GADS Data pertaining to their operations during the month of April 2001. Municipally-owned generation shall submit data in accordance with the form provided in Attachment K of this Manual, GADS or Special Case Resource reporting, as appropriate.

## 4.4.9 Resources Capable of Supplying Unforced Capacity in New York

This subsection applies to Resources which (1) have not previously been in operation in the NYCA, (2) are not subject to the requirements of Subsection 4.4.1. through Subsection 4.4.8 of this Manual, and (3) want to supply Unforced Capacity to the NYCA in the future.

By the tenth (10th) day of the month preceding the month when a Resource wants to supply Unforced Capacity to the NYCA, the Resource shall submit to the ISO the appropriate Operating Data pertaining to its operations over the previous 12 months, if it was in operation. A Resource that wants to continue to supply Unforced Capacity in the NYCA immediately thereafter shall submit, by the 20th day of each month, the appropriate Operating Data.

For example, a Resource that wants to supply Unforced Capacity during the month of July shall submit by June 10 Operating Data pertaining to the previous June to May, inclusively. Thereafter, the Resource shall submit Operating Data in accordance with Subsections 4.4.1 through 4.4.8 of this Manual, as applicable.

## 4.4.10 Resources not in Operation for the past 12 months

A Resource that was not in operation for the past 12 months and that wants to qualify as an Installed Capacity Supplier shall submit monthly Operating Data to the ISO no later than one (1) month after that Resource commenced commercial operation, in accordance with Subsections 4.4.1 through 4.4.8 of this Manual, as applicable.

## 4.4.11 Temporary Interruption in Availability

If a Generator in an otherwise operational state at the time of notice (that is, not otherwise forced out) does not sell or certify its UCAP on a temporary basis (i.e., elects not to participate in the UCAP Market or is not successful in selling its UCAP at auction or in a bilateral transaction), such interruption in availability of UCAP shall be taken on a monthly basis and may be treated for purposes of calculating the $EFOR_D$ for that unit as a maintenance outage with prior notification to the NYISO. If the Generator elects to bid the unit into the NYISO energy markets during such period, all such service hours and forced outage hours shall be included in the computation of the unit's $EFOR_D$, but periods where the unit is not selected may be reported as Reserve Shutdown Hours, as defined in Attachment J.

# 4.5 Calculation of the Amount of Unforced Capacity each Resource may Supply to the NYCA (Section 5.12.6(a) ISO Services Tariff)

The ISO will calculate the amount of Unforced Capacity that Resources are qualified to supply to the NYCA. The Unforced Capacity methodology estimates the probability that a Resource is available to serve Load, taking into account forced outages. To evaluate this probability, the ISO will use the Operating Data submitted by each Resource in accordance with Section 4.4 of this Manual, and the mathematical formulae included in Attachment J of this Manual. For each Capability Period, the ISO will base the amount of Unforced Capacity a Resource is qualified to supply on the average EFORd value of the six (6) most recent 12-month rolling average EFORds for that Resource. Such EFORd value will remain in effect for the entire Capability Period, except in cases when historical GADS data corrections or revisions are submitted. The six (6) most recent 12-month rolling average EFORds shall be for the same interval used to determine the Minimum Installed Capacity Requirement to Minimum Unforced Capacity Requirement translation, as noted in Sections 2.5 and 2.6 of this Manual.

# 4.6 Operating Data Default Value and Exception for Certain Equipment Failures (Section 5.12.6(b) and (c) ISO Services Tariff)

## 4.6.1 Default Value

In its calculation of the amount of Unforced Capacity that each Resource is qualified to supply to the NYCA and notwithstanding the provisions of Section 4.5 of this Manual, the ISO will deem a Resource to be completely forced out during each month for which this Resource has not submitted its Operating Data in accordance with Section 4.4 of this Manual. Pursuant to Section 5.12.12 of the Services Tariff, Resources that do not comply with Section 4.4 of this Manual also are subject to information submission requirements sanctions.

Resources who are deemed to be completely forced out during any month may submit new Operating Data to the ISO at any time. The format and substance of the new Operating Data shall comply with the requirements set forth in Sections 4.4.1 through 4.4.8, as applicable. Within ten (10) calendar days of receipt of new Operating Data that comply with such requirements, the ISO shall use this new Operating Data to recalculate the amount of Unforced Capacity that such Resources may supply to the NYCA.

Upon a showing of extraordinary circumstances, the ISO retains the discretion to accept at any time Operating Data which have not been submitted in a timely manner, or which do not fully conform with Section 4.4 of this Manual.

## 4.6.2 Exception for Certain Equipment Failures

When a Generator, Special Case Resource, Energy Limited Resource, System Resource, or Control Area System Resource is forced into an outage by an equipment failure that involves equipment located on the electric network beyond the step-up transformer, and including such step-up transformer, the NYISO shall not treat the outage as a forced outage for purposes of calculating the amount of Unforced Capacity such Installed Capacity Suppliers are qualified to supply in the NYCA. This exception is not limited to equipment failures that occur on the New York State electrical network and extends to equipment failures that occur on electrical networks operated by External Control Areas.

If an outage occurs on the transmission system beyond the generator step-up transformer, and including such step-up transformer, at a time when a Generator has not placed its unit on a maintenance outage, such interruption in availability shall be treated for purposes of calculating the unit's $EFOR_D$ rating as a reserve shutdown. If an outage occurs on the transmission system beyond the generator step-up transformer, and including such step-up transformer, at a time when a Generator is on a maintenance outage, such interruption in availability shall be treated for purposes of calculating the unit's $EFOR_D$ rating as a maintenance outage. In the event that service resumes on the transmission system but the unit categorized as being on a reserve shutdown is not able to perform, the unit shall be charged with a forced outage from the time that the transmission outage ended until the time it resumes operations (the "post transmission outage period"); provided however, that if the unit had been scheduled to take a maintenance outage during the post transmission outage period, the unit shall be charged with a Forced Outage, as defined in Attachment J, until the scheduled start date of its maintenance outage, at which time it will be charged with a maintenance outage until the end of its scheduled maintenance period.

# 4.7 Monthly Installed Capacity Supplier Certification Forms

Each Installed Capacity Supplier must submit the appropriate ISO certification form to the ISO no later than the deadline for monthly certification as provided by the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website,

demonstrating that the Unforced Capacity it is supplying is not already committed to meet the Minimum Installed Capacity Requirement of an External Control Area.

In addition, each Installed Capacity Supplier that has been de-rated (i.e., has had an amount of Unforced Capacity it is authorized to supply in the NYCA reduced by the ISO in accordance with section 4.5 of this Manual) shall demonstrate in its monthly certification that it has procured sufficient additional Unforced Capacity to cover any shortage, due to such de-rating, of Unforced Capacity it has previously committed to supply in the following month or go into the ICAP Spot Market Auction.

# 4.8 Bidding, Scheduling, and Notification Requirements (Section 5.12.7 ISO Services Tariff)

On any day for which it supplies Unforced Capacity, each Installed Capacity Supplier (except as noted below) must schedule or Bid into the Day-Ahead Market, or declare to be unavailable an amount of Energy that is not less than the Installed Capacity Equivalent of the amount of Unforced Capacity it is supplying to the NYCA from each Resource that it uses to supply Unforced Capacity, rounded down to the nearest whole MW.

Each Installed Capacity Supplier providing Unforced Capacity must designate the entity that will be responsible for complying with these bidding, scheduling and notification requirements.

## 4.8.1 Generators and System Resources

For every hour of any day for which Generators and System Resources supply Unforced Capacity, they must provide the Installed Capacity Equivalent of the amount of Unforced Capacity they are supplying to the NYCA through a combination of scheduling or Bidding in the Day-Ahead Market, or in accordance with the notification procedure below. See the ISO's Day-Ahead Scheduling Manual and Market Participants User Guide for scheduling and bidding procedures.

For any hour of any day that the Installed Capacity Supplier cannot provide the full amount of Energy associated with its Installed Capacity Equivalent, due to a maintenance or forced outage, the supplier must notify the ISO Operations department.

## 4.8.2 Energy Limited Resources

Energy Limited Resources that are Installed Capacity Suppliers must be able to provide the Installed Capacity Equivalent of the amount of Unforced Capacity they are supplying to the NYCA for a minimum of four (4) hours each day. Energy Limited Resources must Bid or schedule in the Day-Ahead Market each day in such a way as to enable the ISO to schedule them for the period in which they are capable of providing the Energy.

An Energy Limited Resource must also provide the ISO with information concerning that Energy Limited Resource's upper operating limit, designating its desired operating level. Once the Energy Limited Resource has provided four (4) hours of Energy equivalent to its Installed Capacity commitment, the ISO will not call on it to provide additional Energy, absent an emergency. In the case of an emergency, the ISO may request an Energy Limited Resource for assistance, recognizing that the Energy Limited Resource may not be capable of responding.

## 4.8.3 Interruptible Load Resources

Interruptible Load Resources that are Installed Capacity Suppliers must supply the ISO with Energy and/or Operating Reserve Bids in the Day-Ahead Market indicating the price at which they are willing to be interrupted. This applies only to Interruptible Loads that are not Special Case Resources.

## 4.8.4 Existing Municipally-Owned Generation

Existing municipally-owned generation that qualify as Installed Capacity Suppliers pursuant to Section 5.12.11(b) of the ISO Services Tariff and Section 4.13 of this Manual are not required to Bid or schedule in the Day-Ahead Market.

## 4.8.5 Special Case Resources (Section 4.12 of this Manual)

Special Case Resources are not subject to daily bidding, scheduling and notification requirements.

For every month in which a Special Case Resource supplies Unforced Capacity, the Responsible Interface Party ("RIP"), or its assignee, must offer to reduce Load equal to the Installed Capacity Equivalent of the amount of Unforced Capacity the Special Case Resource is supplying to the NYCA by submitting a Minimum Payment Nomination to the ISO associated with such Unforced Capacity. This Minimum Payment Nomination will act as a strike price, allowing the ISO to call on a specific amount of Special Case Resources to perform, based on price and NYCA zone, when faced with a Forecast Reserve Shortage. The Minimum Payment Nomination will remain in effect through the month and is not subject to change. Special Case Resource Minimum Payment Nomination submission procedures are detailed in Section 4.12.3.

A RIP, or its assignee, must notify the ISO Planning and Operations departments of a change in status that would cause a Special Case Resource to not be able to provide the full amount of Load reduction associated with the Unforced Capacity it has supplied to the NYCA. See Sections 4.3.3 and 4.12.6 of this Manual.

## 4.8.6 Intermittent Power Resources

As set out in Section 5.12.11(d) of the ISO Services Tariff, Intermittent Power Resources may qualify as Installed Capacity Suppliers, without having to comply with the daily bidding and scheduling requirements set forth in Section 5.12.7 of the ISO Services Tariff. To qualify as Installed Capacity Suppliers, Intermittent Power Resources shall comply with the notification requirement of Section 5.12.7 of the ISO Services Tariff by notifying the ISO of outages.

# 4.9 External Resources

External Generators, System Resources, Control Area System Resources and entities purchasing Installed Capacity from them may participate in the NYCA Installed Capacity market. With the exception of those requirements and procedures identified in section 4.9.2 below, External Installed Capacity Suppliers using Unforced Capacity Deliverability Rights ("UDRs") must comply with the requirements and procedures identified in this section 4.9. Refer to section 4.14 of this Manual for additional Installed Capacity Supplier requirements and procedures associated with the use of UDRs.

## 4.9.1 Requirements to Qualify as an External Installed Capacity Supplier

Prior to supplying Unforced Capacity to the NYCA, External Generators, System Resources, Control Area System Resources and entities purchasing Installed Capacity from them must qualify as External Installed Capacity Suppliers. To qualify as External Installed Capacity Suppliers such entities must provide the following information to the ISO in a timely manner:

1. Name and location of the Resource (if multiple units are involved, identify each unit);

2. Assurance that the External Control Area in which the Resource is located either:

   (a) Will not recall or curtail, for the purposes of satisfying its own Control Area Loads, exports from that External Control Area to the NYCA of an amount of Energy equal to the Installed Capacity Equivalent of the amount of Unforced Capacity that Resource is supplying to the NYCA; or

   (b) In the case of Control Area System Resources, will afford NYCA Load the same pro-rata curtailment priority that it affords its own Control Area Load;

3. Documentation of a DMNC test, or its equivalent, in accordance with the procedures found in Section 4.2 or 4.10.3 of this Manual;

4. Submission of Operating Data for the prior twelve months in accordance with Sections 4.4 and 4.4.9, and Attachment K of this Manual;

5. Documentation which satisfies the Maintenance Scheduling Requirements in Section 4.3 of this Manual; and

6. Expected return dates from full or partial outages.

With the exception of item four (4), this information must be provided to the ISO at least two (2) business days prior to the business day the External Installed Capacity Import Rights ("Import Rights") are requested, two (2) business days prior to an ISO-administered Installed Capacity auction in which the External Installed Capacity Supplier wishes to offer Unforced Capacity, and at such additional times as required by the ISO and this Installed Capacity Manual (e.g., annual DMNC test results). The information required by item four (4) must be submitted in accordance with the timing requirements found in 4.4.9 of this Manual (by the tenth (10th) day of the month preceding the month in which the prospective External Installed Capacity Supplier wishes to supply Unforced Capacity to the NYCA).

The ISO may verify this data with the appropriate External Control Area.

## 4.9.2 Allocation of Import Rights

The ISO establishes the maximum amount of Unforced Capacity that can be provided to the NYCA by Resources located in each neighboring Control Area according to the procedures contained in Section 2.7 of this Manual. Once this amount has been determined for each neighboring Control Area, the allocation among ISO customers of Import Rights to External Unforced Capacity supply is done according to the following procedures.

**Grandfathered External Installed Capacity Rights**

Details concerning Grandfathered Rights are provided in Attachment E to this Manual.

**Other Allocations**

After accounting for Grandfathered External Installed Capacity rights, the ISO will allocate the remaining rights for External Unforced Capacity supply on a first-come, first-serve basis. Import Rights may ultimately only be used by LSEs located within the NYCA, but any ISO Customer may submit a request for External Installed Capacity rights.

Initial requests for Import Rights for one or more months within a Capability Period may be sent to the ISO during the following time period:

- Beginning at 8:00 AM EST

- For Summer Capability Period: on the first business day following the publication of the total number of import rights made available by the NYISO (on or about February 15)

- For Winter Capability Period: on the first business day not more than thirty (30) days prior to a Capability Period (strip) Auction, and

- Ending at 5:00 PM EST three (3) business days prior to a Capability Period Strip Auction.

On or about February 15th the ISO shall post the final quantity of Import Rights available for request for the following Capability Year. The quantity of rights that will be available at that time prior to the Summer and the Winter Capability Period (strip) Auctions shall be 100 % of the Import Rights available, as posted by the ISO.

If Import Rights are not fully subscribed after the Capability Period (strip) Auction has concluded, the ISO will open another period of first-come, first-serve allocations prior to each Monthly Auction for the month or months in which Import Rights remain and the ISO will post the available Import Rights after each subsequent auction.

For each month within a Capability Period, requests for Import Rights may be sent to the ISO during the following time period:

- Beginning at 8:00 AM ET on the business day following the day the ISO posts the results of each Capability Period (Strip) or Monthly Auction.

- Ending at 5:00 PM ET three (3) business days prior to the next Monthly Auction.

**Contents of Request**

Each request must contain the following information:

1. Documentation of a bilateral agreement, with pricing redacted, between a qualified External Installed Capacity Supplier or a marketer with a contract with a qualified External Installed Capacity Supplier and

   (a) an LSE within the NYCA or

   (b) a marketer that is not an affiliate of the External Installed Capacity Supplier;

2. The identity of the ISO Customer making the request;

3. The identity of the External Installed Capacity Supplier;

4. The name and location of the Resource;

5. The Control Area in which the Resource for which the Installed Capacity Supplier seeks rights is located;

6. The MW amount requested to support the Unforced Capacity sale to the NYCA from the Resource designated in (4) above;

7. The time period, in blocks of whole months, for which the rights are requested;

8. E-mail address of the requesting party to which a response will be made.

The information listed above must be provided as a "Request for External Installed Capacity Import Rights" to the ISO's Manager of Resource Reliability via facsimile to the following number: 518-356-6208.

**Response from the ISO**

The ISO shall respond to requests for External Installed Capacity Import Rights in a timely fashion. For requests made during business hours before noon ET, the ISO will respond by noon the next business day. For requests made during business hours from noon ET to 5:00 PM ET, the ISO will respond by 5:00 PM ET the next business day.

If the ISO determines that the information provided in the request is incomplete or inadequate, the ISO will immediately notify the requesting party. The requesting party may resubmit its information to the ISO no later than 24 hours after the expiration of the time period for initial requests.

Only complete requests submitted within the time periods specified above will be evaluated by the ISO. The date and time stamp provided by the FAX machine will determine the priority for the evaluation of requests. If a request is resubmitted for any reason, the latest time stamp will determine its priority.

The ISO will notify the requesting party if its request has been accepted or rejected, with reasons for rejection, if such be the case, within the time period specified above, following receipt of a complete request. If accepted, the ISO will provide a confirmation number. A rejection may be based on either or both of the following:

- Incomplete or inadequate information
- Fully subscribed External Installed Capacity rights

**Tally of Import Rights**

The NYISO will maintain a tally of the available Import Rights for each month within a Capability Year and will post these figures on the NYISO website.

**Obligations of Recipients of Import Rights**

If at any time, the ISO has allocated all of the Import Rights that are available to permit the import of Installed Capacity from one or more control areas for one or more months, the ISO will promptly issue an announcement to all Market Participants, alerting them to this fact. Recipients of these Import Rights will have until 12:00 p.m. two business days following the issuance by the ISO of this announcement or until 5:00 p.m. on the last business day that precedes the beginning of the Capability Period (strip) auction by at least 15 days, if that is later, either to decide to keep these Import Rights, or to return these Import Rights to the ISO. The ISO may exhaust its supply of Import Rights for different Control Areas and different months at different times, so this deadline may differ from Control Area to Control Area within a month, and it may vary from month to month for a given Control Area.

Entities that had requested those Import Rights of the ISO, but which elect to return them to the ISO prior to this deadline, will be under no further obligation associated with those Import Rights. Likewise, if the ISO never makes such an announcement pertaining to Import Rights to import Installed Capacity from a given Control Area for a given month (because the ISO never allocated all of the Import Rights that were available to permit the import of Installed Capacity from those Control Areas in those months), then the recipients of those Import Rights will be under no obligation to use those Import Rights to support the import of Installed Capacity to a New York LSE, nor will they be required to offer Installed Capacity into any ISO-administered auctions. The ISO will notify all Market Participants when Import Rights have been made available due to Import Rights that have been returned back to the ISO from previously awarded Import Rights recipients. Any Import Rights that are returned to the ISO shall be available for allocation to market participants or for use to support the purchase of Installed Capacity in ISO-administered auctions, using the same procedures that are used for other Import Rights, as described elsewhere in this manual.

Entities that elect not to return those Import Rights by the deadline described above after such an announcement is made, or entities that are allocated Import Rights to import Installed Capacity from a Control Area for a given month after such an announcement has been issued for that Control Area and that month by the ISO, shall be able to demonstrate to the ISO no later than the deadline for monthly certification, as provided by the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website, that they have used those Import Rights to support the import of Installed Capacity from the relevant Control Area into New York to meet the Minimum Installed Capacity Requirement of an LSE serving load in the NYCA. If, by that time, a holder of such Import Rights has neither sold that Installed Capacity using those Import Rights in an ISO-administered auction nor has entered into a bilateral agreement to supply Installed Capacity to a New York LSE using those Import Rights, the associated ICAP will be offered for sale into the ICAP Spot Market Auction as price taker, i.e., at a price of $0/MW. The Supplier will be paid the market-clearing price determined in those auctions for the control area in which it is located for the Unforced Capacity in question.

**External Installed Capacity Sales in ISO Administered Auction**

All purchasers of Unforced Capacity that is located in an External Control Area in an ISO-administered auction shall receive the External Installed Capacity rights necessary in order to permit that Unforced Capacity to count towards the LSE Unforced Capacity Obligation; consequently, in order to ensure that there are sufficient external Installed Capacity rights available, the ISO shall limit the number of MW of Unforced Capacity that can be purchased in any External Control Area in those auctions. In each Capability Period auction, the ISO shall limit the number of MW of Unforced Capacity that can be purchased in any External Control Area to the number of MW of Unforced Capacity that can be provided by Installed Capacity Suppliers located in that Control Area, as determined in Section 2.7 of this Manual, less all External Installed Capacity rights that have been requested for that External Control Area under the provisions of this section. In addition, the ISO will permit entities that have been allocated Import Rights to offer Installed Capacity into the auctions it administers.

In the Capability Period Monthly Auctions held before and during the Capability Period, the ISO shall limit the number of MW of Unforced Capacity that can be purchased in any External Control Area to the number of MW of Import Rights that the ISO makes available for the Capability Period from that Control Area, less the number of MW of Unforced Capacity purchased in that External Control Area for that month in preceding Monthly Auctions and the Strip Auction, less all External Installed Capacity Rights that have been requested to support external Bilateral Transactions for that month.

The ISO will reduce External Installed Capacity rights eligible to be traded in the Capability Period strip auction based on the allocations made according to the above procedures.

## 4.9.3 Additional External Installed Capacity Supplier Requirements

**Certification**

Entities that have received External Installed Capacity Import Rights or that are using UDRs to meet NYCA Locational Capacity Requirements must provide the following additional information, for each month that they intend to supply Unforced Capacity to the NYCA, to the ISO on the date when Installed Capacity Supplier and LSE Certifications are due.

- Certification that Unforced Capacity being sold to the NYCA has not been sold elsewhere.

- The confirmation or transaction number granted to the External Installed Capacity transaction. The confirmation number should be listed in the comments section of the Installed Capacity Certification form.

See Section 4.7 of this Manual for complete information in connection with monthly Installed Capacity Supplier certification requirements. The ISO will verify this data with the appropriate External Control Area.

**Deliverability**

External Installed Capacity Suppliers are required to demonstrate that the Energy associated with Unforced Capacity supplied to the NYCA is either deliverable to the NYCA border, or in the case of UDRs, to the NYCA interface with the UDR transmission facility. This demonstration occurs in two stages.

1) Energy must be deliverable to the NYCA border or, when using UDRs, to the NYCA interface with the UDR transmission facility using the transmission service rules of the External Control Area. The following rules apply.

    a. For External Installed Capacity associated with Import Rights,

        i. Secures External Installed Capacity Import Rights during the first-come, first-serve allocation period described above with a bilateral agreement; or

        ii. Sells External Unforced Capacity in an ISO-administered Installed Capacity auction pursuant to the procedures identified in this Manual;

or

    b. For External Installed Capacity associated with UDRs,

        i. That the External Installed Capacity has a sufficient amount of UDRs either owned or under contract for the term of the transaction.

2) Deliverability of Energy associated with External Unforced Capacity is demonstrated as follows:

    a. For External Installed Capacity associated with Import Rights, demonstrate the ability to deliver Energy to the NYCA border for the time the Energy may be scheduled in the DAM, included in the HAM, or pursuant to an SRE, as applicable. If the transmission interface between the NYCA and the adjacent Control Area is full, the External Installed Capacity Supplier is not required to "bump" the entity whose Energy has been committed on the line and the Energy associated with External Unforced Capacity from that External Installed Capacity Supplier is not required to be delivered to the NYCA border. If the transmission tie between the NYCA

and the Control Area where the External Installed Capacity Supplier is located was full but the External Control Area curtails an amount that would reduce the Import below the External Installed Capacity commitment level, the External Installed Capacity Supplier will be required to respond to the NYISO request and use the transmission capability to provide Energy to the NYCA; or

b. For External Installed Capacity associated with UDRs, demonstrate delivery of such Energy to the NYCA interface with the UDR transmission facility for the time the Energy may be scheduled in the DAM, included in the HAM, or pursuant to an SRE, as applicable. If the NYCA interface with the UDR transmission facility is full, the External Installed Capacity Supplier is not required to "bump" the entity whose Energy has been committed on the line and the Energy associated with External Unforced Capacity from that External Installed Capacity Supplier is not required to be delivered to the NYCA interface with the UDR transmission facility. If the NYCA interface with the UDR transmission facility was full but the External Control Area curtails an amount that would reduce the Import below the UDR transmission facility total transmission capability, the External Installed Capacity Supplier will be required to respond to the NYISO request and use the transmission capability to provide Energy to the NYCA.

## 4.9.4 Charges Associated with External Unforced Capacity Deficiencies

In accordance with the Services Tariff, if an entity fails to deliver part or all of the Energy associated with External Unforced Capacity it sold in the NYCA (see section 4.9.3) it will be deemed retroactively deficient for such failure. External Installed Capacity Suppliers unable to deliver such Energy to the NYCA border will be assessed the deficiency charge for Unforced Capacity associated with such failure and will be deemed to have been deficient from the last time the External Installed Capacity Supplier "demonstrated" delivery of its Installed Capacity Equivalent ("ICE"), or any part thereof, until it next delivers its ICE or the end of the term for which it certified Unforced Capacity, whichever occurs first, subject to the limitation that any prior lack of demonstrated delivery will not precede the beginning of the period for which the Unforced Capacity was certified.

# 4.10 System Resources

A System Resource is defined as a portfolio of Unforced Capacity provided by Resources located in a single ISO-defined Locality, the remainder of the NYCA, or any single

External Control Area, that is owned by or under the control of a single entity, which is not the operator of the Control Area where such Resources are located, and that is made available, in whole or in part, to the ISO. System Resources may be External or Internal to the NYCA. Please refer to Section 4.4.3 and Attachment J, Section 3.4, for information regarding Resources operated by the operator of the Control Area in which the Resources are located.

The System Resource must be in a Control Area that either (a) will not recall or curtail transactions from the Resource to satisfy its own Control Area Load, or (b) will afford the NYCA Load the same curtailment priority that it affords its own Control Area Load.

## 4.10.1 Permissible Aggregations

For the purposes of aggregating System Resources, there are seven defined areas in which Installed Capacity Suppliers may reside. These are:

1. New York City Zone
2. Long Island Zone
3. All other NYCA Zones

and the neighboring Control Areas operated by:

4. PJM
5. ISO-NE
6. Hydro Quebec
7. Ontario IMO

Resources located in the Ontario IMO Control Area may not qualify as Installed Capacity Suppliers, since this Control Area does not currently meet the ISO's recall or Curtailment requirements for Installed Capacity Suppliers.

Within the other six areas a single entity may aggregate its Generators into a portfolio for the purposes of entering into System Resource Installed Capacity transactions, so long as all the Generators included in the portfolio reside within the same area. Any entity that wishes to make System Resource sales must provide the required DMNC test data to the ISO for each Generator in its portfolio, unless that entity can re-dispatch Resources under its control located within an External Control Area to maintain a pre-determined interchange schedule between that Control Area and the NYCA. The Unforced Capacity associated with an External Grandfathered Right may not be aggregated with other Resources as a System Resource.

For example, an owner may operate Generators in PJM and the Long Island Zone. The Generators in PJM may be aggregated or the Generators in the Long Island Zone may be aggregated. Generators in PJM and the Long Island Zone may not be combined with each other.

## 4.10.2 External System Resources

The ISO requires the following information for each Resource aggregated as an External System Resource. The entity aggregating the Resources is responsible for supplying the information.

1. Name and location of Generators included in the portfolio.

2. Documentation that satisfies the General Requirements for DMNC determination specified in Section 4.2 of this Manual.

3. Documentation that satisfies the Maintenance Scheduling Requirements specified in Section 4.3 of this Manual.

4. Documentation that satisfies the Operating Data information submission requirements specified in Section 4.4 of this Manual.

5. Expected return date from full or partial outages.

6. Certification that Unforced Capacity supplied to the NYCA has not been supplied elsewhere.

## 4.10.3 Control Area System Resources

Control Area System Resources or the purchasers of Unforced Capacity from those Resources shall not be required to conduct DMNC tests and submit DMNC test results to the ISO. Instead, the ISO shall calculate a net projected capacity (the "Net Projected Capacity") for each Control Area System Resource based on (1) monthly forecast data submitted by the Control Area System Resource pursuant to this Section (the "Forecast Data"), and (2) the formula set forth below. To calculate the amount of UCAP each Control Area System Resource may supply to the NYCA, the ISO shall use the formulae provided in Attachment J of this Manual, which adjusts the Net Projected Capacity on the basis of CARL Data submitted monthly by the Control Area System Resource pursuant to Section 4.4.3 of this Manual.

To qualify as ICAP Suppliers, Control Area System Resources or the purchasers of Unforced Capacity from those Resources shall submit Forecast Data in a form acceptable to the ISO and in compliance with the schedule and requirements set forth in Section 4.2 of this Manual, which are otherwise applicable to the submission of DMNC test results by Generators to the ISO. Forecast Data shall cover the period for which Control Area System Resources or purchasers of Unforced Capacity from those Resources want to

supply Unforced Capacity to the NYCA. For example, Control Area System Resources that wish to participate in the 2001-2002 Winter Capability Period Auction shall submit to the ISO Forecast Data for each of the six (6) months of the 2001-2002 Winter Capability Period.

Forecast Data submitted for a Control Area System Resource providing Installed Capacity from Control Area *c* shall include the following information for each month *m* for which that Control Area System Resource (or purchaser of Capacity from such resource) wishes to provide Installed Capacity:

1. Total forecasted maximum generating Capacity in the Control Area *c* during month *m* (without any adjustments for External firm Capacity purchases, or sales, outages and maintenance) ($CAP_{cm}$);
2. External forecasted firm Capacity purchases by Control Area *c*, other than purchases from Resources in the NYCA during month *m* ($EP_{cm}$);
3. The forecasted amount of load management (i.e., interruptible load) in Control Area *c* during month *m* ($LM_{cm}$);
4. Forecasted peak Load for Control Area *c* during month *m,* including system losses ($PL_{cm}$);
5. Forecasted external firm Capacity sales by Control Area *c* during month *m*, other than firm Capacity sales to the NYCA ($ES_{cm}$);
6. Forecasted losses, up to the border of the NYCA, that would be incurred on transactions corresponding to sales of Unforced Capacity by that Control Area System Resource outside the Control Area ($LS_{cm}$);
7. The amount of generating capacity that is forecasted to be unavailable in Control Area *c* due to planned maintenance during month *m* ($PM_{cm}$); and
8. Planning reserve requirements during month *m* for the Control Area *c* corresponding to reserve requirements necessary for this Control Area *c* to meet NERC Resource Adequacy and applicable reliability council criteria, taking into account all sales of Capacity from this Control Area *c* ($PR_{cm}$).

In cases in which any of the above data items is forecasted to vary from hour to hour within a month, the forecasted monthly value submitted for that data item should be the forecasted value of that data item during the peak load hour for that month for Control Area *c*.

To calculate the Net Projected Capacity of each Control Area System Resource for a specific month, the ISO shall use the following formula:

$$NPC_{cm} = CAP_{cm} + EP_{cm} + LM_{cm} - PL_{cm} - ES_{cm} - LS_{cm} - PM_{cm} - PR_{cm}.$$

Net Projected Capacity shall be used to determine the amount of Unforced Capacity a Control Area System Resource can provide using the equations in Attachment J, Section 3.4.

# 4.11 Interruptible Load Resources

The following procedures apply to Interruptible Load Resources, if any, that are metered by the ISO.

- These Resources must Bid into the Day-Ahead Market as price cap bid Load. These Resources will be scheduled based on their Bids and Day-Ahead prices.
- In real-time, these Resources determine whether, and at what level, to purchase Energy or to interrupt through their Bids into the Hour-Ahead market.
- If the Load chooses to purchase Energy, it will pay the LBMP for the difference between its scheduled Load and the Load for which it is purchasing.
- These Resources must interrupt, if requested to do so by the ISO.

# 4.12 Special Case Resources

Special Case Resources are Loads capable of being interrupted upon demand, and distributed generators, rated 100 kW or higher, that are not visible to the ISO's Market Information System. The Unforced Capacity of a Special Case Resource corresponds to its pledged amount of Load reduction as adjusted by historical performance factors and as increased by the Transmission District loss factor . The calculation of this amount shall be made in accordance with Section 3.3 of Attachment J.

## 4.12.1 Claiming of Unforced Capacity and RIPs

The Unforced Capacity of a Special Case Resource may be freely sold in Bilateral Transactions. However, such Unforced Capacity may not be claimed by an LSE towards satisfaction of its own LSE Unforced Capacity Obligation or be offered into an auction administered by the ISO unless there is a RIP[*] with respect to such Special Case Resource. RIPs are Market Participants that agree to be bound by the notification and other requirements applicable to RIPs under this Section 4.12. RIPs shall be responsible for all forms of communication to and from the ISO for purposes of Minimum Payment Nomination, notification, dispatch, validation, and verification of Special Case Resources and the Unforced Capacity associated with Special Case Resources.

[*] RIPs fulfill functions similar to Curtailment Service Providers under the ISO's Emergency Demand Response Program.

## 4.12.2 General Requirements

Every Special Case Resource must submit a Special Case Resource commitment in accordance with the form in Attachment K and be accepted by the ISO as an Installed Capacity Supplier before its Unforced Capacity may be claimed by an LSE towards its LSE Unforced Capacity Obligation or be offered in an auction administered by the ISO. Every Special Case Resource must submit a Special Case Resource commitment to the ISO in accordance with the schedule and requirements of Section 4.2. Special Case Resources must also submit a notification letter identifying the RIP that they authorize to transact on their behalf and must obtain an identification number from the ISO.

A Special Case Resource that supplies Load reductions solely through the use of a distributed generator (whether or not operated in parallel with the NYCA) and that elects to measure such Load reductions by metering the output of such distributed generator under Section 3.3(b) of Attachment J, shall submit an appropriate DMNC test recorded on the appropriate form of Attachment D as part of its Special Case Resource commitment. All other Special Case Resources shall provide a Special Case Resource commitment in the form of Figure 1 of Attachment K. A Special Case Resource that supplies Load reductions solely through the use of a distributed generator and that elects to measure such Load reductions by metering the output of such distributed generator under Section 3.3(b) of Attachment J: (i) may not use a DMNC in calculating its Unforced Capacity that exceeds the total Load at the site of the distributed generator; (ii) must deduct from the output of such generator any auxiliary power consumed by the generator and supplied from an external source; and (iii) may not serve a load bank with the output of the generator when responding to ISO dispatch under Section 4.12.3.

Special Case Resources must meet the qualifications and comply with the procedures described below. RIPs claiming Unforced Capacity from Special Case Resources must comply with the requirements and procedures set forth below.

The Unforced Capacity of Special Case Resources may only be offered in auctions administered by the ISO or be claimed by an LSE towards its LSE Unforced Capacity Obligation in even increments of 100 kW (e.g. 590 kW of Unforced Capacity would be rounded down to 500 kW). However, Special Case Resources may be aggregated to minimize the effect of this requirement, provided that each such aggregation is identified as a single block of Unforced Capacity. The NYISO will also allow participation by aggregations of small customers using alternative metering and performance measurement subject to the procedures and limitations set forth in Section 3.8 of the NYISO Emergency Demand Response Program Manual, except that the total of all such aggregations for Special Case Resources shall not exceed 100 MW.

## 4.12.3 Minimum Payment Nomination Requirements

For each month in which a Special Case Resource supplies Unforced Capacity to the NYCA, the RIP, or its assignee, must submit a Minimum Payment Nomination to the ISO that will reflect the minimum guarantee price the Special Case Resource will be paid

if called upon to reduce Load equal to the Installed Capacity Equivalent of the amount of Unforced Capacity it has supplied. There is no minimum Minimum Payment Nomination and a Special Case Resource's Minimum Payment Nomination cannot exceed $500/MWh. This Minimum Payment Nomination, or Energy curtailment payment designation, associated with a Special Case Resource's Unforced Capacity will not be entered in the Day-Ahead Market, but instead will serve as a strike price that the ISO can use to determine which Special Case Resources to call when a Forecast Reserve Shortage is identified. Unlike a Generator or other Resource's Bid to supply Energy associated with Unforced Capacity, a Special Case Resource's Minimum Payment Nomination cannot be revised prior to Settlement in the Day-Ahead Market. A Special Case Resource's Minimum Payment Nomination is set for the entire month.

Special Case Resource Minimum Payment Nominations to perform at a minimum payment for Load reduction must be submitted at the same time all Installed Capacity Suppliers are required to submit their monthly Installed Capacity Supplier certification forms. See Section 4.7 of this Manual. Special Case Resource Minimum Payment Nominations must be submitted to the ISO on a separate form. RIPs must submit Minimum Payment Nominations for all qualified Special Case Resources, regardless of whether, at the time of the submission, a qualified Special Case Resource has committed to supply Unforced Capacity in the NYCA market during the upcoming month. Once submitted, a Special Case Resource's Minimum Payment Nomination will remain in effect for the life of the Special Case Resource unless superceded by a successive Minimum Payment Nomination.

Special Case Resource Minimum Payment Nominations will be entered in a separate database and used only when the ISO Operations department determines the need to call on these Resources in response to a Forecast Reserve Shortage. In the event the ISO Operations department makes such a determination, the Minimum Payment Nominations placed for each Special Case Resource will allow the ISO to call for Load reduction based on Special Case Resource zone location and price. As a result, the ISO will be able to call less than the total pool of Special Case Resources in the NYCA and in each NYCA zone.

As an example, the ISO may determine that it needs a Demand Reduction response of 25 MWs in Zone J. A total of 50 MWs of Special Case Resources located in Zone J is supplying Unforced Capacity. For this example, assume that each MW of Special Case Resource Capacity entered a different Minimum Payment Nomination, from $0/MWh to $500/MWh. In order to fulfill its need for 25 additional MWs of reserves, the ISO will call the 25 MWs of Special Case Resources in economic order based on their submitted Minimum Payment Nominations starting with the lowest values. See Section 4.12.8 for situations where multiple Special Case Resources have placed the same top Minimum Payment Nomination called upon by the ISO and the total MWs offered at that price exceed the ISO's needs.

## 4.12.4 Performance

A Special Case Resource must make Energy available, for a minimum four (4) hour block (except where environmental constraints require a shorter block), in amounts that correspond to the Installed Capacity Equivalent of the amount of Unforced Capacity it supplies to the NYCA as specified in Section 3.3 (c) of Attachment J, by reducing Load or transferring Load to a distributed generator, within two (2) hours of a notice provided by the ISO to the RIP, following a twenty-one (21) hour notice if notification is provided by 3:00 PM ET, or twenty-four (24) hour notice otherwise. If the Special Case Resource is unable to provide full output within two (2) hours due to operational constraints, the RIP may petition the ISO for permission to provide maximum output from the Special Case Resource within a longer period. The ISO's permission will not be unreasonably withheld. In granting permission, the ISO will calculate the appropriate de-rating factor for use in determining the amount of Unforced Capacity that such Special Case Resource can provide in the future.

A Special Case Resource may be required by the ISO to demonstrate its pledged Load reduction capability once in every Capability Period if it has not otherwise already been called by the ISO to reduce Load in such period.

In the event that a Special Case Resource located at a retail customer was in operation (in the case of a distributed generator) or providing Load reduction (in the case of interruptible Load), at the time of the system or Transmission District peak upon which the Minimum Unforced Capacity Requirement of the LSE serving that customer is based, the LSE's Minimum Unforced Capacity Requirement shall be increased by the amount of Load that was served or interrupted by the Special Case Resource.

## 4.12.5 ISO Notification Procedures

The ISO will provide twenty-one (21) hour-ahead notification if notification is provided by 3:00 PM ET, or twenty-four (24) hour notice otherwise, and two (2) hour notice, as required by this Manual, to the RIP. The former notification will be provided after 11 am, day-ahead, when the Day-Ahead Market closes. The ISO commits not to use day-ahead notification of potential need to operate indiscriminately but rather only when the Day-Ahead Market indicates serious shortages of supply for the next day. The day-ahead notice may occur on a weekend day or a holiday, as needed.

The ISO shall provide notice no fewer than two (2) hours ahead of required operation or interruption.

RIPs shall contact their Special Case Resources through whatever communication protocols are agreed to between the Special Case Resources and the RIPs.

RIPs claiming Special Case Resource Unforced Capacity shall provide the ISO with their phone and Internet contact information that allows for notification by the ISO at any time. RIPs shall confirm receipt of both instances of notification (day-ahead and two (2) hour) within 1 hour by Internet or telephone reply to the ISO. Such reply must confirm

the relay of proper notification by the RIPs to their Special Case Resource clients, where applicable.

## 4.12.6 Capacity Adjustment Procedures

A Special Case Resource that fails to respond to RIP notification by reaching pledged Load reduction capability or maximum pledged generator output within two (2) hours following notice from the ISO to the RIP, or that fails to provide output for the period required by the ISO or four (4) hours, whichever is less, will be considered forced out (for unperformed hours) for purposes of calculating the Unforced Capacity value of the Special Case Resource for future Obligation Procurement Periods. See Attachment J of this Manual for further explanation of a Special Case Resource's Unforced Capacity value.

A Special Case Resource that has successfully petitioned the ISO for permission to reach pledged Load reduction or maximum output in more than two (2) hours will be considered forced out in the amount of Unforced Capacity not backed by Energy for the period starting two (2) hours following the notice from the ISO to the RIP until the Special Case Resource attains pledged Load reduction or maximum output.

A Special Case Resource that cannot operate for the full four (4) hours when called for by the ISO, due to environmental permit limits or otherwise, shall be considered forced out for the hours it is unable to operate or is operated at reduced output.

## 4.12.7 RIP Requirements

In addition to other requirements under this Section 4.12, an RIP claiming Unforced Capacity from a Special Case Resource for sale into an ISO-administered auction or for its own requirements (in the case of an RIP which is an LSE) shall fulfill the following obligations:

- Submit to the ISO a letter from each SCR authorizing the RIP to act on behalf of the SCR during each Capability Period. The letter must specify that the RIP has authority to sell the SCR's Unforced Capacity, act as the organization of record for all financial transactions, and should be signed by an authorized representative of the SCR.

- Give notice of the claiming of such Unforced Capacity on a one-time basis to the LSE supplying Energy to the retail customer on whose premises the Special Case Resource is located (if different from the RIP).

- Notify the ISO as provided in Section 4.3.3 whenever the Special Case Resource is unavailable to provide its pledged Load reduction.

- Report operating data to the ISO each month as provided in Section 4.4.7 using the form provided in Figure 2 of Attachment K and provide copies of such form to the

appropriate TO and the LSE supplying Energy to the retail customer on whose premises the Special Case Resource is located (if different from the RIP).

- Make certifications to the ISO each month as provided in Section 4.7.

- Document reductions in Load with interval billing meter readings on customer Load (or with readings on the distributed generator(s) in the case of a Special Case Resource whose performance is calculated under Section 3.3(b) of Attachment J) for the four (4) hour period following the two (2) hour ISO notice under Section 4.12.4. In the event that Energy made available from Special Case Resource Unforced Capacity is a small percentage of the total metered Load at the location of the Special Case Resource, such that it may not be clearly reflected by meter reads alone, the ISO will also accept operations logs to augment metered output to ensure accurate verification. The RIP or the Transmission Owner, as appropriate, shall retain all interval meter readings upon which it bases its certification of compliance, for a period of three (3) years.

## 4.12.8 Special Case Resource Demand Response Payments

Each time a Special Case Resource is called upon to perform it will receive an Energy payment for the amount of Load reduction resulting from its performance. If the ISO requests performance by Special Case Resources for more than four (4) hours, each Special Case Resource shall be paid for the duration of the event in accordance with this Section 4.12.8, starting with the hour specified by the ISO as the starting time of the activation, or, in the event that the ISO specified that the Demand Reduction begin as soon as possible, starting with the hour that the Special Case Resource began its response. Each Special Case Resource shall be paid the zonal Real-Time LBMP per MWh of demand reduced for the remainder of the four-hour minimum payment period. Payment for Special Case Resource Load reductions are conditioned upon verification of performance for the time period requested by the ISO.

If the ISO requests performance by Special Case Resources for four (4) hours or less, each Special Case Resource shall be paid as if it had been activated for four (4) hours. Each Special Case Resource that reduces demand shall receive a payment consistent with the hybrid pricing rules, in accordance with this Section 4.12.8, for the duration of the ISO request or for two (2) hours, whichever is greater, starting with the hour specified by the ISO as the starting time of the event, or, if the ISO specified that the Demand Reduction begin as soon as possible, starting with the hour that the Special Case Resource began to perform. Each Special Case Resource shall be paid the zonal Real-Time LBMP per MWh of demand reduced for the remainder of the four-hour minimum payment period. Payment for Special Case Resource Load reductions is conditioned upon verification of performance for the time period requested by the ISO.

Special Case Resource Minimum Payment Nominations would be eligible to participate in the LBMP price setting under the hybrid pricing rules, which permit Bids, or in this case Minimum Payment Nominations, to set prices if at least one (1) MW of Special Case

Resource Capacity is needed to satisfy the total reserve requirement, following performance and verification. In the event that a Special Case Resource's Minimum Payment Nomination total for the number of hours of requested performance exceeds the LBMP revenue that Special Case Resource receives, that Special Case Resource will be eligible for a Bid Production Cost Guarantee to make up the difference.

When more than one Special Case Resource has submitted the highest Minimum Payment Nomination selected by the ISO to perform during an event, the ISO will specify the number of MWs of the amount of Special Case Resources that must perform during that event such that all such resources are selected in the same zone.

To continue the example listed in Section 4.12.3, each Special Case Resource that was called to perform in Zone J would be paid the greater of its Minimum Payment Nomination or the applicable LBMP per MW per hour of requested performance following verification of performance of Demand Reduction. When at least one (1) MW of Special Case Resource Capacity is needed to satisfy the total reserve requirement the Minimum Payment Nominations submitted by these Resources may be considered when determining the LBMP.

### 4.12.9 ISO Verification

The ISO retains the right to audit any records kept by the RIP, the Transmission Owner, or the Special Case Resource which are used to support the RIP's certification of compliance with the procedures set forth in this Section 4.12.

## 4.13 Existing Municipally-Owned Generation

A municipal utility that owns generation in excess of its Minimum Installed Capacity Requirement, net of any Capacity provided by the New York Power Authority, may qualify to supply the excess Capacity as Unforced Capacity under the following conditions.

The municipal utility must:

- Provide the ISO with the physical operating parameters of its generation capability;
- Operate the generation at the ISO's request; and
- Ensure that the Energy provided by the generation is deliverable to the New York State Power System.

Only generation that was in service or under construction as of December 31, 1999 may qualify for the exemption from the bidding, scheduling and notification requirements.

# 4.14 Unforced Capacity Deliverability Rights

Unforced Capacity Deliverability Right ("UDRs") are rights, as measured in MWs, associated with new incremental controllable transmission projects that provide a transmission interface to a NYCA Locality (i.e., an area of the NYCA in which a minimum amount of Installed Capacity must be maintained). External UDRs are associated with interfaces between a NYCA Locality and an External Control Area. Local UDRs are associated with interfaces between a non-constrained region in the NYCA and a NYCA Locality. When combined with Unforced Capacity which is located in an External Control Area or non-constrained NYCA region either by contract or ownership, and which is deliverable to the NYCA interface with the UDR transmission facility, UDRs allow such Unforced Capacity to be treated as if it were located in the NYCA Locality, thereby contributing to an LSE's Locational Minimum Installed Capacity Requirement. To the extent the NYCA interface is with an External Control Area the Unforced Capacity associated with UDRs must be deliverable to the Interconnection Point.

A holder of UDRs may transfer them to another entity.

## 4.14.1 Determination and Assignment of Unforced Capacity Deliverability Rights

The amount of UDRs assigned by the NYISO to each new incremental transmission facility, and any future adjustments there to, will be based on the transmission capability, reliability, and availability of the facility, and appropriate NYSRC reliability studies.

## 4.14.2 Duration and Adjustment of Unforced Capacity Deliverability Rights

An incremental transmission project will be awarded UDRs, quantified as an amount of MWs, throughout its project life. The amount of UDRs awarded to a particular project may be adjusted periodically by the ISO. Adjustments to such an award will reflect changes in physical characteristics and availability of the associated project.

## 4.14.3 Use of External Unforced Capacity Deliverability Rights

In order to use External UDRs, an Installed Capacity Supplier must have a contract to match the number of UDRs with Unforced Capacity associated with an identifiable physical Resource.

When an entity combines External UDRs with acceptable Unforced Capacity, the resulting product, when supplied to an LSE will be treated as Unforced Capacity located

in the NYCA Locality and will qualify as Locational Unforced Capacity, provided that the energy is deliverable to the NYCA interface with the UDR transmission facility.

External Installed Capacity Suppliers using External UDRs must fulfill all External Installed Capacity Supplier requirements found in the Services Tariff and ISO Procedures, except for the requirement to acquire Import Rights as described in section 4.9.2.

## 4.14.4 Use of Local Unforced Capacity Deliverability Rights

In order to use Local UDRs, an Installed Capacity Supplier must have a contract to match UDRs with Unforced Capacity associated with an identifiable physical Resource either located in the non-constrained region of the NYCA or able to deliver Unforced Capacity to the non-constrained region of the NYCA.

When an entity combines Local UDRs with Unforced Capacity, the resulting product, when supplied to an LSE in the appropriate NYCA Locality, will be treated as Unforced Capacity located in the NYCA Locality and will contribute to that LSE's Locational Minimum Unforced Capacity Requirement.

Installed Capacity Suppliers using Local UDRs must fulfill all Installed Capacity Supplier requirements found in the Services Tariff and ISO Procedures for the Unforced Capacity they seek to combine with UDRs.

## 4.14.5 Unforced Capacity Deliverability Rights offered in an Installed Capacity Auction

UDRs may be offered in ISO-administered Installed Capacity Auctions when previously combined with qualified Unforced Capacity. External Unforced Capacity combined with UDRs and sold in a ISO-administered Installed Capacity Auction will not require the allocation of External Installed Capacity Import Rights.

The information submission requirements for External Installed Capacity Suppliers enumerated in section 4.9.1 of this Manual, with the exception of Operating Data, must be provided to the ISO at least two (2) business days prior to an ISO-administered Installed Capacity Auction in which the External Installed Capacity Supplier wishes to offer Unforced Capacity associated with UDRs, and at such times as required by the ISO and this Installed Capacity Manual (e.g., annual DMNC test results). Operating Data must be submitted in accordance with the timing requirements found in 4.4.9 of this Manual (by the tenth ($10^{th}$) day of the month preceding the month in which the prospective External Installed Capacity Supplier wishes to supply Unforced Capacity to the NYCA).

# 5.0 NYISO Administered Installed Capacity Auctions

The ISO will administer Installed Capacity auctions to accommodate LSEs' and Installed Capacity Suppliers' efforts to enter into Unforced Capacity transactions and to allow LSEs to satisfy their respective LSE Unforced Capacity Obligations. In the various ISO-administered auctions, LSEs will have the opportunity to purchase the Unforced Capacity necessary to meet the LSE Unforced Capacity Obligations established by the ISO Services Tariff, and to purchase or sell excess Unforced Capacity. Installed Capacity Suppliers will have the opportunity to sell Unforced Capacity.

LSEs and Installed Capacity Suppliers may also purchase or sell Unforced Capacity through Bilateral Transactions. LSEs holding Unforced Capacity which they want credited against their LSE Unforced Capacity Obligations must certify such Unforced Capacity when submitting their Installed Capacity certifications.

Participation in ISO-administered auctions is restricted to ISO Customers. Unforced Capacity supplied through the auction may only be used for the commercial interests of the purchaser. In addition, any Unforced Capacity purchased through an ISO-administered auction may not be resold for the purposes of meeting Installed Capacity requirements imposed by operators of External Control Areas.

The ISO Services Tariff references are Sections 5.13 through 5.15. A summary of this Section 5 combined with Attachment H of this Manual is on file with FERC as an attachment to the ISO Services Tariff under the title "Installed Capacity Auction Description."

# 5.1 Overview of Auction Structure and Timing

The ISO will conduct regularly scheduled Installed Capacity auctions before and during Capability Periods. See the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website for the upcoming Capability Period schedule of auctions. The schedule is structured to ensure adequate time between the time that auction results from monthly auctions are posted and the dates that LSEs are required to demonstrate the amount of Unforced Capacity that they have procured prior to the ICAP Spot Market Auction. Auctions shall be conducted prior to the start of each Capability Period and each month during a Capability Period.

The ISO will post the results of Installed Capacity auctions on the timeline under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website. The timeline will ensure that there are at least four (4) business days between the time that auction results from the Monthly Auction are posted and the dates that LSEs are required to certify the quantity of Unforced Capacity that it has or has obtained for the upcoming Obligation Procurement Period, pursuant to Section 5.11.2 of the ISO Services

Tariff. LSEs attempting to credit against their LSE Unforced Capacity Obligations any Unforced Capacity that they hold in excess of their Minimum Unforced Capacity Requirement must certify such Unforced Capacity when submitting their Installed Capacity certifications.

### 5.1.1 General Auction Requirements

The ISO shall conduct regular auctions at the times specified in Section 5.13.1 of the ISO Services Tariff and under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website. Installed Capacity Suppliers, LSEs and Installed Capacity Marketers that are Customers under the ISO Services Tariff will be allowed to participate in Installed Capacity auctions, provided that they satisfy the creditworthiness requirements set forth in Section 11.0 of the ISO OATT.

Offers to sell and Bids to purchase Unforced Capacity shall be made in $/kW for the time period appropriate to the auction. The ISO shall impose no limits on Bids or offers in any auction, except to the extent required by any applicable capacity market mitigation measures in accordance with Attachment H of the ISO Services Tariff.

Installed Capacity Suppliers that wish to participate in an ISO-administered auction must submit completed certification forms to the ISO in accordance with the timeline posted under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website, demonstrating that their Unforced Capacity has not been committed to a Bilateral Transaction.

Unforced Capacity associated with In-City generation that is subject to FERC-approved capacity market mitigation measures is required to be offered for sale in the ICAP Spot Market Auction to the extent that such Unforced Capacity has not been sold in prior auctions for the Obligation Procurement Period.

## 5.2 Capability Period Auctions

A Capability Period Auction will be conducted no later than thirty (30) days prior to the start of each Capability Period in which Unforced Capacity will be purchased and sold for the entire duration of the Capability Period. The exact date of the Capability Period Auction shall be established under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website.

The Capability Period Auction will be conducted and solved simultaneously to purchase Unforced Capacity which may be used by an LSE toward all components of its LSE Unforced Capacity Obligation for each Obligation Procurement Period. Participation shall consist of: (i) LSEs seeking to purchase Unforced Capacity; (ii) any other entity seeking to purchase Unforced Capacity; (iii) qualified Installed Capacity Suppliers; and (iv) any other entity that owns excess Unforced Capacity.

Buyers that are awarded Unforced Capacity shall pay the applicable Market-Clearing Price of Unforced Capacity in the Capability Period Auction. Sellers that are selected to provide Unforced Capacity shall receive the applicable Market-Clearing Price of Unforced Capacity in the Capability Period Auction, except in the case of In-City generation that is subject to capacity market mitigation measures, which shall receive the lesser of the applicable Market-Clearing Price or the annual mitigated price cap, as applied in accordance with Attachment H of the ISO Services Tariff. Any entity that resells Unforced Capacity associated with In-City generation that is subject to capacity market mitigation measures shall receive no greater than the annual mitigated price cap, as applied in accordance with Attachment H of the ISO Services Tariff, for that Unforced Capacity.

After consultation between the ISO and owners of In-City generation that is subject to capacity market mitigation measures, shaped Summer and Winter caps will be established each year based on the individual portfolios of In-City generation that is subject to capacity market mitigation measures and adjusted by the ISO with review by the NYPSC such that each owner of In-City generation that is subject to capacity market mitigation measures will have the opportunity to reach the $105/kW of Summer DMNC/year price cap. The calculation will be performed each Spring for the upcoming Capability Year and will be based on the most recent Summer and Winter Capability Period DMNC for each portfolio of In-City generation that is subject to capacity market mitigation measures. The calculation will also take into account the applicable Demand Curve price differential for the relative total Summer and Winter DMNCs of the available resources in the New York City Locality. The monthly price caps will be posted under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website.

If the Market-Clearing Price exceeds the total amount paid to Installed Capacity Suppliers, the ISO shall rebate the Excess Amount pursuant to Section 5.15 of the ISO Services Tariff. Owners of In-City generation that is subject to capacity market mitigation measures are restricted from selling Unforced Capacity to entities for use outside the New York City Locality in the Capability Period Auction.

The results of the Capability Period Auction will be made available to Market Participants at the time specified under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website, which shall be prior to the start of the Monthly Auction held prior to the beginning of each Capability Period.

# 5.3 Monthly Auctions

Monthly Auctions will be held during which Unforced Capacity may be purchased and sold for the forthcoming Obligation Procurement Period, and any other month or months remaining in the Capability Period, as specified under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website. The exact dates of

each Monthly Auction shall be established under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website.

Each Monthly Auction will be conducted and solved simultaneously to purchase Unforced Capacity which may be used by an LSE toward all components of its LSE Unforced Capacity Obligation for each Obligation Procurement Period**.** Participation shall consist of: (i) LSEs seeking to purchase Unforced Capacity; (ii) any other entity seeking to purchase Unforced Capacity; (iii) qualified Installed Capacity Suppliers; and (iv) any other entity that owns excess Unforced Capacity.

Buyers that are awarded Unforced Capacity shall pay the applicable Market-Clearing Price of Unforced Capacity in the Monthly Auction. Sellers that are selected to provide Unforced Capacity shall receive the applicable Market-Clearing Price of Unforced Capacity in the Monthly Auction, except in the case of In-City generation that is subject to capacity market mitigation measures which shall receive the lesser of the applicable Market-Clearing Price or the annual mitigated price cap, as applied in accordance with Attachment H of the ISO Services Tariff. Any entity that resells Unforced Capacity associated with In-City generation that is subject to capacity market mitigation measures shall receive no greater than the annual mitigated price cap, as applied in accordance with Attachment H of the ISO Services Tariff, for that Unforced Capacity.

After consultation between the ISO and owners of In-City generation that is subject to capacity market mitigation measures, shaped Summer and Winter caps will be established each year based on the individual portfolios of In-City generation that is subject to capacity market mitigation measures and adjusted by the ISO with review by the NYPSC such that each owner of In-City generation that is subject to capacity market mitigation measures will have the opportunity to reach the $105/kW of Summer DMNC/year price cap. The calculation will be performed each Spring for the upcoming Capability Year and will be based on the most recent Summer and Winter Capability Period DMNC for each portfolio of In-City generation that is subject to capacity market mitigation measures. The calculation will also take into account the applicable Demand Curve price differential for the relative total Summer and Winter DMNCs of the available resources in the New York City Locality. The monthly price caps will be posted under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website.

If the Market-Clearing Price exceeds the total amount paid to Installed Capacity Suppliers, the ISO shall rebate the Excess Amount pursuant to Section 5.15 of the ISO Services Tariff. Owners of In-City generation that is subject to capacity market mitigation measures are restricted from selling Unforced Capacity to entities for use outside the New York City Locality in the Monthly Auctions.

The results of each Monthly Auction will be made available to Market Participants in accordance with the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website.

# 5.4 ICAP Spot Market Auction

The ISO shall conduct an ICAP Spot Market Auction to purchase Unforced Capacity which shall be used by an LSE toward all components of its LSE Unforced Capacity Obligation for each Obligation Procurement Period immediately preceding the start of each Obligation Procurement Period. The exact date of the ICAP Spot Market Auction shall be established in the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website. All LSEs shall participate in the ICAP Spot Market Auction. In the ICAP Spot Market Auction, the ISO shall submit monthly Bids on behalf of all LSEs at a level per MW determined by the applicable ICAP Demand Curve established in accordance with Section 5.14.1(b) of the ISO Services Tariff and Section 5.5 of this Manual. The ICAP Spot Market Auction will set the LSE Unforced Capacity Obligation for each NYCA LSE.

Prior to the ICAP Spot Market Auction, LSEs shall certify all Unforced Capacity that will be counted toward their respective Minimum Unforced Capacity Requirement (through Bilateral Transactions, self-supply or ISO-administered auctions). Each entity that has previously committed to supply Unforced Capacity for the Obligation Procurement Period will also certify to the ISO the amount of Unforced Capacity it is using to meet those requirements. The ISO shall receive offers from qualified Installed Capacity Suppliers for the ICAP Spot Market Auction for any amount of qualified Unforced Capacity that they have not previously certified. The ISO shall also receive offers for the ICAP Spot Market Auction of Unforced Capacity from any LSE for any amount of qualified Unforced Capacity such LSE has in excess of its NYCA Minimum Unforced Capacity Requirement or Locational Minimum Unforced Capacity Requirement, as applicable.

The ICAP Spot Market Auction will be conducted and solved simultaneously for Unforced Capacity that shall be used by an LSE towards all components of its LSE Unforced Capacity Obligation for that Obligation Procurement Period using the applicable ICAP Demand Curves, as established in Section 5.5 of this Manual. LSEs that are awarded Unforced Capacity in the ICAP Spot Market Auction shall pay to the ISO the applicable Market-Clearing Price of Unforced Capacity determined in the ICAP Spot Market Auction. The ISO shall pay Installed Capacity Suppliers that are selected to provide Unforced Capacity the applicable Market-Clearing Price determined in the ICAP Spot Market Auction, except in the case of Unforced Capacity associated with In-City generation that is subject to capacity market mitigation measures, which shall receive the lesser of the applicable Market-Clearing Price or the annual mitigated price cap, as applied in accordance with Attachment H of the ISO Services Tariff.

The In-City Capacity bid and price caps applicable to certain In-City generation will account for differences between the amount of Unforced Capacity provided during the Summer Capability Period and the Winter Capability Period such that owners of In-City generation that is subject to capacity market mitigation measures shall have an opportunity to receive the annual mitigated price cap. These caps will be calculated according to the procedures set forth in Sections 5.2 and 5.3 of this Manual. The monthly

price caps will be posted under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website. Any entity that resells Unforced Capacity associated with In-City generation that is subject to capacity market mitigation measures shall receive no greater than the monthly mitigated price cap of Unforced Capacity as posted under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website.

If the Market-Clearing Price exceeds the total amount paid to Installed Capacity Suppliers, the ISO shall rebate the Excess Amount pursuant to Section 5.15 of the ISO Services Tariff. In-City generation that is subject to capacity market mitigation measures may be sold to meet NYCA LSE Unforced Capacity Obligations in the ICAP Spot Market Auction, provided the New York City Locational Unforced Capacity Requirement has been met. The ISO shall allocate the excess amount to all LSEs with Locational Minimum Installed Capacity Requirements located in the New York City Locality, except NYPA, pursuant to Section 5.15 of the ISO Services Tariff.

# 5.5 Demand Curve and Adjustments

Three (3) ICAP Demand Curves will be established: one to determine the locational component of LSE Unforced Capacity Obligations for the New York City Locality, one to determine the locational component of LSE Unforced Capacity Obligations for the Long Island Locality and one to determine the total LSE Unforced Capacity Obligations for all LSEs. Each ICAP Demand Curve is set based upon the localized, levelized cost of a gas turbine at the NYCA Minimum Installed Capacity Requirement or the Locational Minimum Installed Capacity Requirement, as applicable, and associated Energy and Ancillary Services revenues. The ICAP Demand Curves will be phased in over three (3) Capability Years beginning in 2003. Each ICAP Demand Curve shall be established within the following fixed, annual ICAP parameters which shall be translated to a dollars per kilowatt-year of Unforced Capacity basis.

| | **Year 1** **(Ends April 30, 2004)** | **Year 2** **(Begins May 1, 2004)** |
|---|---|---|
| | **$/kW-year of ICAP** | **$/kW-year of ICAP** |
| **Total** | $56.24 @ 100% | $67.49 @ 100% |
| | $0.00 @ 112% | $0.00 @ 112% |
| **LI** | $104.37 @ 100% | $123.94 @ 100% |
| | $0.00 @ 118% | $0.00 @ 118% |
| **NYC** | $127.89 @ 100% | $151.14 @ 100% |

| | | |
|---|---|---|
| | $0.00 @ 118% | $0.00 @ 118% |

NOTE: All percentages are in terms of the applicable NYCA Minimum Installed Capacity Requirement and Locational Minimum Installed Capacity Requirement.

NOTE: All annual dollar values will be translated into monthly values by dividing by twelve (12) and rounding to the nearest cent.

NOTE: The ICAP Demand Curves for each monthly ICAP Spot Market Auction are posted under the applicable Capability Period on the NYISO website at http://www.nyiso.com/markets/icapinfo.html.

In the third year, the costs assigned by the ICAP Demand Curves to the NYCA Minimum Installed Capacity Requirement and each of the Locational Minimum Installed Capacity Requirements will be defined by the results of the independent review conducted pursuant to this Section. The respective point at which each Demand Curve crosses zero, expressed in terms of a percentage of the NYCA Minimum Installed Capacity Requirement or each of the Locational Minimum Installed Capacity Requirements, as applicable, will be fixed through the 2005/2006 Capability Year. These dollar figures will also be translated each year to dollars per kilowatt-year of Unforced Capacity.

# 5.6 Periodic Independent Review

Except as provided in the previous Section, a periodic independent review of the ICAP Demand Curves will be performed every three (3) years to determine whether the parameters of the ICAP Demand Curves should be adjusted. Among other criteria, the review will determine the current localized levelized embedded cost of gas turbines in each NYCA Locality and the Rest of State and associated Energy and Ancillary Services revenues.

Each periodic independent review, which will include stakeholder input, will be completed by November 1 for the subsequent Capability Year, except the first periodic independent review, which will be concluded by December 31, 2004. The first periodic review will be initiated immediately following the Summer 2003 Capability Period, and the recommendations will be received not later than December 31, 2004 in time to determine the ICAP Demand Curves to be applied for the 2005-2006 Capability Year.

Once these recommendations are received, they shall be issued to stakeholders and the New York State Public Service Commission ("PSC"), who shall be given an opportunity to provide input to the NYISO concerning the review. Upon consideration of each review and input thereon from stakeholders and the PSC, but prior to NYISO Board approval, the NYISO shall issue three (3) proposed ICAP Demand Curves.

Any stakeholder, including the PSC, shall have thirty (30) days within which to request an opportunity to provide the NYISO Board with supplemental information for its

consideration when acting on the proposed ICAP Demand Curves. Upon receipt of such a request, a NYISO Board subcommittee shall be convened, upon notice to all parties, to review filed information and to hear oral arguments on the issues that have been raised.

After considering the proposed ICAP Demand Curves and any comments related thereto, the NYISO Board shall issue three (3) final ICAP Demand Curves and shall file them for approval at FERC. Once the ICAP Demand Curves have been approved by FERC, they shall remain binding for the 3-year period until the next review, absent exigent circumstances.

# 5.7 Supplemental Supply Fee

Any LSE that has not met its share of the NYCA Minimum Installed Capacity Requirement or its share of the Locational Minimum Installed Capacity Requirement after the completion of an ICAP Spot Market Auction shall be assessed a supplemental supply fee. The supplemental supply fee shall be calculated based on the localized levelized embedded cost of a gas turbine, as set forth in the Table below multiplied by one and one half (1.5), divided by twelve (12), rounded to the nearest cent and multiplied by the number of MWs the LSE needs to meet its share of the NYCA Minimum Installed Capacity Requirement or its share of the Locational Minimum Installed Capacity Requirement.

The ISO will attempt to use these supplemental supply fees to procure Unforced Capacity at the lowest available price from Installed Capacity Suppliers that are capable of supplying Unforced Capacity including: 1) Installed Capacity Suppliers that were not qualified to supply Capacity prior to the ICAP Spot Market Auction; 2) Installed Capacity Suppliers that offered Unforced Capacity at levels above the ICAP Spot Market Auction Market-Clearing Price; and 3) Installed Capacity Suppliers that did not offer Unforced Capacity in the ICAP Spot Market Auction. In the event that different Installed Capacity Suppliers offer the same price, the ISO will give preference to Installed Capacity Suppliers that were not qualified to supply Capacity prior to the ICAP Spot Market Auction.

Offers from Installed Capacity Suppliers are subject to review pursuant to the NYISO Market Monitoring Plan-Market Mitigation Measures (Attachment H to the ISO Services Tariff). Installed Capacity Suppliers selected by the ISO to provide Capacity after the ICAP Spot Market Auction will be paid a negotiated price, subject to the standards, procedures and remedies in the NYISO Market Monitoring Plan-Market Mitigation Measures.

The ISO will not pay an Installed Capacity Supplier more than the applicable supplemental supply fee per MW of Unforced Capacity, or, in the case of In-City generation that is subject to capacity market mitigation measures, the annual mitigated price cap per MW of Unforced Capacity, whichever is less, pro-rated to reflect the portion of the Capability Period for which the Installed Capacity Supplier provides Unforced Capacity. Any remaining monies collected by the ISO pursuant to Section

5.14.1 of the ISO Services Tariff will be applied in accordance with Section 5.14.3 of the ISO Services Tariff.

Beginning with the first ICAP Spot Market Auction held no less than five days after FERC approval of the ISO's Demand Curve filing, the following localized levelized embedded cost of gas turbines in the New York City Locality, the Long Island Locality, and Rest of State, respectively, times one and one-half (1.5) and adjusted in accordance with Section 5.6 of this Manual will be use d to set the supplemental supply fees and deficiency charge in the New York City Locality, the Long Island Locality, or elsewhere in the NYCA.

| | Levelized Costs of Gas Turbines | Supplemental Supply Fee |
|---|---|---|
| In-City New York City (LBMP Load Zone J) | $159/kW-yr. of ICAP | $238.50/kW-yr. of ICAP ($19.88/kW-month of ICAP) |
| Long Island (LBMP Load Zone K) | $139/kW-yr. of ICAP | $208.50/kW-yr. of ICAP ($17.38/kW-month of ICAP) |
| All Other LBMP Load (All other LBMP Load Zones in the NYCA) | $85/kW-yr. of ICAP | $127.50/kW-yr. of ICAP ($10.63/kW-month of ICAP.) |

NOTE: These dollar figures will be translated each year to dollars per kilowatt-year of Unforced Capacity in accordance with Section 2.5 of this Manual.

NOTE: All annual values will be translated into Unforced Capacity terms and monthly values by dividing by twelve (12) and rounding to the nearest cent. These values will be posted on the NYISO website at http://www.nyiso.com/markets/icapinfo.html.

# 5.8 ICAP Supplier Shortfalls and Deficiency Payments

In the event that an Installed Capacity Supplier sells more Unforced Capacity than it is qualified to sell in any specific month in the Capability Period or Monthly Auctions, the Installed Capacity Supplier shall be deemed to have a shortfall for that month. To cover this shortfall, the Installed Capacity Supplier shall purchase sufficient Unforced Capacity in the relevant Monthly Auction or through Bilateral Transactions, and certify to the ISO consistent with the timeline posted under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website that it has covered such shortfall. If the Installed Capacity Supplier does not cover such shortfall or if it does not certify to the ISO in a timely manner, the ISO shall prospectively purchase Unforced Capacity on behalf of that Installed Capacity Supplier in the appropriate ICAP Spot Market Auction or, in the event of shortages in that auction, through post-ICAP Spot Market Auction Unforced Capacity purchases to cover the remaining shortfall.

In the event that an External Installed Capacity Supplier fails to deliver to the NYCA the Energy associated with the Unforced Capacity it committed to the NYCA due to a failure to obtain appropriate transmission service or rights, the External Installed Capacity Supplier shall be deemed to have a shortfall from the last time the External Installed

Capacity Supplier "demonstrated" delivery of its Installed Capacity Equivalent ("ICE"), or any part thereof, until it next delivers its ICE or the end of the term for which it certified the applicable block of Unforced Capacity, whichever occurs first, subject to the limitation that any prior lack of demonstrated delivery will not precede the beginning of the period for which the Unforced Capacity was certified. An External Installed Capacity Supplier deemed to have a shortfall shall be required to pay to the ISO a deficiency charge as set forth in Section 5.14.1(c) of the ISO Services Tariff, pro-rated for the number of hours in the month that External Installed Capacity Supplier is deemed to have a shortfall (*i.e.*, (((deficiency charge ÷ 12 months) ÷ total number of hours in month of shortfall) * number of hours the shortfall lasted) * number of MWs of shortfall).

The ISO shall submit a Bid, calculated pursuant to Section 5.14.1 of the ISO Services Tariff, in the appropriate ICAP Spot Market Auction on behalf of an Installed Capacity Supplier deemed to have a shortfall as if it were an LSE. Such Installed Capacity Supplier shall be required to pay to the ISO the applicable Market-Clearing Price of Unforced Capacity established in that ICAP Spot Market Auction. In the event that the ICAP Spot Market Auction clears below the NYCA Minimum Installed Capacity Requirement or the Locational Minimum Installed Capacity Requirement, whichever is applicable to the Installed Capacity Supplier, the Installed Capacity Supplier shall be assessed the applicable deficiency charge based on the localized levelized embedded cost of a gas turbine, as set forth in the Table above, multiplied by one and one half (1.5), divided by twelve (12), times the amount of its shortfall.

If an Installed Capacity Supplier is found, at any point during a Capability Period, to have had a shortfall for that Capability Period, *e.g.*, when the amount of Unforced Capacity that it supplies is found to be less than the amount it was committed to supply, the Installed Capacity Supplier shall be retrospectively liable to pay the ISO the applicable supplemental supply fee.

Any remaining monies collected by the ISO pursuant to Sections 5.14.1 and 5.14.2 of the ISO Services Tariff will be applied as specified in Section 5.14.3 of the ISO Services Tariff.

# 5.9 Timing of Auctions

The ISO will develop a Capability Period Timeline ***that will attempt to*** ensure that:

1. A Capability Period Auction where Unforced Capacity shall be made available for purchase for the entire six-month Capability Period will be held at least thirty (30) days before the beginning of that Capability Period;

2. Pre-Capability Period Monthly Auctions where Unforced Capacity is made available for purchase for any and all Obligation Procurement Periods within the Capability Period will be held at least fifteen (15) days before the beginning of that Capability Period;

3. During a Capability Period, Monthly Auctions will be held at least fifteen (15) days before the beginning of each Obligation Procurement Period in which Unforced Capacity will be made available for any and all remaining Obligation Procurement Periods within that Capability Period; and

4. A monthly ICAP Spot Market Auction will be held at least two (2) business days before the beginning of each Obligation Procurement Period during which the ISO will procure LSE Unforced Capacity Obligations on behalf of each LSE.

***The above guidelines may be adjusted for weekends and holidays. The intent of the above will direct the ISO towards fair compromises when developing or amending the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website.***

# 5.10 Bids to Buy and Sell - General Requirements

Bids to purchase Unforced Capacity and offers to supply Unforced Capacity must be submitted as separate Bids for each auction.

Bidders who wish to purchase Unforced Capacity and Offerors who wish to supply Unforced Capacity in any ISO-administered auction may submit Bids to the ISO only on the day of the auction, unless otherwise specified under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website. If no Offerors submit offers to supply Unforced Capacity in an auction, the ISO may cancel that auction. By contrast, if at least one Offeror submits an offer to sell in an auction, the ISO will not cancel that auction, and will allow a Market-Clearing Price to be calculated in that auction, even if no Bidder submits a bid to buy in that auction.

All LSEs with Unforced Capacity in excess of their share of the NYCA Minimum Installed Capacity Requirement or their share of the Locational Minimum Installed Capacity Requirement, as applicable, may offer such Unforced Capacity into the ICAP Spot Market Auction on their own behalf.

# 5.11 Limitations on Offerors' Participation in Installed Capacity Auctions

Only Customers will be permitted to offer to sell Unforced Capacity in an auction. The amount of Unforced Capacity that can be offered for sale in any auction from a given Installed Capacity Supplier will not be permitted to exceed the amount that Installed Capacity Supplier is qualified to supply in the NYCA.

When the ISO reduces the amount of Unforced Capacity that an Installed Capacity Supplier may supply to the NYCA, the Installed Capacity Supplier shall procure any

shortfall in Unforced Capacity resulting from the reduction through Bilateral Transactions or in any ISO-administered auction.

The amount of Unforced Capacity that any given Offeror is permitted to offer for sale in the auction shall not exceed the Offeror's share of the amount of Unforced Capacity its Installed Capacity Suppliers are permitted to offer for sale, as calculated above, less any Unforced Capacity that Offeror has offered for sale either through Bilateral Transactions or through sales to External Control Areas. To the extent that an LSE seeks to offer into the ICAP Spot Market Auction, such LSE is limited to offering only those amounts of Unforced Capacity that are in excess of its share of the NYCA Minimum Installed Capacity Requirement or its share of the Locational Minimum Installed Capacity Requirement, as applicable.

Installed Capacity Suppliers that wish to participate in an ISO-administered auction must submit completed certification forms to the ISO by the date posted, and using the certification forms provided for the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website. The certification form shall, at a minimum, demonstrate: (i) that they own, have contracted to purchase, or have been designated as the agent for the share of each Resource that they claim when making offers to supply Unforced Capacity; and (ii) that the Unforced Capacity they offer has not been committed or sold to provide Unforced Capacity in the New York market or an External Control Area. Any offer to sell that would cause the total amount of Unforced Capacity offered by that Offeror from that Resource to exceed the amount of Unforced Capacity it is permitted to offer from that Resource will be rejected in its entirety.

If an Installed Capacity Supplier (or a portion of the Unforced Capacity attributable to an Installed Capacity Supplier) is selected in the auction to provide Unforced Capacity, that Resource (or portion thereof) cannot provide Installed Capacity to any other Control Area, and shall be required to adhere to the requirements for Installed Capacity Suppliers set forth in the ISO Services Tariff and in this Manual. Entities wishing to purchase Unforced Capacity that will count toward Minimum Installed Capacity Requirements in other Control Areas will not be able to purchase such Unforced Capacity in an ISO-administered auction.

# 5.12 Limitations on Bidders' Participation in Installed Capacity Auctions

As part of its evaluation of each Bidder's creditworthiness, the ISO may establish credit limits for each Bidder. The ISO will reject Bids from Bidders if acceptance of that bid could cause the total amount owed by that Bidder as a result of the auction to exceed that Bidder's credit limit. The credit criteria used by the ISO are contained in Article 8 of the ISO Services Tariff.

# 5.13 Required Information in Bids to Buy

In the Capability Period and Monthly Auction, each Bidder may submit multiple Bids. Each bid to purchase Unforced Capacity submitted by a Bidder must include but is not limited to the following information:

1. The total amount of Unforced Capacity it wishes to purchase in association with that Bid, in increments of 100 kW;

2. The maximum price the Bidder is willing to pay for the Unforced Capacity it is offering to purchase in its Bid, in $/kW for the time period appropriate to the auction;

3. The auction to which the Bid applies;

4. Whether the Unforced Capacity must be associated with Installed Capacity Suppliers located in a specific Locality, and if so, which Locality; and

5. Whether the Installed Capacity Suppliers associated with the Unforced Capacity can be located in a Control Area outside the NYCA, and if so, which Control Area(s).

In the ICAP Spot Market Auction, the ISO will enter Bids on behalf of all LSEs. Prior to the ICAP Spot Market Auction, LSEs will certify the amount of Unforced Capacity that they have or have obtained for the upcoming Obligation Procurement Period. After LSE certification, the ISO will enter Bids into the ICAP Spot Market Auction in accordance with the applicable Demand Curve for each Locality and the NYCA.

The ISO Unforced Capacity Purchase Agreement is found in Attachment F to this Manual.

# 5.14 Required Information in Offers to Sell

In the Capability Period Auction, the Monthly Auction and the ICAP Spot Market Auction, each Offeror may submit multiple offers. Each offer to sell Unforced Capacity submitted by an Offeror must include but is not limited to the following information:

1. The amount of Unforced Capacity it offers to sell in increments of 100 kW;

2. The minimum price it is willing to accept for the Unforced Capacity it is offering to sell in its offer, in $/kW for the time period appropriate to the auction;

3. The auction to which the offer applies;

4. The name of the Installed Capacity Supplier providing the Unforced Capacity offered for sale;

5. Documentation of that Installed Capacity Supplier's DMNC (described above);

6. Whether that Installed Capacity Supplier is located in a Locality, and if so, which Locality; and

7. Whether that Installed Capacity Supplier is located in a Control Area outside the NYCA, and if so, which Control Area.

# 5.15 Selection of Bids and Offers; Determination of Market-Clearing Prices

## 5.15.1 Capability Period and Monthly Auctions

In the Capability Period and Monthly Auctions, the ISO will determine which Bids to purchase and which offers to sell Unforced Capacity are selected by maximizing the sum of the Bids submitted by winning bidders minus the offers submitted by winning offerors subject to the following constraints: (1) the amount of Unforced Capacity in each Locality for which offers were accepted must be sufficient to satisfy all accepted Bids that specified that Unforced Capacity must be located in that Locality. (Unforced Capacity combined with UDRs will be treated as Unforced Capacity in the relevant Locality.); (2) the amount of Unforced Capacity in each Control Area outside the NYCA for which offers were accepted cannot exceed the quantity of accepted Bids that specified that Unforced Capacity could be located in that Control Area; and (3) the amount of Unforced Capacity associated with In-City generation that is subject to capacity market mitigation measures for which offers were accepted shall not exceed the amount of Unforced Capacity accepted from Bids which specify that such Unforced Capacity must be located in the New York City Locality.

All, part, or none of a Bid to purchase or an offer to sell Unforced Capacity may be selected in any Capability Period or Monthly Auction. As a result, if a Bidder offers in a Bid to purchase a given amount of Unforced Capacity at a given price, it may be awarded that amount of Unforced Capacity, or it may be awarded any amount lower than the amount it offered to purchase (including zero MWs).

Neither Bidders nor Offerors will be permitted to submit Bids or offers which specify that either all or none of a Bid or offer can be selected. Bids to purchase or offers to sell Unforced Capacity in a given Capability Period or Monthly Auction cannot be made contingent on the outcome of another auction; e.g., an Offeror will not be permitted to offer Unforced Capacity within one month's auction contingent upon its sale of Unforced Capacity in another month's auction.

In cases in which multiple Bidders Bid to pay the same price for Unforced Capacity in a given location (or group of locations, if there is no price difference between those locations) in the same Capability Period or Monthly Auction, and some but not all of those Bids can be selected, the amount of Unforced Capacity awarded to each of those Bidders in association with each of those Bids shall be proportional to the amount of Unforced Capacity that Bidder Bid to purchase in that location (or group of locations, if there is no price difference between those locations) at that price. Likewise, in cases in which multiple Offerors offer to sell Unforced Capacity in a given location (or group of locations, if there is no price difference between those locations) for the same price in the same Capability Period or Monthly Auction, and some but not all of those offers can be selected, the amount of Unforced Capacity selected from each of those Offerors in association with each of those offers shall be proportional to the amount of Unforced Capacity that the Offeror offered to sell in that location (or group of locations, if there is no price difference between those locations) at that price.

As a result of each Capability Period or Monthly Auction, the following Market-Clearing Prices for Unforced Capacity will be determined:

1. Prices for Unforced Capacity located in each Locality.

2. Prices for Unforced Capacity located in each Control Area outside the NYCA.

3. Price for Unforced Capacity located in the portion of the NYCA that is not located in any other Locality.

Market-Clearing Prices per MW of Unforced Capacity will be calculated for each Locality, for the NYCA, and for each External Control Area.

1. The Market-Clearing Price for a Locality will be the price at which one could have satisfied an incremental increase in demand in the auction for Capacity that had to be located in the Locality.

2. The Market-Clearing Price for the NYCA will be the price at which one could have satisfied an incremental increase in demand in the auction for Capacity that could have been located anywhere in the NYCA.

3. The Market-Clearing Price for an External Control Area will be the price at which one could have satisfied an incremental increase in demand in the auction for Capacity that could have been located in the NYCA or in that External Control Area.

The objective function that the ISO will use in the Capability Period and Monthly Auctions, which was described in the previous section, will be to select the offers of Unforced Capacity with the lowest offer prices, insofar as doing so would not cause violations of the locational constraints specified by Bidders whose Bids have been

selected, violations of the limitations on the total amount of Unforced Capacity that can be purchased from an External Control Area, pursuant to Section 4.9.3 "Other Allocations," or violations of the constraint on sales of Unforced Capacity by owners of In-City generation that is subject to capacity market mitigation measures. But the need to honor these locational constraints may require the ISO to accept some offers which specify relatively high offer prices for Unforced Capacity while not accepting other offers with lower offer prices, because purchasing the lower-priced Unforced Capacity would violate the locational constraints stated in the Bidders' Bids. In such cases, locational constraints will be binding and Market-Clearing Prices of Unforced Capacity may differ from location to location. If no locational constraints are binding (i.e., if the locational constraints specified by Bidders or the limitations on the total amount of Unforced Capacity that can be purchased in any given Control Area did not force the ISO to select more expensive offers of Unforced Capacity in the auction than it would have selected in the absence of those locational constraints), then the Market-Clearing Price of Unforced Capacity will be the same at every location.

When locational constraints do not bind, the Market-Clearing Price of Unforced Capacity in a given Capability Period or Montly Auction will be the marginal bid cost of providing additional Unforced Capacity in such Monthly Auction or Capability Period Auction, as applicable. This procedure for calculating Market-Clearing Prices is analogous to the procedure that will be used to calculate LBMP prices in the Energy market (which are based upon the marginal bid cost of supplying an increment of Load at a location). Illustrations of these procedures for calculating prices appear in Attachment H.

In order to determine the marginal bid cost of providing Unforced Capacity in the Capability Period and Monthly Auction, the ISO will calculate the change in the amount of Unforced Capacity that would have been bought and sold by each Bidder and Offeror if there had been — in addition to the Bids and offers that were already part of the auction — an additional demand for a very small amount of Unforced Capacity. The presence of this additional demand would have had one of two effects. Either it would have increased the amount of Unforced Capacity purchased from the marginal Offeror (which is the Offeror whose offer price is lowest among those entities that offered Unforced Capacity into that auction, but did not sell all of that Unforced Capacity in that auction), so that the amount of Unforced Capacity purchased from that Offeror would have been slightly above the amount that was actually purchased in that auction. Alternatively, it would have decreased the amount of Unforced Capacity purchased by the marginal Bidder (which is the Bidder whose offer price is lowest among those entities that purchased Unforced Capacity in that auction), so that the amount of Unforced Capacity purchased by that Bidder would have been slightly below the amount that was actually purchased in that auction (with the leftover Unforced Capacity used to meet the small additional demand). The algorithm that the ISO uses to conduct the Capability Period or Monthly Auction will choose whichever of these mechanisms satisfies the additional demand at the lowest cost. That cost (expressed in terms of $/kW per time period applicable to the auction) will determine the marginal bid cost of providing Unforced Capacity in that auction.

When locational constraints bind, the Market-Clearing Price of Unforced Capacity at each location will still be the marginal bid cost of providing additional Unforced Capacity in either the Capability Period or Monthly Auction, as applicable, but it will be the marginal bid cost of providing Unforced Capacity located in a given area.

First, the locational constraints will be divided into two groups. A Locality constraint is binding if the ISO selects offers of Unforced Capacity located in a certain Locality while not selecting lower-priced offers of Unforced Capacity from outside that Locality. The ISO will only do this in order to avoid violating locational constraints specified by Bidders that state that a Bid is only valid for Unforced Capacity located in a given Locality. A Locality constraint will also be binding for the New York City Locality if the ISO does not select lower-priced offers of Unforced Capacity from the New York City Locality, but instead selects higher-priced offers of Unforced Capacity in the New York City Locality or elsewhere. The ISO will only select such higher-priced offers in order to avoid violating the constraint on sales of In-City generation that is subject to capacity market mitigation measures.

An External Control Area constraint is binding if the ISO does not select offers of Unforced Capacity located in a particular External Control Area (or group of Areas), while selecting offers with higher offer prices from Installed Capacity Suppliers located in the NYCA or in other External Control Areas or to avoid violating the limits on the total amount of Unforced Capacity that can be purchased in a given External Control Area, pursuant to Section 4.9.3 of this Manual. Again, the ISO will only do this in order to avoid violating locational constraints specified by Bidders that state that a Bid is only valid for Unforced Capacity that is not located in a given External Control Area (or group of Areas).

Then:

- If a Locality constraint is binding in a Capability Period or Monthly Auction, the Market-Clearing Price of Unforced Capacity located in that Locality will be the marginal bid cost of providing additional Unforced Capacity in that Locality in that auction.

- If an External Control Area constraint is binding for a particular Control Area in a Capability Period or Monthly Auction (or group of Areas), then the Market-Clearing Price of Unforced Capacity located in that External Control Area (or group of Areas) will be the marginal bid cost of providing additional Unforced Capacity in that particular External Control Area (or group of Areas).

- The Market-Clearing Price in an auction for Unforced Capacity located anywhere else (which includes (1) Unforced Capacity located in the NYCA, but not in any other Locality; (2) Unforced Capacity located in a Locality, if that Locality constraint is not binding; and (3) Unforced Capacity located in an External Control Area, if no External Control Area constraint affecting that External Control Area is binding) will be the marginal bid cost of providing additional

Unforced Capacity located anywhere other than a Locality for which a Locality constraint is binding or an External Control Area for which an External Control Area constraint is binding.

The set of prices that results will ensure that when a Long Island Locality constraint is binding, the Market-Clearing Price for Unforced Capacity located in that Locality will be higher than the Market-Clearing Price for Unforced Capacity located in the portion of the NYCA that is not part of another Locality. It also ensures that when an External Control Area constraint is binding, the Market-Clearing Price for Unforced Capacity located in that External Control Area (or group of Areas) will be lower than the Market-Clearing Price for Unforced Capacity located in the portion of the NYCA that is not part of another Locality.

The ISO will identify Bids that are accepted as follows:

1. Bids for Unforced Capacity that must be located in a Locality that were above the Market-Clearing Price for that Locality will be accepted in their entirety. Bids equal to the Market-Clearing Price will be accepted on a pro rata basis.

2. Bids for Unforced Capacity that could be located anywhere in the NYCA that were above the Market-Clearing Price for Rest of State will be accepted in their entirety. Bids equal to the Market-Clearing Price will be accepted on a pro rata basis.

3. Bids for Unforced Capacity that could be located anywhere in the NYCA or in one or more External Control Areas that were above the lowest Market-Clearing Price among those External Control Areas in which they were willing to purchase Capacity will be accepted in their entirety. Bids equal to the Market-Clearing Price will be accepted on a pro rata basis.

The ISO will identify offers that are accepted as follows:

1. Offers for Unforced Capacity in a Locality that were below the Market-Clearing Price for that Locality will be accepted in their entirety. Offers equal to the Market-Clearing Price will be accepted on a pro rata basis.

    a. An exception applies to Unforced Capacity associated with In-City generation that is not subject to capacity market mitigation measures. Offers for such Unforced Capacity shall be accepted if they are below either the Market-Clearing Price for the New York City Locality or the Market-Clearing Price for Rest of State, whichever is higher. Offers equal to the greater of the Market-Clearing Price for the New York City Locality or the Market-Clearing Price for Rest of State shall be accepted on a pro rata basis.

2. Offers for Unforced Capacity in Rest of State that were below the Market-Clearing Price for Rest of State will be accepted in their entirety. Offers equal to the Market-Clearing Price will be accepted on a pro rata basis.

3. Offers for Unforced Capacity in an External Control Area that were below the Market-Clearing Price for that External Control Area will be accepted in their entirety. Bids equal to the Market-Clearing Price will be accepted on a pro rata basis.

Market-Clearing Prices will be calculated independently within each Capability Period and Monthly Auction. As a result, the Market-Clearing Price for Unforced Capacity at a given location may vary within the same auction, or among different monthly auctions conducted at the same time.

## 5.15.2 ICAP Spot Market Auction

In the ICAP Spot Market Auction, the ISO will construct a supply curve for the total Unforced Capacity offered in the NYCA which includes all Capacity that LSEs or Installed Capacity Suppliers had designated for use to meet their respective LSE Unforced Capacity Obligations through self-supply, as well as all other Capacity offered into the ICAP Spot Market Auction. In cases in which the total amount of Capacity in a given External Control Area, or the combination of all External Control Areas, would exceed limits on the amount of Capacity that can be located in these areas, the ISO shall eliminate the highest offers (or parts of those offers) in the affected External Control Areas from this supply curve until those limits are no longer exceeded.

In the ICAP Spot Market Auction, the ISO will also construct a supply curve for all Unforced Capacity offered for each Locality which includes all Capacity in that Locality that LSEs or Installed Capacity Suppliers had designated for use to meet their respective LSE Unforced Capacity Obligations through self-supply, as well as all other Capacity in that Locality offered into the ICAP Spot Market Auction. Capacity combined with UDRs shall be treated as Capacity in the relevant Locality.

In the ICAP Spot Market Auction, the Market-Clearing Price shall be determined for Rest of State, for each Locality, and for each External Control Area. The Market-Clearing Price for Rest of State will be the price at which the supply curve for the total Unforced Capacity intersects the applicable ICAP Demand Curve for the total Installed Capacity market. The Market-Clearing Price for a Locality will be the price at which the supply curve for that Locality intersects the Demand Curve for that Locality unless the Market-Clearing Price determined for Rest of State is higher in which case the Market-Clearing Price for that Locality will be set at the Market-Clearing Price for Rest of State.

The Market-Clearing Price for an External Control Area will be set to the Market-Clearing Price for Rest of State unless there were offers below the Rest of State Market-Clearing Price from Installed Capacity Suppliers in External Control Areas that were not accepted. If an offer in the ICAP Spot Market Auction was not accepted because it

would cause the limit on the total amount of Capacity provided by Installed Capacity Suppliers located outside the NYCA to have been exceeded, the Market-Clearing Price for all External Control Areas shall be set to the price at which one could have obtained an incremental amount of Capacity from anywhere outside the NYCA unless there were offers below such Market-Clearing Price from Installed Capacity Suppliers in a given External Control Area that were not accepted. In that case, the Market-Clearing Price for that External Control Area would be set to the price at which one could have obtained an incremental amount of Capacity in that External Control Area.

# 5.16 Billing and Settlements

Subject to the exceptions noted elsewhere regarding New York City generation, the ISO will pay each Offeror whose offer to sell Unforced Capacity is selected in an auction the Market-Clearing Price determined in that auction at the location of each of its Resources that have been selected to provide Unforced Capacity, for each 100 kW of Unforced Capacity that Resource has been selected to supply. Each Bidder for Unforced Capacity whose Bid to purchase is selected in an auction will pay the ISO the Market-Clearing Price at the location specified in the Bid(s) that have been selected, for each 100 kW of Unforced Capacity that it purchased.

For the Capability Period and Monthly Auctions, entities purchasing Unforced Capacity will pay:

1. The Market-Clearing Price for the Locality times the number of MW of Bids they submitted that were accepted that specified that Capacity must be located in that Locality.

2. The Market-Clearing Price for Rest of State times the number of MW of Bids they submitted that were accepted that specified that Capacity could be located anywhere in the NYCA.

3. The Market-Clearing Price for an External Control Area times the number of MW of Bids they submitted that were accepted that specified that Capacity could be located anywhere in the NYCA or in that External Control Area. (In cases where the Bid specified that the Capacity could be located in multiple External Control Areas, the lowest Market-Clearing Price for one of those External Control Areas will be used.)

For all Installed Capacity auctions, entities selling Unforced Capacity will be paid:

1. The Market-Clearing Price for the Locality times the number of MW of offers they submitted that were accepted for Capacity in that Locality. (Capacity combined with UDRs will be treated as Capacity in the relevant Locality.)

a. If the Market-Clearing Price exceeds the monthly mitigated price cap, owners of In-City generation that is subject to capacity market mitigation measures shall receive no greater than the applicable price cap as posted under the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website.

b. Owners of In-City generation that is not subject to capacity market mitigation measures shall receive the higher of the Market-Clearing Price for New York City or the Market-Clearing Price for Rest of State in the Capability Period and Monthly Auctions.

2. The Market-Clearing Price for Rest of State times the number of MW of offers they submitted that were accepted for Capacity in Rest of State.

3. The Market-Clearing Price for an External Control Area times the number of MW of offers they submitted that were accepted for Capacity in that External Control Area.

In the ICAP Spot Market Auction, the ISO will pay entities purchasing Unforced Capacity the Market-Clearing Price as determined in Section 5.15 of this Manual.

Settlements for all Installed Capacity auctions will occur in the month following the month for which the Unforced Capacity was purchased. For example, Unforced Capacity purchased for the month of May will be billed and paid for in the month of June. The schedule for bills and payments for Unforced Capacity will follow the Energy Market schedule. A timetable for bills and payments for the Energy Market can be found on the NYISO website.

Unforced Capacity purchased in the six-month strip auction (the Capability Period Auction) will be settled on a monthly basis. The ISO will issue bills for one-sixth of the applicable Market-Clearing Price for Unforced Capacity on the same schedule referenced above.

In-City LSEs will receive bills for the Unforced Capacity that they purchased that are net of any rebates.

# 5.17 Allocation of Winning Bids

In the Capability Period and Monthly Auctions, each Bidder whose Bid to purchase Unforced Capacity is selected will be allocated a pro rata share of the Unforced Capacity purchased in the auction, subject to the locational constraints specified in that Bidder's Bid, using the following procedure:

1. Bidders whose Bids specified that the Unforced Capacity must be associated with an Installed Capacity Supplier located in a Locality will be awarded such Unforced Capacity.

2. Bidders whose Bids specified that the Unforced Capacity could be associated with an Installed Capacity Supplier located in a particular Control Area outside the NYCA, and who paid a lower Market-Clearing Price as a result, will be allocated Unforced Capacity located in that External Control Area.

3. Any remaining purchasers of Unforced Capacity whose Bids specified they could accept Unforced Capacity associated with Installed Capacity Suppliers located outside the NYCA will be allocated Unforced Capacity for all remaining Unforced Capacity sold in that auction that is located outside the NYCA. This allocation shall be performed on a pro-rata basis, without violating any locational constraints specified by those Bidders.

4. All remaining Unforced Capacity associated with Installed Capacity Suppliers located inside the NYCA shall be allocated on a pro-rata basis among all remaining purchasers of Unforced Capacity in that auction.

# 5.18 Posting of Results

The ISO will post the results of each auction within the time period specified in the ISO Procedures. These results shall include:

1. The Market-Clearing Price for each Locality, each External Control Area, and the portion of the NYCA not included in any other Locality, in each ISO-administered auction.

2. The total amount of Unforced Capacity associated with Installed Capacity Suppliers in each Locality, each External Control Area, and the portion of the NYCA that is not included in any other Locality that was sold in each ISO-administered auction.

3. The total amount of Unforced Capacity purchased in each ISO-administered auction, broken down by the constraints placed upon the location of those Unforced Capacity by the Bidders placing those Bids.

The ISO shall publish all Bids and offers made in each auction six months after the conclusion of that auction. The names of Offerors or Bidders will not be revealed publicly; however, the ISO will post these data in a way that permits the identity of a given Offeror or Bidder to be tracked over time.

# Attachment B:

## Locational Minimum Installed Capacity Requirements (for the 2003-2004 Capability Year)

- The Locational Minimum Installed Capacity Requirement for New York City (LBMP Zone J) is 80%.
- The Locational Minimum Installed Capacity Requirement for Long Island (LBMP Zone K) is 95%.

## Maximum Allowances for Installed Capacity Provided by Resources Outside the NYCA

- The maximum Installed Capacity Equivalent of Unforced Capacity that may be located outside the NYCA is 2755 MW. This number will be updated annually based on ISO reliability studies. Existing Grandfathered contracts currently account for 622 MW of the 2755 MW. See Attachment E. This leaves a total of 2133 MW permitted to be imported to the NYCA, on a first-come, first-serve basis.*

| Amount of External ICAP Permitted to be Sold in the NYCA | Total (MW) | Grandfathered (MW) | Remaining (MW) |
|---|---|---|---|
| | 2755 | 622 | 2133 |

- The maximum amount of Installed Capacity that may be located in each of the following Control Areas, due to transmission constraints, is as follows:**

| Neighboring Control Area | Total (MW) | Grandfathered (MW) | Remaining (MW) |
|---|---|---|---|
| PJM | 1300*** | 117*** | 1183*** |
| ISO-NE | 950 | 50 | 900 |
| Ontario-IMO | 55 | 55 | 0 |
| Hydro Quebec | 1200 | 400 | 800 |

* Please refer to Section 4.9 of this Manual for further information in connection with ICAP sales in the NYCA from Resources located in External Control Areas.

** Note that the "Total" and "Remaining" NYCA ICAP that may be located in each of the four listed External Control Areas, when tallied, exceeds the amount of external ICAP permitted to be sold in the NYCA.

*** 1080 MW of these 1300 MW are subject to reservation under Section 5.12.2 of the ISO Services Tariff in amounts up to those listed in OATT Attachment L Table 3 (Existing Transmission Capacity for Native Load ETCNL) which includes 117 MWs of Grandfathered MWs in the PJM Control Area (see Attachment E of this Manual).

# Attachment J:

## Unforced Capacity for Installed Capacity Suppliers

### 1.0 Fundamental Formulae

(1-1) $$UCAP = (1 - EFOR_D) \times DMNC$$

(1-2) $$EFOR_D = \frac{f_f \times FOH + f_p \times (EFOH - FOH)}{SH + f_f \times FOH}$$

(1-3) $$f_f = \frac{\frac{1}{r} + \frac{1}{T}}{\frac{1}{r} + \frac{1}{T} + \frac{1}{D}}$$

(1-3a) $$r = \text{average forced outage duration} = \frac{FOH}{\text{number of forced outages}}$$

(1-3b) $$T = \text{average time between calls for a unit to run} = \frac{RSH}{\text{number of attempted starts}}$$

(1-3c) $$D = \text{average run time} = \frac{SH}{\text{number of successful starts}}$$

(1-4) $$f_p = \frac{SH}{AH}$$

**Note: UCAP values will be calculated monthly for each Resource based on a rolling 12-month calculation. The detailed formulae, including treatment where new units are being phased in, are shown in Section 3.**

# 2.0 Definitions

UCAP ..... Unforced Capacity

$EFOR_D$ ..... Equivalent Demand Forced Outage Rate

DMNC..... per Tariff definition

ICE ..... Installed Capacity Equivalent as defined in the Services Tariff and in Section 3 of this Attachment J.

Net Dependable Capacity .... The gross power level that a unit can sustain during any period of time when there are no equipment, operating or regulatory restrictions and after adjusting for station service and auxiliary loads and ambient conditions. Average ambient temperature should reflect the average of the daily high temperatures for the month at the plant location. Only one Net Dependable Capacity for each Resource shall be reported for each month. That value may be either the Resource's DMNC for the Capability Period containing that month or that Resource's average Net Dependable Capacity for that month, at the discretion of the owner of the Resource.

$f_f$ ..... full f-factor (see formula in Section 1.0)

$f_p$ ..... partial f-factor (see formula in Section 1.0)

FOH..... Full Forced Outage Hours

Forced Outage..... An unplanned failure that requires a unit to be removed from service, or the Load on the unit to be reduced before the end of the nearest following Weekend.

EFOH ..... Equivalent Full Forced Outage Hours: Sum of all hours a unit was involved in an outage expressed as equivalent hours of full forced outage at its maximum net dependable capability.

SH ..... Service Hours: The time a unit is electrically connected to the system - Sum of all Unit Service Hours.

AH..... Available Hours: The time a unit is capable of producing energy, regardless of its capacity level -- Sum of all Service Hours + Reserve Shutdown Hours + Pumping Hours + Synchronous Condensing Hours.

RSH.....Reserve Shutdown Hours: The time a unit is available for service but not dispatched due to economic or other reasons.

PH .....Period hours equals 24 times the number of days in the reporting period.

Note: For in-depth GADS Data concepts, refer to the NERC Fast Link for GADS Services at www.nerc.com.

# 3.0 Calculations

In general, all generating Resources with nameplate capacities greater than 10 MWs or plants with aggregated capacities greater than 25 MW are expected to provide the full GADS Data set defined in Attachment K. Units for which the full GADS Data set is provided will have their UCAP based on $EFOR_D$ according to Section 3.1 below. All other generating units will be rated based on equivalent GADS Data as described in Section 3.2. Energy Limited Resources that do not want to have their UCAP based on production levels using equivalent GADS Data will have to submit GADS Data to document their available capacity for the minimum 4-hour daily requirement period. Special Case Resources will have their UCAP based on Load reduction determined in Section 3.3.

# 3.1 UCAP based on $EFOR_D$

**(a) Determining the Amount of UCAP a Supplier Qualifies to Supply**

$UCAP^{Q}_{gm} = (1\text{-}EFOR_{Dgm})\ DMNC_{gm}$;

where:

$UCAP^{Q}_{gm}$ is the amount of Unforced Capacity that supplier *g* is qualified to provide in month *m*;

$UCAP_{gmp}$ is the Unforced Capacity that supplier *g* provides in month *m*;

$EFOR_{Dgm}$ is the Equivalent Demand Forced Outage Rate calculated for supplier *g* that will be used to determine the amount of Unforced Capacity that the Resource will be permitted to provide in month *m*, as defined further below; and

$DMNC_{gm}$ is the DMNC rating for supplier *g* which is applicable for month *m*, which shall be the most recent Summer DMNC rating for that supplier calculated in accordance with ISO procedures if month *m* is part of a Summer Capability Period, or the most recent Winter DMNC rating for the supplier calculated in accordance with ISO procedures if month *m* is part of a Winter Capability Period, as of the close of business on the last business day preceding the Monthly

Installed Capacity Auction that is conducted during the month preceding month *m*.

A rolling, cumulative, 12-month $EFOR_D$ will be calculated for each Resource that submits GADS Data using the GADS reporting format in Attachment K. The $EFOR_D$ for month (m) will be based on GADS Date for months, m-14, through and including month, m-3. (For example, $EFOR_D$ for August will be based on data submitted for June of the prior year through May of the current year).

$$EFOR_{Dgm} = \frac{IST_{ge}}{12} \times \frac{f_{fgbe}FOH_{gbe} + f_{pgbe}(EFOH_{gbe} - FOH_{gbe})}{(SH_{gbe} + f_{fgbe}FOH_{gbe})} + \left(1 - \frac{IST_{ge}}{12}\right)CEFOR_{Dg}$$

where $f_{fgbe}$ and $f_{pgbe}$ are further defined below and:

$EFOR_{Dgm}$ as above, is the Equivalent Demand Forced Outage Rate calculated for Resource *g* that will be used to determine the amount of Unforced Capacity that Resource will be permitted to provide in month *m*;

$IST_{ge}$ is the number of months that Resource *g* had been in service as of time *e* (0 if generator *g* was not in service as of time *e*; 12 if Resource *g* was in service from months *m*-14 through month *m*-3);

$FOH_{gbe}$ is the sum of all Full Forced Outage Hours reported for Resource *g* for the period beginning at time *b* and ending at time *e*. The data is the GADS Data submitted in accordance with Attachment K, Performance Record 02, columns 40-43 and Event Record 01, NERC Event Types U1, U2, U3, and SF;

$EFOH_{gbe}$ is the sum of all Equivalent Full Forced Outage Hours reported for Resource *g* for the period beginning at time *b* and ending at time *e*. The data is the GADS Data submitted in accordance with Attachment K for NERC Event Types U1, U2, U3, D1, D2, D3 and SF, such that:

$$EFOH_{gbe} = \left\{ \begin{array}{l} 0, \text{ if there were no outages for Resource g during the} \\ \text{period beginning at time b and ending at time e; and} \\ \displaystyle\sum_{i \in OUT_{gbe}} \frac{(NDC_{gi} - NAC_{gi})H_{gi}}{NDC_{gi}}, \text{ otherwise;} \end{array} \right\}$$

where:

$OUT_{gbe}$ is the set of outages for Resource *g* during the period beginning at time *b* and ending at time *e*:

$NDC_{gi}$ is the Net Dependable Capacity for Resource g applicable for outage *i*, submitted in accordance with Attachment F, Performance Record 01, columns 35-38;

$NAC_{gi}$ is the Net Available Capacity for Resource *g*, applicable for outage *i*, submitted in accordance with Attachment K, Event Record 01, columns 60-63;

and

$H_{gi}$ is the time accumulated for Resource *g* applicable for outage *i* submitted in accordance with Attachment K, columns 20-27 and columns 48-55, (*i.e.*, the positive difference between the start and end of the event).

$SH_{gbe}$ is the sum of all Service Hours reported for Resource *g* for the period beginning at time *b* and ending at time *e* in accordance with the GADS Data submitted in accordance with Attachment K, Performance Record 02, columns 16-19;

*e* is the end of the month occurring three months before month *m*, (e.g., if month *m* is September 2001, then *e* is the end of June 2001);

*b* is the beginning of the month occurring 14 months before month *m*, unless the supplier had not gone into service at that time, in which case *b* is the time at which that supplier went into service; and

$CEFOR_{Dg}$ is the class-equivalent $EFOR_D$ calculated by the ISO for suppliers of the same class as supplier *g* based on NERC class averages for similar Resources. Where no similar Resource exists, the NYISO will estimate a value based on its best judgment, if a mutually acceptable value cannot be agreed on.

Then:

$$f_{fgbe} = \frac{\frac{1}{r} + \frac{1}{T}}{\frac{1}{r} + \frac{1}{T} + \frac{1}{D}}$$

where:

*r* is $FOH_{gbe}$ divided by the total number of GADS Data Forced Outages reported for the period beginning at time *b* and ending at time *e* in accordance with Attachment K;

*T* is the number of Reserve Shutdown Hours ($RSH_{gbe}$) divided by the number of attempted starts reported for the period beginning at time *b* and ending at time *e* for Resource *g*. $RSH_{gbe}$ is the sum of all Reserve Shutdown Hours reported for Resource *g* for the period beginning at time *b* and ending at time *e* in accordance

with the GADS Data submitted in accordance with Attachment K, Performance Record 02, columns 20-23; and

*D* is the number of Service Hours ($SH_{gbe}$) divided by the number of successful starts reported for the period beginning at time b and ending at time *e* for Resource g; and

where:

$AH_{gbe}$ is the sum of all Available Hours reported for Resource *g* for the period beginning at time *b* and ending at time *e* in accordance with GADS Data submitted under Attachment K, Performance Record 02, Columns 32-35.

These equations shall be modified when necessary as follows in order to avoid dividing by zero:

If RSH = 0 (<1), set $f_f$=1;

If SH = 0, set $f_f$ =1;

If FOH = 0, set 1/r = 0 and calculate $f_f$ per its equation; and

If AH = 0, set $f_p$ =1.

**(b) Determining the ICE of the Amount of UCAP Supplied**

$$ICE_{gm} = \frac{UCAP^{P}_{gm}}{1 - EFOR_{Dgm}};$$

where:

$ICE_{gm}$ is the Installed Capacity Equivalent of the amount of Unforced Capacity that supplier *g* supplies in month *m*;

$UCAP^{p}_{gm}$ is the amount of Unforced Capacity that supplier *g* supplies in month *m*; and

$EFOR_{Dgm}$ as above, is the Equivalent Demand Forced Outage Rate calculated for Resource *g* that will be used to determine the amount of Unforced Capacity that resource will be permitted to provide in month *m*.

## 3.2 UCAP based on equivalent GADS Data (capacity factor method)

**(a) Determining the Amount of UCAP a Supplier Qualifies to Supply**

$$UCAP^{Q}_{gm} = (1 - OF_{gm})DMNC_{gm};$$

where:

$UCAP^{Q}_{gm}$ is the Unforced Capacity that supplier *g* is qualified to provide in month *m*;

$OF_{gm}$ is the Outage Factor calculated for supplier *g*, as further defined below, that will be used to determine the amount of Unforced Capacity that Resource will be permitted to provide in month *m*; and

$DMNC_{gm}$ is the DMNC rating for supplier *g* which is applicable for month *m*, which shall be the most recent Summer DMNC rating for that supplier calculated in accordance with ISO procedures if month *m* is part of a Summer Capability Period, or the most recent Winter DMNC rating for the supplier calculated in accordance with ISO procedures if month *m* is part of a Winter Capability Period, as of the close of business on the last business day preceding the Monthly Installed Capacity Auction that is conducted during the month preceding month *m*.

A rolling, cumulative 12-month, outage factor (OF) will be calculated for each Resource that submits the basic data (equivalent GADS Data) using the GADS Data form in Attachment K. The OF for month (m) will be based on GADS Data for months, m-14 through month m-3. (For example, $EFOR_D$ for August will be based on data submitted for June of the prior year through May of the current year).

$$OF_{gm} = \frac{IST_{ge}}{12} \times (1 - CF_{gbe}) + \left(1 - \frac{IST_{ge}}{12}\right)(1 - CCF_{g})$$

where:

$OF_{gm}$ is the Outage Factor for Resource *g* that will be used to determine the amount of Unforced Capacity that Resource will be permitted to provide in month *m*;

$IST_{ge}$ is the number of months that Resource *g* had been in service as of time *e* (0 if generator *g* was not in service as of time *e*; 12 if Resource *g* was in service from months m-14 through month m-3); and

$$CF_{gbe} = \frac{NAG_{gbe}}{\sum_{m=B}^{E}\left(NDC_{gm}\left(PH_{gm} - POH_{gm} - MOH_{gm}\right)\right)};$$

where:

$CF_{gbe}$ is the Capacity Factor for Resource *g* for the period beginning at time *b* and ending at time *e*;

$NAG_{gbe}$ is the Net Actual Generation for Resource *g* for the period beginning at time *b* and ending at time *e*. The data is the GADS Data submitted in accordance with Attachment K, Performance Record 01, columns 39-45;

$NDC_{gm}$ is the Net Dependable Capacity for Resource *g* for month *m*. The data is the GADS Data submitted in accordance with Attachment K, Performance Record 01, columns 35-38;

$PH_{gm}$ is the Period Hours reported for Resource *g* for month *m*. The data is the GADS Data submitted in accordance with Attachment K, Performance Record 02, columns 56-59;

$POH_{gm}$ is the Planned Outage Hours reported for Resource *g* for month *m*. The data is from the GADS Data submitted in accordance with Attachment K, Performance Record 02, columns 36-39;

$MOH_{gm}$ is the Maintenance Outage Hours reported for Resource *g* for month *m*. The data is from the GADS Data submitted in accordance with Attachment K, Performance Record 02, columns 44-47;

$CCF_g$ is the class-equivalent Capacity Factor for suppliers of the same class as supplier *g* based on NERC class averages for similar Resources. Where no similar Resource exists, the NYISO will estimate a value based on its best judgment if a mutually acceptable value cannot be agreed on;

*b* is the beginning of the month occurring 14 months before month *m*, unless the supplier had not gone into service at that time, in which case *b* is the time at which that supplier went into service;

*e* is the end of the month occurring three months before month *m*, (e.g., if month *m* is September 2001, then *e* is the end of June 2001);

*B* is the month containing time *b*; and

*E* is the month containing time *e*.

**(b) Determining the ICE of the Amount of UCAP Supplied**

$$ICE_{gm} = \frac{UCAP^{P}_{gm}}{1 - OF_{gm}}$$

where:

$ICE_{gm}$ is the Installed Capacity Equivalent of the amount of Unforced Capacity that supplier *g* supplies in month *m*;

$UCAP^{P}_{gm}$ is the amount of Unforced Capacity that supplier *g* supplies in month *m*; and

$OF_{gm}$, as above, is the Outage Factor for Resource *g* that will be used to determine the amount of Unforced Capacity that Resource will be permitted to provide in month *m*.

## 3.3 UCAP based on Load/Demand Reduction applicable to Special Case Resources

The amount of UCAP that can be provided by a Special Case Resource that provides capacity wholly or partially by means of non-generator based load reduction shall be calculated using the equations specified in subsection (a). The amount of UCAP that can be provided by a Special Case Resource that provides capacity solely by means of load reductions achieved through operation of one or more generators may be calculated using the equations specified in either subsection (a) or subsection (b). The Installed Capacity Equivalent of Special Case Resources shall be as specified in subsection (c).

**(a) Determining the Amount of UCAP for a Non-Generator Based Special Case Resource**

$$\mathrm{UCAP}^{Q}_{\mathrm{gm}} = (\mathrm{APMD}_{\mathrm{gm}} - \mathrm{CMD}_{\mathrm{gm}}) \times \frac{\sum_{h \in LRH_{gbe}} \min\left(\frac{APMD_{gh} - AMD_{gh}}{APMD_{gh} - CMD_{gh}}, 1\right)}{NLRH_{gbe}} \times \left(1 + TLF_{g}\right)$$

where:

$UCAP^{Q}_{gm}$ is the Unforced Capacity that Resource *g* is qualified to provide in month *m*;

$APMD_{gm}$ is the Average of Peak Monthly Demands for Resource *g* applicable to month *m*, using data submitted in accordance with Attachment K, Special Case Resource Certification; if month *m* is in the Summer Capability Period, the Average of Peak Monthly Demands is calculated using the peak monthly demands for that supplier for the most recent consecutive months of June, July, August and September that had occurred as of the beginning of month *m* (e.g., if month *m* is August 2001, then the peak monthly demands to be counted would be for the months of June, July, August and September of 2000); and if month *m* is in the Winter Capability Period, the Average of Peak Monthly Demands is calculated using the peak monthly demands for that supplier for the most recent consecutive months of December, January, February and March that had occurred as of the beginning of month *m*;

$CMD_{gm}$ is the Contract Minimum Demand for Resource *g* applicable to month *m*, using data submitted in accordance with Attachment K, Special Case Resource Certification;

$LRH_{gbe}$ is the set of hours (each an hour *h*) in the period beginning at time *b* and ending at time *e* in which Resource *g* was requested to reduce load;

$APMD_{gh}$ is the applicable Average of Peak Monthly Demands for Resource *g* applicable to hour *h*, using data submitted in accordance with Attachment K, Special Case Resource Certification; if hour *h* is in the Summer Capability Period, the Average of Peak Monthly Demands is calculated using the peak monthly demands for that supplier for the most recent consecutive months of June, July, August and September that had occurred as of time *e*; and if hour *h* is in the Winter Capability Period, the Average of Peak Monthly Demands is calculated using the peak monthly demands for that supplier for the most recent consecutive months of December, January, February and March that had occurred as of time *e*;

$AMD_{gh}$ is the Average Minimum Demand for Resource *g* for hour *h*, using data submitted in accordance with Attachment K, Figure 2, Special Case Resource Minimum Load Demonstration;

$CMD_{gh}$ is the Contract Minimum Demand for Resource *g* applicable to hour *h*, using data submitted in accordance with Attachment K, Special Case Resource Certification;

$NLRH_{gbe}$ is the number of hours during the period beginning at time *b* and ending at time *e* in which Resource *g* was requested to reduce load (including any hour in which Resource *g* was requested to reduce load by the ISO as part of a test);

*b* is the beginning of the month occurring 14 months before month *m*, unless Resource *g* had not begun at that time to serve as a Special Case Resource available to reduce load, in which case *b* is the earlier of time *e* or the time at which Resource *g* began to serve as a Special Case Resource available to reduce load;

*e* is the end of the month occurring three months before month *m* (e.g., if month *m* is September 2001, then *e* is the end of June 2001); and

$TLF_g$ is the applicable transmission loss factor for Resource *g,* expressed in decimal form (i.e. a loss factor of 8% is equal to .08). The applicable transmission loss factor shall be the loss factor for deliveries of Energy by the relevant TO to the retail customer where the Resource *g* is located as reflected in the TO's most recent rate case.

If $NLRH_{gbe} = 0$, then the calculation of $UCAP^{Q}_{gm}$ shall be performed as though the value of $\frac{\sum_{h \in LRHgbe} \min\left(\frac{APMD_{gh} - AMD_{gh}}{APMD_{gh} - CMD_{gh}}, 1\right)}{NLRH_{gbe}}$ in the equation above were 1; provided, however, that if Resource *g* had not begun to serve as a Special Case Resource at time *e,* then the value of $\frac{\sum_{h \in LRHgbe} \min\left(\frac{APMD_{gh} - AMD_{gh}}{APMD_{gh} - CMD_{gh}}, 1\right)}{NLRH_{gbe}}$ in the equation above shall be set equal to an average historical performance factor calculated by the ISO for all Special Case Resources. Until such a calculation is performed and posted by the ISO, this factor shall equal 1.

**(b) Determining the Amount of UCAP for a Generator-Based Special Case Resource**

$$\text{UCAP}^{\text{Q}}_{\text{gm}} = \text{DMNC}_{\text{gm}} \text{ X } \frac{\sum_{h \in LRHgbe} \min\left(\frac{AGO_{gh}}{CGO_{gh}}, 1\right)}{NLRH_{gbe}} \text{ X } \left(1 + TLF_{g}\right)$$

where:

$UCAP^{Q}_{gm}$ is the Unforced Capacity that Resource *g* is qualified to provide in month *m*;

$DMNC_{gm}$ is the total of DMNC ratings for all generators used to reduce load at Resource *g* which are applicable for month *m*, which shall be the most recent Summer DMNC ratings for the generators calculated in accordance with ISO procedures if month *m* is part of a Summer Capability Period, or the most recent Winter DMNC ratings for the generators calculated in accordance with ISO procedures if month *m* is part of a Winter Capability Period, as of the close of business on the last business day preceding the Monthly Installed Capacity Auction that is conducted during the month preceding month *m*.

$LRH_{gbe}$ is the set of hours (each an hour *h*) in the period beginning at time *b* and ending at time *e* in which Resource *g* was requested to reduce load;

$NLRH_{gbe}$ is the number of hours during the period beginning at time *b* and ending at time

*e* in which Resource *g* was requested to operate in order to offset system load (including any hour in which Resource *g* was requested to operate by the ISO as part of a test);

$AGO_{gh}$ is the average output of the generator(s) located at Resource *g* during an hour *h* using data submitted in accordance with Attachment K, Figure 2, Special Case Resource Generator Output Performance;

$CGO_{gh}$ is the Contracted Generator Output for the generator(s) located at Resource *g* applicable to an hour *h*, using data submitted in accordance with Attachment K, Special Case Resource Certification;

*b* is the beginning of the month occurring 14 months before month *m*, unless Resource *g* had not begun at that time to serve as a Special Case Resource available to reduce load, in which case *b* is the earlier of time *e* or the time at which Resource *g* began to serve as a Special Case Resource available to reduce load;

*e* is the end of the month occurring three months before month *m* (e.g., if month *m* is September 2001, then *e* is the end of June 2001; and

$TLF_g$ is the applicable transmission loss factor for Resource *g,* expressed in decimal form (i.e. a loss factor of 8% is equal to .08). The applicable transmission loss factor shall be the loss factor for deliveries of Energy by the relevant TO to the retail customer where the Resource *g* is located as reflected in the TO's most recent rate case.

If $NLRH_{gbe} = 0$, then the calculation of $UCAP^{Q}_{gm}$ shall be performed as though the value of $\frac{\sum_{h \in LRHgbe} \min\left(\frac{AGO_{gh}}{CGO_{gh}}, 1\right)}{NLRH_{gbe}}$ in the equation above were 1; provided, however, that if Resource g had not begin to serve as a Special Case Resource at time *e,* then the value of $\frac{\sum_{h \in LRHgbe} \min\left(\frac{AGO_{gh}}{CGO_{gh}}, 1\right)}{NLRH_{gbe}}$ in the equation above shall be set equal to an average historical performance factor calculated by the ISO for all Special Case Resources. Until such a calculation is performed and posted by the ISO, this factor shall equal 1.

**(c) Determining the ICE of the Amount of UCAP Supplied**

**(1) ICE for a Non-Generator Based Special Case Resource**

The ICE of a Special Case Resource *g* that provides capacity wholly or partially by means of non-generator based load reduction shall be calculated as follows:

$ICE_{gm} = APMD_{gm} - CMD_{gm}$

where:

$ICE_{gm}$ is the Installed Capacity Equivalent of the amount of Unforced Capacity that Resource *g* supplies in month *m*;

$APMD_{gm}$ is the Average of Peak Monthly Demands for Resource *g* applicable to month*m*, using data submitted in accordance with Attachment K, Special Case Resource Certification, as calculated in subsection (a) above; and

$CMD_{gm}$ is the Contract Minimum Demand for Resource *g* applicable to month *m*, using data submitted in accordance with Attachment K, Special Case Resource Certification.

**(2) ICE for a Generator Based Special Case Resource**

The ICE of a Special Case Resource that provides capacity solely by means of load reductions achieved through operation of one or more generators shall be as follows:

$$ICE_{gm} = CGO_{gm}$$

where:

$ICE_{gm}$ is the Installed Capacity Equivalent of the amount of Unforced Capacity that Resource *g* supplies in month *m*; and

$CGO_{gm}$ is the Contracted Generator Output for the generator(s) located at Resource *g* applicable for month *m*, using data submitted in accordance with Attachment K, Special Case Resource Certification.

## 3.4 Calculation of UCAP for Control Area System Resources

**(a) Determining the Amount of UCAP a Supplier Qualifies to Supply**

$$UCAP^{Q}_{cm} = NPC_{cm} \times (1 - CAF_{cm})$$

where:

$UCAP^{Q}_{cm}$ is the Unforced Capacity that the Control Area System Resource located in the Control Area *c* is qualified to supply in the NYCA during month *m*;

$NPC_{cm}$ is the Net Projected Capacity calculated pursuant to the formula set forth in Section 4.10.3 of this Manual, repeated below for clarity:

$$NPC_{cm} = CAP_{cm} + EP_{cm} + LM_{cm} - PL_{cm} - ES_{cm} - LS_{cm} - PM_{cm} - PR_{cm};$$

and

$CAF_{cm}$ is the derating factor applicable to the Control Area System Resource providing Installed Capacity from Control Area *c* for month *m,* representing the average proportion of its Installed Capacity Equivalent that that Control Area System Resource was able to provide during months *m-14* through and including *m-3*, calculated as follows:

$$CAF_{cm} = \frac{\sum_{i=b}^{e} \max\left(0,\ ICE_{ci} - (CAP_{ci} + EP_{ci} + LM_{ci} - L_{ci} - ES_{ci} - LS_{ci} - PM_{ci} - FO_{ci} - OR_{ci})\right)}{\sum_{m=B}^{E} ICE_{cm} TH_{m}}$$

where:

*i* is an hour in which the Control Area System Resource provided Installed Capacity to the NYCA*;*

*b* is the beginning of the month 14 months before month *m,* or the time at which Capacity began to be provided from Control Area *c* under the terms of this section, if later;

*e* is the end of the month 3 months before month *m;*

$ICE_{ci}$ is the Installed Capacity equivalent of the amount of Unforced Capacity supplied from a Control Area System Resource providing Installed Capacity from Control Area *c* during the month containing hour *i*;

$CAP_{ci}$ is the actual maximum total generating Capacity in hour *i* in Control Area *c*;

$EP_{ci}$ is the actual External firm Capacity purchases in hour *i* by Control Area *c*, other than purchases from Resources in the NYCA;

$LM_{ci}$ is the actual amount of load management (*i.e.,* interruptible load) in hour *i* in Control Area *c*;

$L_{ci}$ is the Load in hour *i* for Control Area *c*, including system losses;

$ES_{ci}$ is the actual External firm Capacity sales in hour *i* by Control Area *c*, other than firm capacity sales to NYCA;

$LS_{ci}$ is the actual losses, up to the border of the NYCA, that would have been incurred in hour *i* on transactions corresponding to sales of Unforced Capacity by that Control Area System Resource outside the Control Area;

$PM_{ci}$ is the amount of generating Capacity in Control Area *c* that was actually unavailable in hour *i* due to planned maintenance;

$FO_{ci}$ is the amount of generating Capacity in Control Area *c* that was actually unavailable in hour *i* due to forced outages;

$OR_{ci}$ is the amount of operating reserve that was actually available for Control Area *c* in hour *i*;

*E* is the month containing e;

*B* is the month containing *b;*

$ICE_{cm}$ is the Installed Capacity Equivalent of the amount of Unforced Capacity provided from a Control Area Resource associated with Control Area *c* during month *m*, and

$TH_m$ is the total number of hours in month *m* in which the Control Area System Resource provided Installed Capacity to the NYCA.

**(b) Determining the ICE of the Amount of UCAP Supplied**

$ICE_{cm} = UCAP^{P}_{cm} / (1 - CAF_{cm})$,

where:

$ICE_{cm}$ is the Installed Capacity equivalent of the amount of Unforced Capacity supplied from Control Area *c* in month *m*;

$UCAP^{P}_{cm}$ is the amount of Unforced Capacity supplied from Control Area *c* in month *m*; and

$CAF_{cm}$ is the Capacity Adjustment Factor for Control Area *c* for month *m*, as calculated above.

# Attachment K:

## Reportable Operating Data

### NERC-GADS Data Reporting Requirements

**Forced Outage**

An unplanned failure that requires a unit to be removed from service, or the Load on the unit to be reduced before the end of the nearest following Weekend.

**Maintenance Outage**

A scheduled outage or derating that can be deferred beyond the end of the nearest following Weekend but that requires the unit to be removed from service or the Load reduced before the next Planned Outage.

Note: Any Resource that notifies the ISO that it can defer its outage beyond the end of the next following Weekend, but requests a maintenance outage before the end of the next following Weekend, will have its maintenance outage request granted by the ISO unless the ISO has specific reliability concerns that require the ISO to deny such a request.

**Weekend**

The period of time that begins every Friday at 10:01:00 PM and ends the following Monday at 8:00:59 AM.

NERC-GADS data or data equivalent to GADS Data for each Generator is to be provided to the ISO by the 20th of the month following the month for which the data applies.

See Section 4.4 of this Manual for the general Operating Data reporting requirements and the following pages for detailed Operating Data Reporting Requirements.

The input formats for NERC-GADS data can also be found on the NERC web-site at:

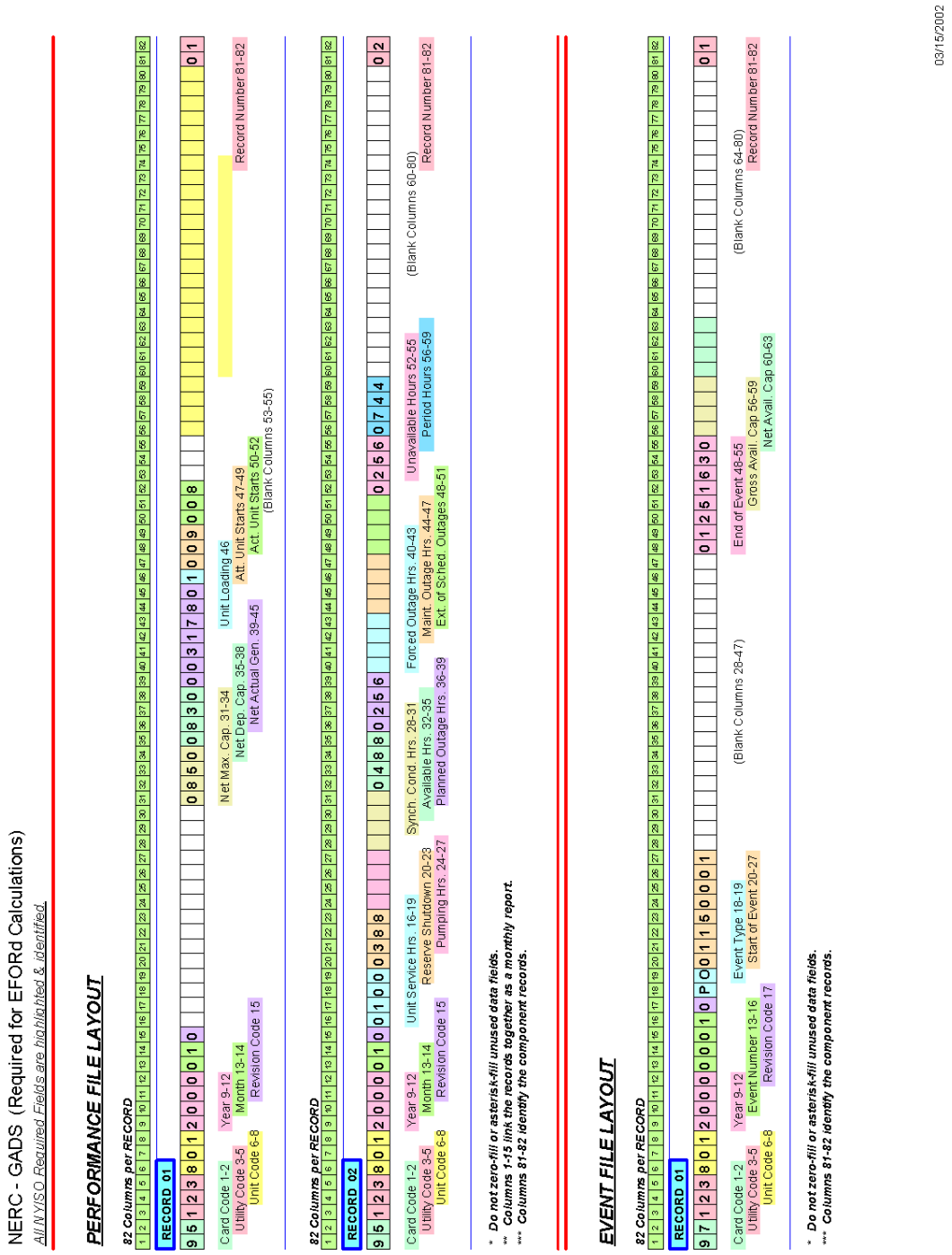
www.nerc.com

Find **GADS Services** in the **GO** link. The reporting manuals are also located there. The NERC-GADS data follows an 82 character fixed format as defined in the NERC GADS manuals.

The form on the following page delineates the Performance File and Event File data layouts. The data must be submitted electronically to the ISO (gads_data@nyiso.com) in standard ASCII Text File format.

The pages following the Performance File and Event File data layouts further define GADS Data or data equivalent to GADS Data. All data will be used for internal ISO reliability studies and for calculating Unforced Capacity ("UCAP") values.

In general, generating Resources with nameplate capacities greater than 10 MW or plants whose total capacity exceeds 25 MW are expected to submit the full GADS dataset. Those Resources will have a UCAP value based on $EFOR_D$. Resources submitting equivalent GADS Data will have a UCAP value based on actual production (or Capacity factor). All UCAP calculations are defined and described in Attachment J.


NERC - GADS (Required for EFORd Calculations)
All NYISO Required Fields are highlighted & identified
PERFORMANCE FILE LAYOUT
82 Columns per RECORD
RECORD 01
Card Code 1-2
Utility Code 3-5
Unit Code 6-8
Year 9-12
Month 13-14
Revision Code 15
Net Max. Cap. 31-34
Net Dep. Cap. 35-38
Net Actual Gen. 39-45
Unit Loading 46
Att. Unit Starts 47-49
Act. Unit Starts 50-52
(Blank Columns 53-55)
Record Number 81-82
RECORD 02
Unit Service Hrs. 16-19
Reserve Shutdown 20-23
Pumping Hrs. 24-27
Synch. Cond. Hrs. 28-31
Available Hrs. 32-35
Planned Outage Hrs. 36-39
Forced Outage Hrs. 40-43
Maint. Outage Hrs. 44-47
Ext. of Sched. Outages 48-51
Unavailable Hours 52-55
Period Hours 56-59
(Blank Columns 60-80)
* Do not zero-fill or asterisk-fill unused data fields.
** Columns 1-15 link the records together as a monthly report.
*** Columns 81-82 identify the component records.
EVENT FILE LAYOUT
82 Columns per RECORD
RECORD 01
Card Code 1-2
Utility Code 3-5
Unit Code 6-8
Year 9-12
Event Number 13-16
Revision Code 17
Event Type 18-19
Start of Event 20-27
(Blank Columns 28-47)
End of Event 48-55
Gross Avail. Cap 56-59
Net Avail. Cap 60-63
(Blank Columns 64-80)
Record Number 81-82
* Do not zero-fill or asterisk-fill unused data fields.
*** Columns 81-82 identify the component records.
03/15/2002

## Required Fields for NYISO GADS Data

| | Performance Record ( 01 ) Columns | Performance Record ( 02 ) Columns | Event Record ( 01 ) Columns |
|---|---|---|---|
| Card Code | 1-2 | 1-2 | 1-2 |
| Utility Code | 3-5 | 3-5 | 3-5 |
| Unit Code | 6-8 | 6-8 | 6-8 |
| Year | 9-12 | 9-12 | 9-12 |
| Revision Code | 15 | 15 | 17 |
| Record Number | 81-82 | 81-82 | 81-82 |
| *(Performance Only)* | | | |
| Month | 13-14 | 13-14 | |
| Net Max. Capacity | 31-34 | | |
| Net Dependable Capacity | 35-38 | | |
| Net Actual Generation | 39-45 | | |
| Unit Loading | 46 | | |
| Attempted Unit Starts | 47-49 | | |
| Actual Unit Starts | 50-52 | | |
| Service Hours | | 16-19 | |
| Reserve Shutdown Hours | | 20-23 | |
| Pumping Hours | | 24-27 | |
| Synch. Condensing Hours | | 28-31 | |
| Available Hours | | 32-35 | |
| Planned Outage | | 36-39 | |
| Forced Outage | | 40-43 | |
| Maintenance Outage | | 44-47 | |
| Ext. of Sched. Outages | | 48-51 | |
| Unavailable Hours | | 52-55 | |
| Period Hours | | 56-59 | |
| *(Event Only)* | | | |
| Event Number | | | 13-16 |
| Event Type | | | 18-19 |
| Start Date/Time | | | 20-27 |
| End Date/Time | | | 48-55 |
| Net Available Capacity | | | 60-63 |

**ISO NERC-GADS Reporting Requirements**

Data marked with an * is the minimum dataset for data equivalent to GADS Data and will result in UCAP based on actual production, with allowance for scheduled outages. The full dataset will result in UCAP based on $EFOR_D$. See Attachment J for the actual calculation methodology.

**Performance Data**

Card 01

| | |
|---|---|
| *Card Code | Required |
| *Utility Code | Required if known, |
| *Unit Code | Required if known, |
| *Year | Required |
| *Report Period (Month) | Required |
| *Record Revision Code | Required |
| Gross Maximum Capacity | - |
| Gross Dependable Capacity | - |
| Gross (MWhr) Actual Generation | - |
| *Net Maximum Capacity | Required |
| *Net Dependable Capacity | Required |
| *Net (MWhr) Actual Generation | Required |
| Typical Unit Loading Characteristics | Required |
| Attempted Unit Starts | Required |
| Actual Unit Starts | Required |
| *Record Number | Required |

Card 02

| | |
|---|---|
| *Card Code | Required |
| *Utility Code | Required if known, |
| Unit Code | Required if known, |
| *Year | Required |
| *Report Period (Month) | Required |
| *Record Revision Code | Required |
| *Unit Service Hours (SH) | Required |
| *Reserve Shutdown Hours (RH) | Required |
| *Pumping Hours (if applicable) | Required |
| *Synchronous Condensing Hours (if applicable) | Required |
| *Available Hours (AH) | Required |
| *Planned Outage Hours (POH) | Required |

| | |
|---|---|
| Forced Outage Hours & Startup Failure Hours | Required |
| *Maintenance Outage Hours (MOH) | Required |
| *Extension of Scheduled Outage Hours (SEH) | Required |
| Unavailable Hours (UH) | Required |
| *Period Hours | Required |
| *Record Number | Required |

Card 03 — Not Required

Card 04 — Not Required

**Event Report Data**

Card 01

| | |
|---|---|
| Card Code | Required |
| Utility Code | Required if known, |
| Unit Code | Required if known, |
| Year | Required |
| Event Number | Required |
| Record Revision Code | Required |
| Event Type | Required |
| Start of Event | Required |
| End of Event | Required |
| Gross Available Capacity as Result of Event | - |
| Net Available Capacity as Result of Event | Required |
| Record Number | Required |

Cards 02 –99 Provide data on system component events — Not Required

# Special Case Resource (SCR) Commitment/Verification

SCR End-Use Customer: _____

Address: _____

_____

LBMP Zone: _____

Check one: NYC_____LI_____ROS_____

Transmission Owner _____ Service Voltage_____

Meter Number/Account: _____

Permanent Recording Meter on Generator/Curtailable Load: YES / NO ID#_____

Method of Load Curtailment (check where appropriate):

On-Site Generator:_____ Curtailable Load:_____Combination: _____

Generator Type: Diesel_____ Gas_____ Oil_____ Other _____

If other, describe: _____

Generator Nameplate Rating: _____

The Special Case Resource Customer is in compliance with any New York State Department of Environmental Conservation regulations that are applicable to it.: YES / NO

Disclaimer: It is the responsibility of the Customer to comply with all local, state and federal air emissions regulations. Questions concerning compliance should be forwarded to the respective regulating authority.

Method of Calculating Load Curtailment (check one)

Customer Load Reduction under Section 3.3(a) of Attachment J: _____

Generator Output under Section 3.3(b) of Attachment J: _____

**Responsible Interface Party Information**

Type of RIP (circle one): TO LSE Aggregator Direct Customer

Name of RIP: _____

Contact: _____

Address: _____

_____

Phone (1 hour e-mail response required): _____

Fax: _____

E-mail (1-hour e-mail response required): _____

# Steps:

1. SCRs calculating load reduction based on generator output under Section 3.3.(b) of Attachment J shall submit the appropriate DMNC test form with this commitment and skip to Step 7. All others shall continue with the steps below.

2. Record the SCR End-use Customer maximum monthly one hour integrated demand for the two most recent Capability Periods (Figure 1).

**Figure 1**
**Actual Maximum Monthly One-Hour Integrated Demand**

| Year_____ | June | July | August | September | Summer Average |
|---|---|---|---|---|---|
| Date/Time | | | | | N/A |
| Demand (MW) | | | | | |

| Years_____ | December | January | February | March | Winter Average |
|---|---|---|---|---|---|
| Date/Time | | | | | N/A |
| Demand (MW) | | | | | |

3. Capability Period for which commitment is requested (circle one):

   Summer Winter

4. Determine the average peak monthly demand ($APMD_{gm}$) for the last like Capability Period selected in step 3: _____

5. Level of demand to which customer commits during SCR implementation (Customer Minimum Demand ($CMD_{gm}$)): _____

6. Determine the amount of Load customer is willing to reduce its demand by during SCR implementation ($APMD_{gm} - CMD_{gm}$ = Installed Capacity Equivalent ($ICE_{gm}$)): _____

7. For SCRs using Section 3.3(b) of Attachment J **only**, generator output to which SCR commits during SCR implementation (Contracted Generator Output ($CGO_{gm}$) = $ICE_{gm}$) _____ and Capability Period for which commitment is requested (circle one):

   Summer Winter

8. Transmission Loss Adjustment: _____ kW

9. Sum of $ICE_{gm}$ and Transmission Loss Adjustment amount: _____ kW*

10. Dates SCR may be called upon to curtail Load:
    Starting: Ending (if applicable): _____

* The entry on this line will be adjusted by the ISO in accordance with a historic performance factor as specified in Section 3.3 of Attachment J to determine the UCAP for the Resource in question (i.e., to determine the amount that can be claimed by an LSE towards its Unforced Capacity Requirement or that can be sold in an ISO administered auction).

11. Report actual Load/generator output from meter readings covering the time period of the SCR implementation request (Figure 2) by the 20th of the month following the month in which the request occurs.

IN WITNESS WHEREOF. this Unforced Capacity commitment has been submitted on this, the _____ day of _____, 20_____.

Name of Certifying Entity: _____

By: _____

Title: _____

**Figure 2**
**Minimum Load/Generator Output Verification**
**Demonstrated Load Reduction During Special Case Resource Implementation**
**(Operating Data as required by Section 4.4 of the Installed Capacity Manual)**
**One completed form required for each event**

| Event # | | |
|---|---|---|
| Requested Start Date/Time | | |
| Requested End Date/Time | | |
| Date/Time* | Meter Reading | Cumulative Energy |
| | | |
| | | |
| | | |
| | | |
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| | | |
| | | |
| | | |

IN WITNESS WHEREOF. this Unforced Capacity Verification has been submitted on this, the ___ day of _____, 20_____.

Name of Certifying Entity: _____

By: _____

Title: _____

* Entries shall be made according to the increments measured by the interval meter in question (e.g., In the case of an interval meter that measures on a 15 minute basis, four entries shall be made for each hour of SCR implementation).

# Attachment A

## Revisions in Transmission Owner Installed Capacity Data Submittals

This Attachment establishes the process and procedures associated with the reporting of LSE Load data to the ISO by the Transmission Owners. It discusses how this data is used to calculate LSE's Minimum Unforced Capacity Requirements each month and the financial reconciliation associated with customer-switching among LSEs.

## Details:

Transmission Owners are required to provide two data submittals each month documenting LSE customer-switching and Load obligations. The first submittal is used for an initial financial reconciliation of customer-switching in the current month and for establishing an LSE's Installed Capacity obligation as of the first of the following month. The second data submittal will be used for a final financial reconciliation of Load-shifts in a designated previous month. Additional customer-switching adjustments requiring a financial reconciliation will be handled on a case-by-case basis.

## Data Submittal One

In the first data submittal, Transmission Owners will provide (1) the daily shifts in Load obligations for each Load-serving entity (LSE) occurring in the current month and (2) the Load obligation of LSEs for the first day of the following month. This submittal should contain the best available information at the time of the data submittal. For example, Transmission Owner A would submit customer-switching data for August in early August as well as the final Load obligation for September 1. See the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website for the data submittal schedule.

The ISO will use this data for two purposes:

(1) To set each LSE's Minimum Unforced Capacity Requirement and Locational Unforced Capacity Requirement for the following month (and any remaining months in the Capability Period).

(2) To perform an initial financial reconciliation of Load-shifts occurring in the course of the current month. That is, an initial reconciliation would be conducted for August customer-switching based on data received in the month of August.

This reconciliation would credit customer-losing and bill Load-gaining LSEs based on the clearing price for the current month's Unforced Capacity in the prior month's Installed Capacity auction.

> **Example A**: 10 MW of Load-shifts from LSE A to LSE B on June 5th. First, this 10 MW of Load is equivalent to 11 MW of Unforced Capacity shifting based on a reserve requirement of 10%. LSE A then is credited for 9.166 (11 MW * 25 days / 30) MWs (weighted average) of Unforced Capacity; LSE B is billed for 9.166 MWs of Unforced Capacity. A Market-Clearing Price for June Unforced Capacity in the May auction of $3.00 per kW-month translates into $3,000.00 per MW-month ($3.00/kW-month * 1,000). Therefore, LSE A is credited $27,500 ($3.00/kW-month * 1000 kW * 9.166 MWs); LSE B is billed $27,500 ($3.00 /kW-month * 1000 kW * 9.166 MWs).

This initial financial reconciliation can also be used by the ISO to address those cases in which an LSE's Load obligation for the current month was set too high or too low causing the LSE to have purchased too much or too little Unforced Capacity for the entire month. In these cases, an LSE would be billed or credited for an entire month of Unforced Capacity.

> **Example B**: Based on the best available data at the time, Transmission Owner A submits a report in early May indicating that LSE A will be serving 110 MW of Load on June 1; and that LSE B will be serving 90 MW of Load on June 1. However, due to the uncertainties of Retail Access, Data Submittal One for June indicates that LSE A actually served 100 MW on June 1, or 10 MW less than projected. Similarly, Data Submittal One for June indicated that LSE B actually served 100 MW on June 1, or 10 MW more than projected. Recall that this 10 MW of Load is equivalent to 11 MW in Unforced Capacity. Using the market clearing price in the above example ($3.00/kW-month), LSE A would be credited $33,000 $3.00/kW-month * 1000 kW * 11 MW * 30 days); LSE B would be billed the same $33,000.

# Data Submittal Two

In the second data submittal, Transmission Owners will provide for a designated prior month (1) the actual Load obligation of each LSE for the first day of the designated month and (2) the daily shifts in Load obligations for each LSE documented to have actually occurred. For example, Transmission Owner A would submit in late August actual customer-switching data for May and the actual Load obligation for May 1. These "true-up" transactions would then be included in the September Unforced Capacity billing. See the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website for data submittal dates.

This data will be used to true-up the customer-switching adjustments that were made based on the initial customer-switching provided in Data Submittal One. Any credits or

bills would then be net of the prior bills and credits calculated based on the customer-switching reported in Data Submittal One.

> **Example C**: In Example A, it is reported in Data Submittal One for the month of June (based on the best available data at the time) that on June 5th a 10 MW Load (equivalent to 11 MW of Unforced Capacity) is scheduled to shift from LSE A to LSE B. This shift results in LSE A being credited $27,500 and LSE B being billed $27,500.
>
> However, in Data Submittal Two, the Transmission Owner reports that this 10 MW Load (11 MW of Unforced Capacity) actually shifted from LSE A to LSE C - not LSE B. In this case, LSE A would not be affected (since it had already been credited for the $27,500 it was due); LSE B would now be credited $27,500 since it had been initially billed this amount for a Load-shift which did not occur; LSE C would now be billed the $27,500 since in retrospect it had actually assumed the 10 MW Load (11 MW of Unforced Capacity) obligation.

# Standardization of Customer Switching Documentation

Transmission Owners will be required to provide electronic data submittals in the format below that will also be available on the ISO Web Site. A PDF version of the required format can be found below. The data submittal will consist of an Excel workbook containing a separate worksheet for each LSE's data. Transmission Owners should complete the worksheets for each Load-serving entity, adding sheets as necessary. Transmission Owners will be required to provide each LSE a copy of the pertinent Excel worksheet.

Schedule

See the applicable Capability Period on the Installed Capacity (ICAP) Market page of the NYISO website.