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# nyiso Installed Capacity Manual

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# Installed Capacity Manual

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# 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 that was filed at FERC on February 1, 2000, and amended thereafter by subsequent filings with the FERC. FERC accepted the February 1, 2000 filing on March 29, 2000 in Order ER00-1483-000. Sections 5.9 through 5.16 were continued through the 2001 Summer Capability Period, pursuant to the ISO's February 9, 2001 filing approved by FERC on March 28, 2001.

Starting with the 2001-2002 Winter Capability Period, the ISO will implement a revised Installed Capacity market design in the NYCA. The framework of the revised market design is similar to the "transitional market design" in place in New York State since the 2000 Summer Capability Period. In two respects, however, it differs from the transitional market design significantly. First, the length of the Obligation Procurement Period under the revised market design will be reduced from six (6) months to one (1) month. LSEs will have to procure sufficient Capacity on a monthly basis. Similarly, Installed Capacity Suppliers will be rated on a monthly basis and allowed to qualify new Capacity at any time. Installed Capacity Suppliers and LSEs remain free to buy and sell Unforced Capacity for periods longer than a month, and the ISO will continue to administer Capability Period (strip) Auctions.

Second, the ISO will use an Unforced Capacity methodology starting November 2001 to determine the amount of Capacity that each Resource is qualified to supply to the NYCA, and to determine the Capacity requirements of LSEs. The Unforced Capacity methodology estimates the probability that a Resource is 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 Installed Capacity Requirement, and which will be used to measure the portion of that NYCA 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 In-City LSEs will purchase to meet their "Locational Installed Capacity Requirements."

Every Capability Year, the ISO will translate the NYCA Installed Capacity Requirement into a NYCA Unforced Capacity Requirement (*see* sections 2.5 and 3.2 of this Manual). From the NYCA Unforced Capacity Requirement, the ISO will then calculate and establish each LSE's "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 4.5.1 of this Manual). Thus, Market Participants will transact Unforced Capacity in Installed Capacity auctions and Bilateral Transactions starting with the 2001-2002 Winter Capability Period.

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 Installed Capacity Requirement, Locational Installed Capacity Requirements within the NYCA, and limitations on Unforced Capacity from External Control Areas; and
- The NYCA Unforced Capacity Requirement.

The ISO Services Tariff references for this section of the Manual are Sections 5.10 and 5.11.

### 2.1 Overview

- The New York State Reliability Council ("NYSRC") sets the Installed Reserve Margin and the ISO determines the NYCA Installed Capacity Requirement in accordance with the criteria and standards of the Northeast Power Coordinating Council ("NPCC") and the New York Public Service Commission ("PSC").
- The ISO converts the NYCA Installed Capacity Requirement into a NYCA Unforced Capacity Requirement.
- The ISO determines Locational Installed Capacity Requirements and converts them into Unforced Capacity terms. Initially these were determined in accordance with the retail access agreements or the corporate restructuring agreements of New York's utilities serving Load in these areas.
- The ISO assigns Unforced Capacity Requirements, including Locational Installed 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 regularly scheduled Installed Capacity auctions before and during each Capability Period.
- LSEs procure adequate Unforced Capacity from Installed Capacity Suppliers, either bilaterally or through ISO-administered auctions, to meet their requirements.
- 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 and has the authority to impose sanctions on, or submit deficiency bids on behalf of, any entity that fails to comply with these rules and procedures.

## 2.2 Timeline

A detailed timeline for the current and the upcoming Capability Period is appended to this Manual as Attachment A. 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 the current and the following Capability Year are found in Attachment A.

## 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”). Resource adequacy exists in New York State when the probability of disconnecting firm Load due to a Resource deficiency (Loss of Load Expectancy, or “LOLE”) will 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 Installed Capacity Requirement

The ISO calculates the NYCA 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 Unforced Capacity Requirement

The ISO calculates the NYCA Unforced Capacity Requirement by multiplying the NYCA Installed Capacity Requirement by the quantity one (1) minus the average forced outage rate for the NYCA based on the data used to determine the Installed Reserve Margin by the NYSRC.

## 2.6 Locational 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 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 Installed Capacity Requirements are imposed. These are the New York City and the Long Island zones. The Locational Installed Capacity Requirements applicable to these zones were established by rulings of the PSC and the Long Island Power Authority.

Starting with the 2001-2002 Winter Capability Period, the ISO converts the Locational Installed Capacity Requirements of LSEs into Locational Unforced Capacity Requirements by multiplying such Locational Installed Capacity Requirements by the quantity one (1) minus the average forced outage rate for the relevant Locality based on the data used to determine the Installed Reserve Margin by the NYSRC.

For the purpose of specifying Locational Installed Capacity Requirements, the remainder of the NYCA is grouped together as "All other NYCA Zones." Locational 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 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 Unforced Capacity Requirements of Load Serving Entities**

This section contains information and procedures related to:

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

The ISO Services Tariff references for this section of this Manual are Section 5.10 and 5.11.

### **3.1 The NYCA Installed Capacity Requirement**

The ISO calculates the NYCA 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 Unforced Capacity Requirement

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

## 3.3 Transmission District Unforced Capacity Requirements

The Unforced Capacity requirement for each Transmission District will be calculated as the product of the NYCA 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:

$UCR_t$  = Unforced Capacity requirement for a Transmission District  $t$ ;

$UCR_{NYCA}$  = Unforced Capacity requirement for the NYCA;

$OIPL_t$  = 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 Unforced Capacity Requirement for an Obligation Procurement Period

Every month, each LSE must procure sufficient Unforced Capacity to meet its Unforced Capacity requirement for the following Obligation Procurement Period. The ISO will calculate the Unforced Capacity requirement of each LSE in two steps prior to the first day of the Summer Capability Period. The ISO will first calculate an initial Unforced Capacity requirement

and provide it to each LSE in March for the following Capability Year, which reflects 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 May 1 Capability Year Unforced Capacity requirement. This second calculation, adjusted every month thereafter to reflect customer-switching, is binding with regard to the LSE's obligation to procure Unforced Capacity for each Obligation Procurement Period of that Capability Year.

The 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:

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

$UCR_t$  = 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 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 that they have obtained sufficient Unforced Capacity 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 in Attachment A.

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**

Each year (all dates are defined in Attachment A), Transmission Owners shall submit an initial forecast with supporting data, which will reflect verified customer-switching that occurred during the prior calendar year. In addition to the initial 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 Attachment



A). This data shall reflect verified customer-switching through December 31 of the previous year 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 Unforced Capacity requirement for each LSE. The ISO will provide each LSE with its preliminary Unforced Capacity requirement estimate. The ISO will notify each LSE of its final Unforced Capacity requirement for each year, which shall reflect documented customer-shifts as of April 1<sup>st</sup> that are scheduled to occur before May 1<sup>st</sup>. In the event of a dispute as of April 10<sup>th</sup> regarding a Transmission Owner's forecast, the ISO shall nevertheless establish each LSE's final Unforced Capacity requirement, subject to possible adjustments required from a resolution of the dispute.

The Transmission Owners will update the ISO and the affected LSEs every month concerning customer-switching. Each Transmission Owner will provide the updated aggregated LSE Loads to the ISO and each LSE serving Load in the Transmission District by the date provided in Attachment A of this Manual. The updated aggregated LSE Loads shall reflect all customer-switching reported to Transmission Owners as of the last day of the previous month and scheduled to occur by the last day of the current month.

Based on customer-switching, the ISO will make monthly adjustments to each LSE's Unforced Capacity requirement for the following month to reflect an individual LSE's gain and loss of Load. The adjustment will be made in such a way as to keep the total Unforced Capacity requirement for the Transmission District constant. Each update will reflect scheduled customer-switching through the end of that month based on customer-switching documented as of the end of the prior month.

See the Capability Period Timeline in Attachment A for details concerning the schedule of updates and notification requirements related to monthly customer-switching.

### **3.5.1 Assignment of Installed Capacity Obligation for a New Customer in a Transmission District**

A new customer will be 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 Installed 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 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 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 TD 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 Installed Capacity obligation. The 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 Installed Capacity obligation which is assumed by the LSE serving that new customer.
- In the absence of a direct assignment mechanism, the 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 Installed 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 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 Unforced Capacity requirement for the Transmission District remains constant.

If a dispute occurs concerning the assignment of Installed Capacity obligations related to new customers, it will be handled according to Section 3.5.4 of this Manual. If the direct assignment of the Installed Capacity obligation for a new customer takes place within the Obligation Procurement Period, the LSE with the new customer obligation shall be required to have sufficient Unforced Capacity to cover that assignment on a prospective basis for the duration of the Obligation Procurement Period on the first day of the month after the first monthly auction following the assignment.

### **3.5.2 Load Lost due to Departing Customers**

To account for Load lost when a customer leaves New York State, the ISO will:

- Reduce the Unforced Capacity requirement of the Load-losing LSE within the Transmission District.
- Relieve the LSE responsible for the Installed 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 counter-signed 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 Unforced Capacity requirements of all LSEs serving Load (including the Load-losing LSE) in the relevant Transmission District such that the total 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 Installed Capacity obligation of the departing customer, 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.

### **3.5.3 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.

- The customer-gaining LSE will financially cover the Unforced Capacity 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 next month after the next regular Monthly Auction, at which time the Unforced Capacity requirement of each LSE will reflect the switch.
- The ISO will use the monthly Installed Capacity billing cycle to bill the customer-gaining LSE, for the period referred to directly above, in the same month as the auction referred to directly above.
- The rate that will be used to calculate this financial exchange will be the monthly clearing price established at the most recent previous Monthly Auction, pro-rated on a daily basis. If the most recent previous Monthly Auction did not clear, the rate that will be used will be the clearing price of the Capability Period Auction divided by six to determine a monthly average clearing price, and then prorated on a daily basis for the number of days in the month.
- 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.

### 3.5.4 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 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 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 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 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 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.*

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

*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:*

$$\text{Adjusted } IC_{\text{NYPA}} = \sum (ICAF_{\text{plant}} * IC_{\text{plant}})$$

Where:

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

*$ICAF_{\text{plant}}$  = 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.*

*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 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 Sections 2.6 and 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.

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 certification. 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 certification 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 certification 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 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. This notification letter shall be in a form and substance substantially similar to the form included in Attachment D to this Manual. 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 certification 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 certification 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 certification 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 Attachment A).

## **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 Stations**

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 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**

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. 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 20<sup>th</sup> 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 20<sup>th</sup> 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 Winter-Peaking Control Area System Resources**

This section applies to Control Area System Resources that experience peak demand during the winter. The NYISO will adjust these requirements as appropriate if and when a Summer peaking Control Area System Resource becomes an ISO customer and seeks qualification as an Installed Capacity Supplier.

Control Area System Resources or the purchasers of Unforced Capacity from those Resources that qualify as Installed Capacity Suppliers shall provide to the ISO specific data, which shall be defined as “CARL Data.” CARL Data shall include data as follows:

- Available Capacity (CAP) that does not reflect adjustments for External firm Capacity purchases or sales, outages and maintenance (in MW);
- External firm Capacity purchases, other than purchases from New York (EP) (in MW);
- Monthly peak Load (MPL) (in MW);
- Winter peak Load (WPL) (in MW);
- External firm Capacity sales other than sales to New York (EF) (in MW);
- Planned maintenance (PM) (in MW);
- Historical average Forced Outages (FO) (in MW);
- Average Forced Outage Rate of the Resources included in the portfolio operated by the Control Area System Resource (AFO) (rate in decimal form);
- Operating reserve (OR) (in MW); and
- Planning reserve (PR) (in MW) – corresponds to the required reserves necessary to meet the NERC Resource Adequacy Criteria of 1 day in 10 years.

Forty-five (45) days prior to any Capability Period, Control Area System Resources shall submit forecasted CARL Data for the following Capability Period. This CARL Data shall include individual Monthly Peak Loads (MPL) for April through November and a (one) Winter Peak Load (WPL) for December through March.

In accordance with Section 5.12.5(c) of the ISO Services Tariff, Control Area System Resources shall submit CARL Data and actual system failure occurrences data to the ISO every 20<sup>th</sup> of the month following the month for which the data has been collected except for the period from December to March which is treated as a whole.

### **4.4.4 Energy Limited Resources**

By the 20<sup>th</sup> 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 20<sup>th</sup> 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 20<sup>th</sup> 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**

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 20<sup>th</sup> 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.



#### **4.4.7.2 Special Case Resources that are Generators**

Special Case Resources that are Generators shall submit to the ISO data using the minimum data set for GADS reporting or the Special Case Resource reporting form provided in Attachment K, as appropriate. GADS data reporting should treat all non-service hours in the month as Reserve Shutdown Hours. (Defined in Attachment J of this Manual.)

Special Case Resources that are Generators shall submit by the 20<sup>th</sup> day of each month data pertaining to the previous month. For example, Special Case Resources that are Generators shall submit by May 20, 2001, data pertaining to their operations during the month of April 2001.

#### **4.4.8 Municipally-Owned Generation**

By the 20<sup>th</sup> 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 (10<sup>th</sup>) 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 20<sup>th</sup> 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.

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

Each month, the ISO will calculate the amount of Unforced Capacity that Resources are qualified to supply to the NYCA. Starting with the 2001-2002 Winter Capability Period, the ISO will use an Unforced Capacity methodology to rate and qualify Resources. 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.

## **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, or System Resource is forced into an outage by an equipment failure that involves equipment located in the electric network beyond the step-up transformer, and including such step-up transformer, the outage will not be counted as a forced outage for purposes of calculating the amount of Unforced Capacity these Installed Capacity Suppliers are qualified to supply in the NYCA.

### **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 20<sup>th</sup> day of each month, demonstrating that the Unforced Capacity it is supplying is not already committed to meet the Installed Capacity requirement of an External Control Area.

### **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

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

## 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

## 4.9.1 General Requirements

External Generators, System Resources, and entities purchasing from them may qualify as Installed Capacity Suppliers if:

1. They comply with the information requirements in Section 4.9.2 and thereby demonstrate that the Installed Capacity Equivalent of the amount of Unforced Capacity they are supplying to the NYCA is deliverable to the NYCA;  
  
and
2. The External Control Area in which the Resource is located demonstrates that it either:
  - (a) Will not recall or curtail, for the purposes of satisfying its own Control Area Loads, imports from that External Control Area in 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) Will afford NYCA Load the same curtailment priority that it affords its own Control Area Load.

The amount of Unforced Capacity that may be supplied by qualifying External Generators, External System Resources and Control Area System Resources may be reduced by the ISO, as indicated below, to reflect the possibility of curtailment. (ISO Services Tariff Section 5.12.2.)

## 4.9.2 Information Requirements for External Resources

The ISO requires the following information from Resources External to the NYCA that wish to qualify as Installed Capacity Suppliers, and from Resources relied upon in Unforced Capacity contracts that have been assigned Grandfathered External Rights.

1. Name and location of Generators.
2. Documentation which satisfies the general requirements for DMNC Determination in Section 4.2 of this Manual.
3. Documentation which satisfies the Maintenance Scheduling Requirements in Section 4.3 of this Manual.
4. Expected return dates from full or partial outages.
5. Certification that Unforced Capacity sold to the NYCA has not been sold elsewhere.
6. Verification that it has made all arrangements required by its Control Area to ensure that the Energy associated with the Resources' Unforced Capacity sale to the NYCA will be delivered to the NYCA. For example, if the Resource is located in the PJM Control Area, it must demonstrate that it has agreed to make any Congestion payments that may be incurred in order to deliver Energy to the NYCA.

### **4.9.3 Allocation of Installed Capacity Rights for External Unforced Capacity Supply**

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 2.6 of this Manual. Once this amount has been determined for each neighboring Control Area, the allocation among ISO customers of 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.

External Installed Capacity 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 External Installed Capacity rights may be sent to the ISO during the following time period:

- Beginning at 8:00 AM EST seven (7) business days prior to the Capability Period strip auction,
- Ending at 5:00 PM EST three (3) business days prior to this same auction.

Each request must contain the following information:

1. Documentation of a bilateral agreement, with pricing redacted, between the requesting entity and either
  - (a) a Load within the NYCA or
  - (b) a previously qualified External Installed Capacity Supplier;
1. The identity of the ISO Customer making the request;
2. The identity of the External Installed Capacity Supplier;
3. The name and location of the Resource;
4. The Control Area in which the Resource for which the Installed Capacity Supplier seeks rights is located;
5. The MW amount requested to support the Unforced Capacity sale to the NYCA from the Resource designated in (4) above;
6. The time period, in blocks of whole months, for which the rights are requested;
7. 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 Rights" to the ISO's Manager of Resource Reliability via facsimile to the following number: 518-356-6208.

If the ISO determines, by 5:00 PM EST on the day following receipt of an initial request (provided that this day falls during the time period for initial requests specified above) 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 during the specified time period, for any reason, the latest time stamp will determine the priority.

The ISO will notify the requesting party if its request has been accepted or rejected, with reasons for rejection, by 5:00 PM EST on the day following receipt of a complete request. A rejection may be based on either or both of the following:

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

By 5:00 PM EST on the day following receipt of an accepted request, the requesting entity must provide the ISO with all documentation and information necessary to qualify an External Resource as an Installed Capacity Supplier, in accordance with the procedures contained in this Manual. By 5:00 PM EST two (2) business days prior to the Capability Period strip auction, an LSE that has procured an External Installed Capacity right must provide the ISO with the information and documents described in numbers 1, 4 and 5 above. The information described in this paragraph should be forwarded as a "Certification of External Installed Capacity Rights" to the ISO Manager, Resource Reliability by facsimile to 518-356-6208. The ISO will verify this data with the External Control Area to ensure that there is no double counting.

By 5:00 PM EST two (2) business days prior to the Pre-Capability Period Monthly Auctions, all External Installed Capacity rights should be matched between a Load in the NYCA and an External Installed Capacity Supplier. Unforced Capacity supplied by External Installed Capacity Suppliers that have claimed External Installed Capacity rights, but have not entered into bilateral arrangements with an LSE serving NYCA Load by that time, will be offered for sale into those Auctions 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.) Similarly, if the ISO has not received certification from an LSE which demonstrates that the rights it has secured are matched with a qualified External Installed Capacity Supplier, that LSE will relinquish those rights. 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 Unforced Capacity requirements of an LSE; 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 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 Unforced Capacity that can be provided by Installed Capacity Suppliers located in that Control Area, less the number of MW of Unforced Capacity purchased in that External Control Area for that month in preceding Monthly Auctions, less all External Installed Capacity rights for that Control Area that have been used to support Bilateral Transactions for the sale of Unforced Capacity for that month from Installed Capacity Suppliers in that Control Area to Loads in the NYCA.

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.

If External Installed Capacity 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 which External Installed Capacity rights remain. The procedures specified above will govern any monthly first-come, first-serve allocations. The period for requesting these rights will open at 8:00 a.m. EST on the fifth business day prior to the auction and will close at 5:00 p.m. EST on the third business day prior to the auction.

## **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 ISO-NE and the Ontario IMO Control Areas may not qualify as Installed Capacity Suppliers, since these Control Areas do not currently meet the ISO's recall or Curtailment requirements for Installed Capacity Suppliers.

Within the other five 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.

## 4.11 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.

### 4.12.1 Sale of Unforced Capacity Associated with Special Case Resources in Bilateral Transactions and in ISO-Administered Auctions

The Unforced Capacity of Special Case Resources will correspond to the pledged amount of Load reduction calculated in accordance with Attachment K. Special Case Resources may sell their Unforced Capacity in Bilateral Transactions to LSEs or Installed Capacity Marketers (the "Purchasing Entity"). The Purchasing Entity may then resell such Unforced Capacity in another Bilateral Transaction to another party (the "Other Party") provided, however, that the Purchasing Entity or Other Party agrees to be bound and comply with the notification requirements set forth in this Section 4.12. The Purchasing Entity or the Other Party may then resell such Unforced Capacity in Bilateral Transactions as described above, or in an ISO-administered auction subject to the conditions set forth in the following paragraph.

Special Case Resources and Purchasing Entities may offer and sell their Unforced Capacity or the Unforced Capacity associated with Special Case Resources in ISO-administered auctions

provided, however, that (1) the amount of Unforced Capacity offered is greater than 1 MW and (2) they agree to be bound and comply with the notification requirements set forth in this Section 4.12. Special Case Resources and Purchasing Entities may aggregate Unforced Capacity associated with Special Case Resources to offer and sell it in ISO-administered auctions.

Market Participants that are bound by the notification requirements set forth in this Section 4.12 shall be considered “Responsible Interface Parties” (“RIPs”). In addition to the notification requirements set forth in this Section 4.12, RIPs shall be responsible for all forms of communication to and from the ISO for purposes of dispatch, validation, and verification of Special Case Resources or the Unforced Capacity associated with Special Case Resources.

### **4.12.2 Distributed Generators - General Requirements**

Special Case Resources that are distributed generators and that run in parallel with the system must provide historical operating data. Special Case Resources must perform a one-hour (1) test of pledged output, and provide test results in the format specified by the ISO, or provide historical operating data. If the Special Case Resource consumes auxiliary power from the system, its auxiliary demand must be netted out of its maximum output.

Special Case Resources that are not called by the ISO to reduce Load in a Capability Period may be required to run a test once every Capability Period.

Special Case Resources may qualify in the same manner and during the same test periods as “new Generators.” Please refer to Sections 4.2.1 and 4.2.3 of this Manual.

The amount of Unforced Capacity that may be supplied shall be the lesser of the pledged output test, or the total Load at the site of the distributed generator.

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

### **4.12.3 Loads Capable of Interruption Upon Demand - General Requirements**

Loads capable of interruption upon demand must conduct a one-hour (1) sustained disconnect test and provide test results in the format specified by the ISO, or provide historical operating data. These Special Case Resources may qualify in the same manner and during the same test periods as “new Generators.” Please refer to Sections 4.2.1 and 4.2.3 of this Manual.

Special Case Resources that are not called by the ISO to reduce Load in a Capability Period may be required to run a test once every Capability Period.

RIPs claiming Unforced Capacity from these Loads capable of interruption upon demand must comply with the requirements and procedures set forth below.

#### **4.12.4 Qualifications**

A Special Case Resource must make Energy available, in amounts that correspond to the Installed Capacity Equivalent of the amount of Unforced Capacity it supplies to the NYCA, by reducing Load or transferring Load to a Generator, within two (2) hours of a notice provided by the ISO to the RIP, following a 24-hour notice. 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 derated DMNC for use in determining the amount of Unforced Capacity that it can provide in the future.

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 Unforced Capacity requirement of the LSE serving that customer is based, the LSE's Unforced Capacity requirement shall be increased by the amount of Load that was served or interrupted by the Special Case Resource.

An RIP may claim Special Case Resource Unforced Capacity for its own Unforced Capacity requirement (in the case of an RIP that is an LSE), or claim such Unforced Capacity for purposes of sale in an Installed Capacity auction provided, in either case, that it gives notice of such action to the LSE supplying Energy to the customer where the Special Case Resource is located.

Transmission Owners shall permit short periods of parallel operation for Load switching from the Transmission Owner's electrical system to distributed generation equipment claimed as Special Case Resource Unforced Capacity provided that the distributed generator meets the Transmission Owner's interconnection requirements.

#### **4.12.5 Notification Procedures**

The ISO will provide 24 hour-ahead notification and two (2) hour notice, as required by this Manual, to the RIP. The 24 hour-ahead notification will be provided after 11 am, day-ahead, when the Day-Ahead Market closes. The ISO commits not to use 24 hour 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 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 communication at any time.

#### **4.12.6 Capacity Adjustment Procedures**

Special Case Resources that fail to respond to RIP notification by reaching maximum output within two (2) hours following notice from the ISO to the RIP, or that fail to provide maximum output for the period required by the ISO or four (4) hours, whichever is less, will be considered forced out (for unserved hours) for purposes of calculating the Unforced Capacity value of the Special Case Resource for future Obligation Procurement Periods.

Special Case Resource Capacity that has successfully petitioned the ISO for permission to reach maximum output in more than two (2) hours will be considered forced out in the amount of Unforced Capacity not backed by Energy within two (2) hours of the notice from the ISO to the RIP.

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**

RIPs shall certify that the Special Case Resources for which they claim Unforced Capacity meet or have met the applicable general requirements and qualifications described in Section 4 of this Manual. RIPs claiming Special Case Resource Unforced Capacity from entities that are not their retail customers must further provide the notification described in item number 4 of the Qualifications section of this document.

RIPs shall certify that Special Case Resources claimed as Unforced Capacity are complying with the procedures set forth in this Section 4.12 by documenting reductions in Load with interval billing meters readings on customer Load for the six (6) hour period following the two (2) hour ISO notice. 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.

RIPs that claim Unforced Capacity from Special Case Resources shall document operation of the Special Case Resource to the Transmission Owner and to the LSE supplying Energy to the retail customer on whose premises the Special Case Resource is located if such LSE is different from the RIP.

RIPs that claim Unforced Capacity from Special Case Resources shall file with the ISO the data necessary to document the source and amount of Special Case Resource Unforced Capacity.

#### **4.12.8 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.

### **4.13 Existing Municipally-Owned Generation**

A municipal utility that owns generation in excess of its 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.

## 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 give LSEs an opportunity to satisfy their Unforced Capacity requirements. In the various ISO-administered auctions, LSEs will have the opportunity to purchase the Unforced Capacity necessary to meet the Unforced Capacity requirements 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.

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 Attachment A for the upcoming Capability Period schedule of auctions. The schedule is structured to ensure adequate time between the time that auction results are posted and the dates that LSEs are required to demonstrate that they have procured sufficient Unforced Capacity to cover their Unforced Capacity requirements. Auctions shall be conducted prior to the start of each Capability Period and each month during a Capability Period.

#### 5.1.1 Auctions Conducted Prior to the Capability Period



The auctions conducted a prior to the Capability Period occur in three (3) steps. The first auction conducted prior to the start of the Capability Period (the “Capability Period Auction,” also called the “strip” auction), will allow Bidders to purchase Unforced Capacity and Offerors to sell Unforced Capacity for the entire six (6) months included in that Capability Period.

The second set of auctions conducted prior to the start of the Capability Period will facilitate transactions for individual months within a Capability Period (the “Pre-Capability Period Monthly Auctions”). This set of auctions shall consist of a series of a separate auction for each Obligation Procurement Period in the Capability Period. The first Pre-Capability Period Monthly Auction will also serve as the regular Monthly Auction for the first Obligation Procurement Period.

In the event that all LSEs do not certify that their Unforced Capacity requirements have been satisfied for the following Obligation Procurement Period (*i.e.*, the first Obligation Procurement Period of the Capability Period), the ISO will conduct a Deficiency Procurement Auction at least two (2) business days prior to the beginning of the Capability Period. During this Deficiency Procurement Auction, the ISO will also procure Unforced Capacity on behalf of Installed Capacity Suppliers that are deficient for the first Obligation Procurement Period of the Capability Period. This Deficiency Procurement Auction will consist of one (1) monthly auction.

### **5.1.2 Auctions Conducted within the Capability Period**

The ISO shall conduct a regular Monthly Auction prior to each Obligation Procurement Period to allow Bidders to purchase Unforced Capacity, and Offerors, including new Offerors, to sell Unforced Capacity, for any remaining Obligation Procurement Periods within that Capability Period. Monthly Auctions allow LSEs to purchase sufficient Unforced Capacity to meet their Unforced Capacity requirements. The Monthly Auctions also allow customer-gaining LSEs that have entered into six-month (6) contracts in the Capability Period Auction, to Bid to purchase Unforced Capacity to cover customers acquired as result of customer-switching during the prior month. Similarly, customer-losing LSEs that have excess Unforced Capacity as a result of customer-switching may offer to sell their surplus in the Monthly Auctions.

When an LSE fails to procure sufficient Unforced Capacity to cover its Unforced Capacity requirement for the following Obligation Procurement Period, the ISO shall conduct a Deficiency Procurement Auction at the time specified in Attachment A to this Manual.

## **5.2 Auctions Conducted Prior to a Capability Period**

### **5.2.1 Phased Auctions**

The Capability Period Auction, the Pre-Capability Period Monthly Auctions, and the Deficiency Procurement Auction for the first Obligation Procurement Period of the Capability Period will each consist of two phases. The implementation of FERC-approved mitigation measures in the New York City Locality Installed Capacity markets creates the requirement for two phases for each auction. Both phases of a given auction shall be conducted on the same day. Under certain circumstances described below, some auctions may only consist of a single phase.

In the Capability Period Auction and the Pre-Capability Procurement Period Monthly Auctions, LSEs may submit their own bids, whereas in the Deficiency Procurement Auction, the ISO shall submit bids on behalf of LSEs that are deficient for the first Obligation Procurement Period. The ISO shall not reveal the number of MWs that LSEs are deficient prior to the Deficiency Procurement Auction.

### **5.2.2 Overview - Capability Period Auction and Pre-Capability Period Monthly Auctions Phase One**

Participation in the first phase of the Capability Period Auction and the Pre-Capability Period Monthly Auctions shall be limited to: (i) LSEs authorized to serve Load in the New York City Locality seeking to make locational Unforced Capacity purchases in order to satisfy their In-City Locational Installed Capacity Requirements; (ii) any other entity seeking to purchase In-City locational Unforced Capacity; (iii) qualified In-City Installed Capacity Suppliers; and (iv) any other Installed Capacity Supplier that owns excess Unforced Capacity associated with qualified In-City Installed Capacity Suppliers.

Installed Capacity Suppliers selected to provide Unforced Capacity in the first phase of the first two auctions shall be paid the Market-Clearing Price determined in that phase, except in the case of Unforced Capacity associated with In-City Installed Capacity Suppliers that are subject to mitigation measures, which shall receive the lesser of the Market-Clearing Price or the applicable locational price cap. Any entity that resells Unforced Capacity associated with In-City Installed Capacity Suppliers that are subject to market mitigation measures shall receive the lesser of the Market-Clearing Price determined in that phase, or the price that it paid for that Unforced Capacity. The ISO shall retain any Excess Amount and rebate it to all LSEs with Installed Capacity obligations in the New York City Locality (pursuant to Section 5.15) of the ISO Services Tariff.

### **5.2.3 Overview - Capability Period Auction and Pre-Capability Period Monthly Auctions Phase Two**

Participation in the second phase of the Capability Period Auction and the Pre-Capability Period Monthly Auctions shall not be limited to In-City entities, except with respect to Unforced Capacity associated with In-City Installed Capacity Suppliers that are subject to market mitigation measures, which may not participate unless it is established that all In-City LSEs have

satisfied their In-City Locational Installed Capacity Requirements. LSEs awarded Unforced Capacity in the second phase shall pay the applicable Market-Clearing Price of Unforced Capacity determined in that phase.

Installed Capacity Suppliers selected to provide Unforced Capacity in the second phase shall receive the applicable Market-Clearing Price of Unforced Capacity determined in that phase, except for entities reselling Unforced Capacity associated with In-City Installed Capacity Suppliers subject to market mitigation measures, which shall receive the lesser of the applicable Market-Clearing Price determined in that phase or the price paid for that Unforced Capacity.

#### **5.2.4 Results of the Capability Period Auction**

The results of the Capability Period Auction will be made available to Market Participants before the beginning of that Capability Period and before the Pre-Capability Period Monthly Auctions. Individual Market Participants will receive results of the Capability Period Auction to the extent that such results affect that Market Participant's Unforced Capacity transaction(s).

#### **5.2.5 Phase One and Two of Deficiency Procurement Auction**

The ISO shall conduct a Deficiency Procurement Auction, if necessary, after the Pre-Capability Period Monthly Auctions if LSEs have not procured sufficient Unforced Capacity to meet their Unforced Capacity requirement for the first Obligation Procurement Period of the Capability Period.

Participation in the first phase of this Deficiency Procurement Auction shall be limited to deficient LSEs serving Load in the New York City Locality that are required to make additional Locational Installed Capacity purchases in order to satisfy their In-City Locational Installed Capacity Requirements, qualified In-City Installed Capacity Suppliers, and any other Installed Capacity Supplier that owns excess Unforced Capacity associated with qualified In-City Installed Capacity Suppliers. The ISO shall submit deficiency bids on behalf of each participating LSE at a level determined pursuant to Section 5.14.1 of the ISO Services Tariff.

LSEs awarded Unforced Capacity in the first phase shall pay the lesser of the Market-Clearing Price of Unforced Capacity determined in that phase, or the deficiency bid, to the ISO. The ISO shall pay Installed Capacity Suppliers that are selected to provide Unforced Capacity the Market-Clearing Price determined in that phase, which can be no greater than the deficiency bid, except in the case of Unforced Capacity associated with In-City Installed Capacity Suppliers that are subject to mitigation measures, which shall receive the lesser of the Market-Clearing Price determined in that phase or the applicable locational price cap.

Any entity that resells Unforced Capacity associated with In-City Installed Capacity Suppliers that are subject to market mitigation measures shall receive the lesser of the Market-Clearing Price determined in that phase or the price that it paid for that Unforced Capacity. The ISO

shall retain any Excess Amount and rebate it to all LSEs serving Load in the New York City Locality pursuant to Section 5.15 of the ISO Services Tariff.

Participation in the second phase of the Deficiency Procurement Auction shall not be limited to In-City Installed Capacity Suppliers. The ISO shall submit deficiency bids on behalf of all remaining deficient LSEs at a level determined pursuant to Section 5.14.1 of the ISO Services Tariff. The ISO shall solicit bids from all qualified Installed Capacity Suppliers, including In-City Installed Capacity Suppliers otherwise subject to market mitigation measures, that still have Unforced Capacity to offer after all LSEs based in the New York City Locality have met their Locational Installed Capacity Requirements for this Obligation Procurement Period.

LSEs awarded Unforced Capacity in the second phase shall pay the lesser of the applicable Market-Clearing Price of Unforced Capacity determined in that phase, or the deficiency bid, to the ISO. The ISO will use these deficiency payments to pay the applicable Market-Clearing Price of Unforced Capacity determined in that phase, except as noted below, to Installed Capacity Suppliers that were selected to provide Unforced Capacity, including In-City Installed Capacity Suppliers that are otherwise subject to market mitigation measures.

Any Installed Capacity Supplier that resells Unforced Capacity associated with In-City Installed Capacity Suppliers that are subject to market mitigation measures shall receive the lesser of the applicable Market-Clearing Price determined in that phase or the price that it paid for that Unforced Capacity.

The ISO shall also prospectively purchase Unforced Capacity on behalf of deficient Installed Capacity Suppliers in the Deficiency Procurement Auctions. The ISO shall submit a deficiency bid on behalf of deficient Installed Capacity Suppliers as if they were deficient LSEs. Deficient Installed Capacity Suppliers must pay the applicable Market-Clearing Price of Unforced Capacity to the ISO. If an Installed Capacity Supplier is determined to have been deficient for any prior portion of a Capability Period, that Installed Capacity Supplier must retroactively pay to the ISO the applicable monthly deficiency charge.

If deficiencies exist after this Deficiency Procurement Auction, the ISO shall purchase any subsequently qualified Unforced Capacity using the deficiency charges collected from deficient LSEs and Installed Capacity Suppliers. Please refer to Section 5.3.3, below, for further details in connection with post-Deficiency Procurement Auction Unforced Capacity purchases by the ISO.

## **5.3 Auctions Conducted During a Capability Period**

### **5.3.1 Monthly Auctions**

Within a Capability Period, Monthly Auctions where LSEs will Bid and Installed Capacity Suppliers will offer Unforced Capacity for the second through sixth Obligation Procurement Periods in that Capability Period will be conducted exactly like the Pre-Capability Period Monthly Auctions, *i.e.*, in two phases, unless the ISO has established that all LSEs with New York City Locational Installed Capacity Requirements have satisfied these requirements. If the ISO has established that each LSE with such Locational Installed Capacity Requirement has satisfied its requirement, each regular Monthly Auction will be conducted as if it were the second phase of a Pre-Capability Period Monthly Auction.

### **5.3.2 Deficiency Procurement Auctions**

Each monthly Deficiency Procurement Auction will be conducted exactly like a regular Monthly Auction, *i.e.*, in two phases, when necessary as described in the above paragraph. The ISO shall conduct each monthly Deficiency Procurement Auction, if necessary, at least two (2) business days before the beginning of an Obligation Procurement Period in which an LSE fails to procure sufficient Unforced Capacity to meet its Unforced Capacity requirement.

The ISO shall not reveal the number of MWs that LSEs are deficient prior to Deficiency Procurement Auctions.

### **5.3.3 Deficiency Charges**

LSEs that are still deficient after the completion of a Deficiency Procurement Auction will pay a deficiency charge to the ISO equal to the deficiency bid multiplied by the number of MWs by which the LSEs are deficient. At any time before or during the applicable Obligation Procurement Period, the ISO will attempt to use the money it collects through the imposition of deficiency charges to procure Unforced Capacity from Resources that are capable of supplying Unforced Capacity but that failed to qualify to supply it prior to the Deficiency Procurement Auction, *e.g.*, recently upgraded Resources, new Resources, and existing Resources that were otherwise not able to qualify.

The ISO shall not procure Unforced Capacity from previously qualified Installed Capacity Suppliers that withheld their Unforced Capacity. An Installed Capacity Supplier shall be deemed to not have withheld Unforced Capacity if it offered such Unforced Capacity into the first phase of a Deficiency Procurement Auction and was thereby prevented from offering that Unforced Capacity into the second phase of the same auction. The ISO will not pay an Installed Capacity Supplier more than the applicable deficiency charge per MW of Unforced Capacity, or the applicable locational price cap per MW of Unforced Capacity, which ever is less, pro-rated to reflect the portion of the Capability Period for which the Installed Capacity Supplier provides Unforced Capacity. Any remaining moneys collected by the ISO pursuant to Section 5.14.1 of the ISO Services Tariff will be applied in accordance with Section 5.14 of the ISO Services Tariff.

The ISO shall also prospectively purchase Unforced Capacity on behalf of deficient Installed Capacity Suppliers in a monthly Deficiency Procurement Auction. The ISO shall submit a deficiency bid on behalf of deficient Installed Capacity Suppliers as if they were deficient LSEs. Deficient Installed Capacity Suppliers must pay the Market-Clearing Price of Unforced Capacity to the ISO. If an Installed Capacity Supplier is determined to have been deficient for any prior portion of a Capability Period, that Installed Capacity Supplier must retroactively pay to the ISO the applicable monthly deficiency charge.

### **5.3.4 Results of the Monthly Auctions**

The results of the Monthly Auctions will be made available to Market Participants within five (5) days of the Monthly Auctions. Individual Market Participants will receive results of the Monthly Auctions to the extent that such results affect that Market Participant's Unforced Capacity transaction(s).

### 5.3.5 Deficiency Bids and Charges

<b>LOCATION</b>	<b>IMPLEMENTATION OF UCAP THROUGH APRIL 30, 2002</b>	<b>MAY 1, 2002 THROUGH APRIL 30, 2003</b>
<b>In-City New York City (LBMP Load Zone J)</b>	<b>\$82.06/kW of Unforced Capacity per Capability Period</b> (Equivalent to \$75.00/kW of Installed Capacity per Capability Period)	\$75.00 x In-City Locational Installed Capacity Requirement / In-City Locational Unforced Capacity Requirement
<b>Long Island (LBMP Load Zone K)</b>	<b>\$73.95/kW of Unforced Capacity per Capability Period</b> (Equivalent to \$65.00/kW of Installed Capacity per Capability Period)	\$70.00 x Long Island Locational Installed Capacity Requirement / Long Island Locational Unforced Capacity Requirement
<b>All Other LBMP Load Zones in the NYCA</b>	<b>\$62.91/kW of Unforced Capacity per Capability Period</b> (Equivalent to \$57.50/kW of Installed Capacity per Capability Period)	\$62.50 x NYCA Locational Installed Capacity Requirement / NYCA Locational Unforced Capacity Requirement

Beginning May 1, 2003, these deficiency bids and charges will be based on 3 times the localized levelized embedded cost of gas turbines in the New York City Locality, the Long Island Locality, or elsewhere in the NYCA, respectively.

## 5.4 Timing of Auctions

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

- (i) A Capability Period Auction will be held at least 30 days before the beginning of that Capability Period where Unforced Capacity shall be made available for purchase for the entire six-month Capability Period;
- (ii) Pre-Capability Period Monthly Auctions will be held at least 15 days before the beginning of that Capability Period where Unforced Capacity is made available for purchase for any and all Obligation Procurement Periods within the Capability Period;

- (iii) In the event that an LSE does not certify to the ISO ten (10) days before the beginning of the Capability Period that its Unforced Capacity requirement for the first Obligation Procurement Period of this Capability Period has been met, the ISO will conduct a Deficiency Procurement Auction, consisting of one (1) auction, at least two (2) business days before the beginning of that Obligation Procurement Period to procure the requisite amount of Unforced Capacity on behalf of the deficient LSE;
- (iv) During a Capability Period, Monthly Auctions will be held at least 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
- (v) During the Capability Period, a monthly Deficiency Procurement Auction will be held at least two (2) business days before the beginning of each Obligation Procurement Period during which the ISO will procure Unforced Capacity on behalf of LSEs that have not procured sufficient Unforced Capacity to meet their Unforced Capacity requirements for the upcoming Obligation Procurement Period.

*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 Attachment A.*

## **5.5 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. Bids to purchase Unforced Capacity and offers to supply Unforced Capacity that are not selected in a phase of a given auction will not carry over into subsequent auctions or phases of that 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 in the ISO Procedures. If no Offerors submit offers to supply Unforced Capacity in a phase of an auction by that deadline, the ISO will cancel that phase of that auction. By contrast, if at least one Offeror submits an offer to sell in a phase of an auction, the ISO will not cancel that phase of that auction, and will allow a Market-Clearing Price to be calculated in that phase of that auction, even if no Bidder submits a bid to buy in that phase of that auction.



## 5.6 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 deficiency in Unforced Capacity resulting from the reduction through a Deficiency Procurement Auction. The ISO Procedures shall establish the circumstances under which the ISO may reduce the amount of Unforced Capacity that an Installed Capacity Supplier may supply to the NYCA.

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.

Installed Capacity Suppliers that wish to participate in an ISO-administered auction must submit completed certification forms to the ISO by the 20<sup>th</sup> day of the month preceding an auction period in which they intend to offer Unforced Capacity. The certification form shall, at a minimum, require Installed Capacity Suppliers to 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 generated by 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 Installed Capacity requirements in other Control Areas will not be able to purchase such Unforced Capacity in an ISO-administered auction.

## 5.7 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.

## 5.8 Required Information in Bids to Buy

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:

- (i) The total amount of Unforced Capacity it wishes to purchase in association with that bid, in increments of 100 kW;
- (ii) 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;
- (iii) The auction and phase to which the bid applies;
- (iv) Whether the Unforced Capacity must be associated with Installed Capacity Suppliers located in a specific Locality, and if so, which Locality; and
- (v) 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).

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

## 5.9 Required Information in Offers to Sell

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:

- (i) The amount of Unforced Capacity it offers to sell in increments of 100 kW;
- (ii) 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;
- (iii) The auction and phase to which the offer applies;

- (iv) The name of the Installed Capacity Supplier providing the Unforced Capacity offered for sale;
- (v) Documentation of that Installed Capacity Supplier's DMNC (described above);
- (vi) Whether that Installed Capacity Supplier is located in a Locality, and if so, which Locality; and
- (vii) Whether that Installed Capacity Supplier is located in a Control Area outside the NYCA, and if so, which Control Area.

## **5.10 Determination of Selected Bids and Offers**

The ISO will determine which bids to purchase and which offers to sell Unforced Capacity are selected by maximizing total gains from trade in each phase of each auction, i.e., by maximizing the sum of the maximum prices Bid by Bidders whose bids to purchase Unforced Capacity in that phase of that auction were selected minus the sum of the minimum prices specified by Offerors whose offers to sell Unforced Capacity in that phase of that auction were selected, subject to the constraints on the location of the associated Installed Capacity Supplier that have been specified in the selected bids as well as the limitations on the total amount of Unforced Capacity that can be purchased in each External Control Area in each auction (as described in Section 4.9.3). This maximization will be performed jointly for all locations in each phase of each auction.

All, part, or none of a bid to purchase or an offer to sell Unforced Capacity may be selected in any given phase of an 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 phase of an 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. Initially, bids to purchase or offers to sell Unforced Capacity in a phase of a given auction cannot be made contingent on whether another bid or offer is accepted in the same phase. However, the ISO will evaluate the feasibility of making the acceptance of a bid or offer in a phase of a given auction contingent on the acceptance of other bids or offers in that phase.

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 phase of the same 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 phase of the same 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 Offeror offered to sell in that location (or group of locations, if there is no price difference between those locations) at that price.

## **5.11 Determination of Market-Clearing Prices**

As a result of each phase of an ISO-administered auction, with the exception of the first phase of auctions conducted in two phases, the following Market-Clearing Prices for Unforced Capacity will be determined:

- (i) Prices for Unforced Capacity located in each Locality.
- (ii) Prices for Unforced Capacity located in each Control Area outside the NYCA.
- (iii) Price for Unforced Capacity located in the portion of the NYCA that is not located in any other Locality.

In the first phase of a two-phase auction, only Unforced Capacity located in the New York City Locality will be available, so the only Market-Clearing Price determined in that phase will be the price for that Locality.

The objective function that the ISO will use in each phase of each auction, 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 or 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." 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

determined in that phase 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 determined in that phase will be the same at every location.

When locational constraints do not bind, the Market-Clearing Price of Unforced Capacity in a phase of a given auction will be the marginal bid cost of providing additional Unforced Capacity in that auction. The marginal bid cost of providing additional Unforced Capacity in the first phase of any two-phase auction will also establish the Market-Clearing Price for Unforced Capacity in the New York City Locality in that phase. 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, 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 phase of that auction, but did not sell all of that Unforced Capacity in that phase), so that the amount of Unforced Capacity purchased from that Offeror would have been slightly above the amount that was actually purchased in that phase. 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 phase of 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 phase (with the leftover Unforced Capacity used to meet the small additional demand). The algorithm that the ISO uses to conduct the 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 phase of 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 that phase of that auction, but it will be the marginal bid cost of providing Unforced Capacity located in a given area. The relevant area is defined in the next several paragraphs.

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.

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 phase of an auction, then the Market-Clearing Price of Unforced Capacity located in that Locality in that phase will be the marginal bid cost of providing additional Unforced Capacity in that Locality in that phase.
- If an External Control Area constraint is binding for a particular Control Area in a phase of an auction (or group of Areas), then the Market-Clearing Price of Unforced Capacity located in that External Control Area (or group of Areas) in that phase will be the marginal bid cost of providing additional Unforced Capacity in that particular External Control Area (or group of Areas) in that phase.
- The Market-Clearing Price in a phase of 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 in that phase; and (3) Unforced Capacity located in an External Control Area, if no External Control Area constraint affecting that External Control Area is binding in that phase) will be the marginal bid cost of providing additional Unforced Capacity in that phase located anywhere other than a Locality for which a Locality constraint is binding in that phase or an External Control Area for which an External Control Area constraint is binding in that phase.

The set of prices that results will ensure that when a 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.

Market-Clearing Prices will be calculated independently within each phase of a given auction. As a result, the Market-Clearing Price for Unforced Capacity at a given location may vary

among phases of the same auction, or among different monthly auctions conducted at the same time.

## **5.12 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 any particular phase of an auction the Market-Clearing Price determined in that phase of that auction at the location of each of its Resources that have been selected in that phase 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 any particular phase of 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 in that particular phase.

Settlements for Capability Period auctions (i.e., strip and monthly) 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 ISO Web site.

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 Phase I rebates.

## **5.13 Allocation of Winning Bids**

Each Bidder whose bid to purchase Unforced Capacity in any particular phase of an auction 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:

- (i) 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.
- (ii) 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.

- (iii) 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 phase of 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.
- (iv) 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 phase of that auction.

## **5.14 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:

- (i) 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 phase of each ISO-administered auction.
- (ii) 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 phase of each ISO-administered auction.
- (iii) The total amount of Unforced Capacity purchased in each phase of 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.



## **6.0 Sanctions**

The ISO may impose sanctions on Installed Capacity Suppliers, LSEs, and Transmission Owners for failing to comply with the ISO Services Tariff requirements.

Sanctions may be assessed against Installed Capacity Suppliers for actions that fall into the following two categories:

- Failure to provide required information.
- Failure to comply with bidding, scheduling and notification requirements and procedures.

An LSE that fails to comply with the ISO's requirement to demonstrate ahead of an Obligation Procurement Period that it has procured sufficient Unforced Capacity to cover its Unforced Capacity requirement is penalized through the procedures and financial consequences of the Deficiency Procurement Auction. Please refer to Section 5 of this Manual for details.

A Transmission Owner that fails to provide the information required by Section 5.11.3 of the Service Tariff in a timely fashion is subject to sanctions as described below in section 6.2 of this Manual.

The ISO Services Tariff references are Sections 5.11.3, 5.12.12, and 5.14.1.

## **6.1 Supplier Sanctions**

### **6.1.1 Failure to Provide Required Information**

Section 4 of this Manual, and the Capability Period Timeline in Attachment A, contain detailed description of the types of information that Installed Capacity Suppliers must provide to the ISO, and the deadlines for receipt of that information.

If an Installed Capacity Supplier fails to provide the required information, the following procedures will be followed:

- On the first day that the required information is late (unless that day falls on a weekend or official New York State holiday, in which case the notification shall be made on the next business day), the ISO shall notify the Installed Capacity Supplier that the information is past due and that the ISO reserves the right to impose financial sanctions if the information is not provided by the end of the next day.

- Starting on the third day that the required information is late, the ISO may impose a daily financial sanction up to the higher of \$500 or \$5 per MW of Unforced Capacity that the Installed Capacity Supplier is capable of providing.
- Starting on the tenth day that the required information is late, the ISO may impose a daily financial sanction up to the higher of \$1000 or \$10 per MW of Unforced Capacity that the Installed Capacity Supplier is capable of providing.

### **6.1.2 Failure to Bid, Schedule and Notify the NYISO of Outages**

Section 4.7 of this Manual contains the daily bidding, scheduling and notification requirements applicable to Installed Capacity Suppliers.

On any day in which the Installed Capacity Supplier, or its designated scheduling entity, fails to comply with these requirements, the ISO may impose a financial sanction up to the product of a daily deficiency charge and the maximum number of MWs for which the ISO should have received a bid, schedule or other notification of operating status.

The deficiency charge will be based on the table provided in Section 5.3.3 of this Manual, with the applicable charges pro-rated on a daily basis.

The ISO will assess the sanction against the entity that the Installed Capacity Supplier has designated to provide the bids, schedules and status notification.

## **6.2 Transmission Owner Sanctions**

The ISO Load Forecasting Manual, and the Capability Period Timeline in Attachment A, contain detailed descriptions of the types of information that Transmission Owners must provide to the ISO, and the deadlines for receipt of that information.

If a Transmission Owner fails to provide the required information, the following procedures will be followed:

- On the first day that the required information is late (unless that day falls on a weekend or official New York State holiday, in which case the notification shall be made on the next business day), the ISO shall notify the Transmission Owner that the information is past due and that the ISO reserves the right to impose financial sanctions if the information is not provided by the end of the next day.
- Starting on the third day that the required information is late, the ISO may impose a daily financial sanction up to \$5000 per day.

- Starting on the tenth day that the required information is late, the ISO may impose a daily financial sanction up to \$10,000 per day.

## **6.3 Procedural Safeguards**

If the ISO staff becomes aware of potentially sanctionable activity by a Market Participant, it shall report the activity to ISO's Discretionary Acts Committee ("DAC"). The DAC will evaluate the reported activity pursuant to its procedures and, if warranted, shall recommend an appropriate sanction. All DAC decisions shall be made in a reasonable and non-discriminatory manner.

If the DAC recommends a sanction, the ISO shall send a "Notice of Recommended Sanction" to any Market Participant potentially subject to sanctions pursuant to the DAC procedures. The DAC shall afford Market Participants a reasonable opportunity to demonstrate that its activities are not sanctionable. Market Participants shall also have a reasonable opportunity to bring any mitigating circumstances to the DAC's attention and to explain why the DAC, in the event that it decides to recommend a sanction, should reduce the sanction's severity.

If a Market Participant accepts a sanction recommended by the DAC the ISO will automatically impose the sanction. If a Market Participant disagrees with a recommended sanction it may appeal the DAC's decision to the ISO's President and Chief Executive Officer ("CEO"), who must approve all contested sanctions. Market Participants may challenge any sanction approved by the CEO pursuant to the ISO Dispute Resolution Procedures.

# Attachment A:

## Installed Capacity Reporting and Auction Timeline

Date	Description (All time are in Prevailing Eastern Time)
9/28/2001	ISO informs ICAP Suppliers of the amount of Unforced Capacity they are qualified to offer in the 2001-2002 Winter Capability Period
	ISO informs LSEs of their final Unforced Capacity requirements for the upcoming Obligation Procurement Period
10/1/2001	Capability Period (Strip) Auction - bids and offers may be submitted between 8:00 and 17:00 hours
	ISO provides EFORD percentages for Suppliers by unit
	New Suppliers requiring a PTID (PoinT Identification) number must request one to participate in the next month's auction.
10/4/2001	Results of the Capability Period (Strip) Auction are posted and awards are issued.
10/5/2001	Transmission Owners to provide daily load shifting (customer switching) between LSEs
	Transmission Owners provide estimated load position by LSE for first day of upcoming Month
10/8/2001	Holiday - ISO Closed.
10/9/2001	ISO to ship accounting data to LSEs and Suppliers
10/10/2001	ISO provides Installed Capacity Requirements to LSEs
	New LSEs must provide creditworthiness proof to ISO (5 days before an auction)
	Last day for Suppliers to provide GADS for activity from 2 months ago

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- 10/12/2001 Last day to adjust DMNC
- New Suppliers must submit sell agreements, certification (DMNC or SCR) by fax by 17:00 hours
- New LSEs must submit purchase agreements by fax by 17:00 hours
- 10/15/2001 Monthly Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- Original Sell/Purchase agreements must be received by the ISO before an offer or bid can be accepted
- 10/16/2001 Payment from purchasers of ICAP due
- 10/18/2001 Post results of monthly auction
- 10/19/2001 Supplier and LSE certifications due
- TOs report true-up load shifting (actual data) for LSE activity 3 months prior
- 10/20/2001 GADS due from Suppliers for previous month's activity
- 10/21/2001 Payments to Suppliers of ICAP made
- 10/23/2001 Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- 10/26/2001 Post results of deficiency auction
- 11/1/2001 ISO provides EFORD percentages for Suppliers by unit
- New Suppliers requiring a PTID (PoinT Identification) number must request one to participate in the next month's auction.
- 11/7/2001 Transmission Owners to provide daily load shifting (customer switching) between LSEs
- Transmission Owners provide estimated load position by LSE for first day of upcoming Month
- 11/8/2001 ISO to ship accounting data to LSEs and Suppliers

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- 11/9/2001      ISO provides Installed Capacity Requirements to LSEs  
New LSEs must provide creditworthiness proof to ISO (5 days before an auction)  
Last day for Suppliers to provide GADS for activity from 2 months ago
- 11/12/2001      Last day to adjust DMNC  
New Suppliers must submit sell agreements, certification (DMNC or SCR) by fax by 17:00 hours
- 11/14/2001      Monthly Auction – bids and offers maybe submitted between 8:00 and 17:00 hours  
Original Sell/Purchase agreements must be received by the ISO before an offer or bid can be accepted
- 11/16/2001      Payment from purchasers of ICAP due
- 11/19/2001      Post results of monthly auction
- 11/20/2001      GADS due from Suppliers for previous month's activity  
Supplier and LSE certifications due  
TOs report true-up load shifting (actual data) for LSE activity 3 months prior
- 11/21/2001      Payments to Suppliers of ICAP made
- 11/22/2001      Holiday - ISO closed.
- 11/23/2001      Holiday - ISO closed.
- 11/26/2001      Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- 11/29/2001      Post results of deficiency auction
- 12/03/2001      ISO provides EFORD percentages for Suppliers by unit  
New Suppliers requiring a PTID (PoinT Identification) number must request one to participate in the next month's auction.

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- 12/7/2001      Transmission Owners to provide daily load shifting (customer switching) between LSEs
- Transmission Owners provide estimated load position by LSE for first day of upcoming Month
- ISO to ship accounting data to LSEs and Suppliers
- 12/10/2001      ISO provides Installed Capacity Requirements to LSEs
- New LSEs must provide creditworthiness proof to ISO (5 days before an auction)
- Last day for Suppliers to provide GADS for activity from 2 months ago
- 12/12/2001      Last day to adjust DMNC
- New Suppliers must submit sell agreements, certification (DMNC or SCR) by fax by 17:00 hours
- 12/14/2001      Monthly Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- Original Sell/Purchase agreements must be received by the ISO before an offer or bid can be accepted
- 12/17/2001      Payment from purchasers of ICAP due
- 12/18/2001      Post results of monthly auction
- 12/20/2001      GADS due from Suppliers for previous month’s activity
- Supplier and LSE certifications due
- TOs report true-up load shifting (actual data) for LSE activity 3 months prior
- 12/21/2001      Payments to Suppliers of ICAP made
- 12/24/2001      Holiday - ISO closed.
- 12/25/2001      Holiday - ISO closed.
- 12/26/2001      Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- 12/28/2001      Post results of deficiency auction

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- 1/1/2002      Holiday - ISO closed.
- 1/2/2002      ISO provides EFORD percentages for Suppliers by unit
- New Suppliers requiring a PTID (PoinT IDentification) number must request one to participate in the next month's auction.
- 1/7/2002      Transmission Owners to provide daily load shifting (customer switching) between LSEs
- Transmission Owners provide estimated load position by LSE for first day of upcoming Month
- 1/9/2002      ISO to ship accounting data to LSEs and Suppliers
- 1/10/2002     ISO provides Installed Capacity Requirements to LSEs
- New LSEs must provide creditworthiness proof to ISO (5 days before an auction)
- Last day for Suppliers to provide GADS for activity from 2 months ago
- 1/11/2002     Last day to adjust DMNC
- New Suppliers must submit sell agreements, certification (DMNC or SCR) by fax by 17:00 hours
- 1/15/2002     Monthly Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- Original Sell/Purchase agreements must be received by the ISO before an offer or bid can be accepted
- 1/16/2002     Payment from purchasers of ICAP due
- 1/18/2002     Post results of monthly auction
- 1/20/2002     GADS due from Suppliers for previous month's activity
- 1/21/2002     Holiday - ISO closed.
- 1/22/2002     Supplier and LSE certifications due
- TOs report true-up load shifting (actual data) for LSE activity 3 months prior
- Payments to Suppliers of ICAP made



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- 1/24/2002      Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- 1/28/2002      Post results of deficiency auction
- 2/1/2002      ISO provides EFORD percentages for Suppliers by unit
- New Suppliers requiring a PTID (PoinT IDentification) number must request one to participate in the next month’s auction.
- 2/7/2002      Transmission Owners to provide daily load shifting (customer switching) between LSEs Transmission Owners provide estimated load position by LSE for first day of upcoming Month
- 2/8/2002      ISO to ship accounting data to LSEs and Suppliers
- 2/11/2002      ISO provides Installed Capacity Requirements to LSEs
- New LSEs must provide creditworthiness proof to ISO (5 days before an auction)
- Last day for Suppliers to provide GADS for activity from 2 months ago
- 2/13/2002      Last day to adjust DMNC
- New Suppliers must submit sell agreements, certification (DMNC or SCR) by fax by 17:00 hours
- 2/15/2002      Monthly Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- Original Sell/Purchase agreements must be received by the ISO before an offer or bid can be accepted
- Transmission Owners provide Transmission District and LSE peak Load coincident with the Transmission District peak to ISO and LSEs
- ISO provides Summer 2002 DMNC ratings to Resources
- 2/18/2002      Holiday - ISO closed.
- 2/19/2002      Payment from purchasers of ICAP due

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- 2/20/2002 Post results of monthly auction
- GADS due from Suppliers for previous month's activity
- Supplier and LSE certifications due
- TOs report true-up load shifting (actual data) for LSE activity 3 months prior
- 2/21/2002 Payments to Suppliers of ICAP made
- 2/22/2002 Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- 2/26/2002 Post results of deficiency auction
- 3/1/2002 ISO provides EFORD percentages for Suppliers by unit
- New Suppliers requiring a PTID (PoinT Identification) number must request one to participate in the next month's auction.
- 3/7/2002 Transmission Owners to provide daily load shifting (customer switching) between LSEs
- Transmission Owners provide estimated load position by LSE for first day of upcoming Month
- 3/8/2002 ISO to ship accounting data to LSEs and Suppliers
- 3/11/2002 ISO provides Installed Capacity Requirements to LSEs
- New LSEs must provide creditworthiness proof to ISO (5 days before an auction)
- Last day for Suppliers to provide GADS for activity from 2 months ago
- 3/13/2002 Last day to adjust DMNC
- New Suppliers must submit sell agreements, certification (DMNC or SCR) by fax by 17:00 hours
- 3/15/2002 Monthly Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- Original Sell/Purchase agreements must be received by the ISO before an offer or bid can be accepted

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- 3/18/2002      Payment from purchasers of ICAP due
- 3/19/2002      Post results of monthly auction
- 3/20/2002      GADS due from Suppliers for previous month's activity
- Supplier and LSE certifications due
- TOs report true-up load shifting (actual data) for LSE activity 3 months prior
- 3/21/2002      Payments to Suppliers of ICAP made
- 3/25/2002      Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- 3/28/2002      Post results of deficiency auction
- ISO informs ICAP Suppliers of the amount of Unforced Capacity they are qualified to offer in the 2002 Summer Capability Period
- ISO informs LSEs of their final Unforced Capacity requirements for the upcoming Obligation Procurement Period
- 4/1/2002      Capability Period (Strip) Auction - bids and offers may be submitted between 8:00 and 17:00 hours
- ISO provides EFORD percentages for Suppliers by unit
- New Suppliers requiring a PTID (Point Identification) number must request one to participate in the next month's auction.
- 4/4/2002      Results of the Capability Period (Strip) Auction are posted and awards are issued.
- 4/5/2002      Transmission Owners to provide daily load shifting (customer switching) between LSEs
- Transmission Owners provide estimated load position by LSE for first day of upcoming Month
- 4/9/2002      ISO to ship accounting data to LSEs and Suppliers

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- 4/10/2002      ISO provides Installed Capacity Requirements to LSEs  
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- 5/7/2002      Transmission Owners to provide daily load shifting (customer switching) between LSEs
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- 5/15/2002      Monthly Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- Original Sell/Purchase agreements must be received by the ISO before an offer or bid can be accepted
- 5/16/2002      Payment from purchasers of ICAP due
- 5/17/2002      Post results of monthly auction
- 5/20/2002      GADS due from Suppliers for previous month's activity
- Supplier and LSE certifications due
- TOs report true-up load shifting (actual data) for LSE activity 3 months prior
- 5/21/2002      Payments to Suppliers of ICAP made
- 5/24/2002      Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- 5/27/2002      Holiday - ISO closed.
- 5/28/2002      Post results of deficiency auction

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- 6/20/2002      GADS due from Suppliers for previous month's activity
- Supplier and LSE certifications due
- TOs report true-up load shifting (actual data) for LSE activity 3 months prior
- 6/21/2002      Payments to Suppliers of ICAP made
- 6/24/2002      Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours

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- 6/27/2002 Post results of deficiency auction
- 7/1/2002 ISO provides EFORD percentages for Suppliers by unit
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- 7/4/2002 Holiday - ISO closed.
- 7/5/2002 Transmission Owners to provide daily load shifting (customer switching) between LSEs
- Transmission Owners provide estimated load position by LSE for first day of upcoming Month
- 7/9/2002 ISO to ship accounting data to LSEs and Suppliers
- 7/10/2002 ISO provides Installed Capacity Requirements to LSEs
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- 8/12/2002      ISO provides Installed Capacity Requirements to LSEs
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- 8/21/2002      Payments to Suppliers of ICAP made
- 8/23/2002      Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- 8/27/2002      Post results of deficiency auction
- 9/2/2002        Holiday - ISO closed.
- 9/3/2002        ISO provides EFORD percentages for Suppliers by unit
- New Suppliers requiring a PTID (PoinT IDentification) number must request one to participate in the next month's auction.
- 9/6/2002        Transmission Owners to provide daily load shifting (customer switching) between LSEs
- Transmission Owners provide estimated load position by LSE for first day of upcoming Month
- 9/9/2002        ISO to ship accounting data to LSEs and Suppliers
- 9/10/2002      ISO provides Installed Capacity Requirements to LSEs
- New LSEs must provide creditworthiness proof to ISO (5 days before an auction)
- Last day for Suppliers to provide GADS for activity from 2 months ago
- 9/11/2002      Last day to adjust DMNC
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- Original Sell/Purchase agreements must be received by the ISO before an offer or bid can be accepted
- 9/16/2002      Payment from purchasers of ICAP due
- 9/18/2002      Post results of monthly auction
- 9/19/2002      Results of the Monthly Auction are posted and awards are issued.

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- 9/20/2002 GADS due from Suppliers for previous month's activity
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- TOs report true-up load shifting (actual data) for LSE activity 3 months prior
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- ISO informs LSEs of their final Unforced Capacity requirements for the upcoming Obligation Procurement Period
- 10/1/2002 Capability Period (Strip) Auction - bids and offers may be submitted between 8:00 and 17:00 hours
- ISO provides EFORD percentages for Suppliers by unit
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- 10/21/2002 Payments to Suppliers of ICAP made
- 10/22/2002 Seller's payments sent.
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- 11/22/2002 Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- 1/27/2002 Post results of deficiency auction
- 11/28/2002 Holiday - ISO closed.
- 11/29/2002 Holiday - ISO closed.
- 12/2/2002 ISO provides EFORD percentages for Suppliers by unit  
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- Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- 12/24/2002     Holiday - ISO closed
- 12/25/2002     Holiday - ISO closed.

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- 12/27/2002 Post results of deficiency auction
- 1/1/2003 Holiday - ISO closed.
- 1/2/2003 ISO provides EFORD percentages for Suppliers by unit
- New Suppliers requiring a PTID (Point IDentification) number must request one to participate in the next month's auction.
- 1/7/2003 Transmission Owners to provide daily load shifting (customer switching) between LSEs
- Transmission Owners provide estimated load position by LSE for first day of upcoming Month
- 1/9/2003 ISO to ship accounting data to LSEs and Suppliers
- 1/10/2003 ISO provides Installed Capacity Requirements to LSEs
- New LSEs must provide creditworthiness proof to ISO (5 days before an auction)
- Last day for Suppliers to provide GADS for activity from 2 months ago
- 1/13/2003 Last day to adjust DMNC
- New Suppliers must submit sell agreements, certification (DMNC or SCR) by fax by 17:00 hours
- 1/15/2003 Monthly Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- Original Sell/Purchase agreements must be received by the ISO before an offer or bid can be accepted
- 1/16/2003 Payment from purchasers of ICAP due
- 1/17/2002 Post results of monthly auction
- 1/20/2003 GADS due from Suppliers for previous month's activity
- Holiday - ISO closed.

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- 1/21/2003      Supplier and LSE certifications due
- TOs report true-up load shifting (actual data) for LSE activity 3 months prior
- Payments to Suppliers of ICAP made
- 1/24/2003      Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- 1/28/2003      Post results of deficiency auction
- 2/3/2003        ISO provides EFORD percentages for Suppliers by unit
- New Suppliers requiring a PTID (PoinT IDentification) number must request one to participate in the next month’s auction.
- 2/7/2003        Transmission Owners to provide daily load shifting (customer switching) between LSEs
- Transmission Owners provide estimated load position by LSE for first day of upcoming Month
- ISO to ship accounting data to LSEs and Suppliers
- 2/10/2003      ISO provides Installed Capacity Requirements to LSEs
- New LSEs must provide creditworthiness proof to ISO (5 days before an auction)
- Last day for Suppliers to provide GADS for activity from 2 months ago
- 2/12/2003      Last day to adjust DMNC
- New Suppliers must submit sell agreements, certification (DMNC or SCR) by fax by 17:00 hours

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- 2/14/2003      Monthly Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- Original Sell/Purchase agreements must be received by the ISO before an offer or bid can be accepted
- Transmission Owners provide Transmission District and LSE peak Load coincident with the Transmission District peak to ISO and LSEs
- ISO provides Summer 2002 DMNC ratings to Resources
- 2/17/2003      Holiday - ISO closed.
- 2/18/2003      Payment from purchasers of ICAP due
- 2/19/2003      Post results of monthly auction
- 2/20/2003      GADS due from Suppliers for previous month's activity
- Supplier and LSE certifications due
- TOs report true-up load shifting (actual data) for LSE activity 3 months prior
- 2/21/2003      Payments to Suppliers of ICAP made
- 2/24/2003      Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- 2/27/2003      Post results of deficiency auction
- 3/3/2003      ISO provides EFORD percentages for Suppliers by unit
- New Suppliers requiring a PTID (PoinT IDentification) number must request one to participate in the next month's auction.
- 3/5/2003      *TOs provide information relating to customer switching through March 31<sup>st</sup>.*
- 3/7/2003      Transmission Owners to provide daily load shifting (customer switching) between LSEs
- Transmission Owners provide estimated load position by LSE for first day of upcoming Month
- ISO to ship accounting data to LSEs and Suppliers



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- 3/10/2003      ISO provides Installed Capacity Requirements to LSEs  
New LSEs must provide creditworthiness proof to ISO (5 days before an auction)  
Last day for Suppliers to provide GADS for activity from 2 months ago
- 3/12/2003      Last day to adjust DMNC  
New Suppliers must submit sell agreements, certification (DMNC or SCR) by fax by 17:00 hours
- 3/14/2003      Monthly Auction – bids and offers maybe submitted between 8:00 and 17:00 hours  
Original Sell/Purchase agreements must be received by the ISO before an offer or bid can be accepted
- 3/1/2003        Payment from purchasers of ICAP due
- 3/19/2003      Post results of monthly auction
- 3/20/2003      GADS due from Suppliers for previous month's activity  
Supplier and LSE certifications due  
TOs report true-up load shifting (actual data) for LSE activity 3 months prior
- 3/21/2003      Payments to Suppliers of ICAP made
- 3/24/2003      Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- 3/27/2003      Post results of deficiency auction
- 3/28/2003      ISO informs ICAP Suppliers of the amount of Unforced Capacity they are qualified to offer in the 2003 Summer Capability Period  
ISO informs LSEs of their final Unforced Capacity requirements for the upcoming Capability Period
- 4/1/2003        Capability Period (Strip) Auction - bids and offers may be submitted between 8:00 and 17:00 hours
- 4/4/2003        Results of the Capability Period (Strip) Auction are posted and awards are issued.

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- 4/7/2003      Transmission Owners to provide daily load shifting (customer switching) between LSEs
- Transmission Owners provide estimated load position by LSE for first day of upcoming Month
- 4/9/2003      ISO to ship accounting data to LSEs and Suppliers
- 4/10/2003      ISO provides Installed Capacity Requirements to LSEs
- New LSEs must provide creditworthiness proof to ISO (5 days before an auction)
- Last day for Suppliers to provide GADS for activity from 2 months ago
- 4/11/2003      Last day to adjust DMNC
- New Suppliers must submit sell agreements, certification (DMNC or SCR) by fax by 17:00 hours
- 4/15/2003      Monthly Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- Original Sell/Purchase agreements must be received by the ISO before an offer or bid can be accepted
- 4/16/2003      Payment from purchasers of ICAP due
- 4/18/2003      LSEs certify that they have procured sufficient Unforced Capacity for the 2002 May Obligation Procurement Period.
- Post results of monthly auction
- 4/20/2003      GADS due from Suppliers for previous month's activity
- 4/21/2003      Supplier and LSE certifications due
- TOs report true-up load shifting (actual data) for LSE activity 3 months prior
- Payments to Suppliers of ICAP made
- 4/24/2003      Deficiency Auction – bids and offers maybe submitted between 8:00 and 17:00 hours
- 4/28/2003      Post results of deficiency auction

# Attachment B:

## Locational Installed Capacity Requirements

- The Locational Installed Capacity Requirement for New York City (LBMP Zone J) is 80%.
- The Locational Installed Capacity Requirement for Long Island (LBMP Zone K) is 98%.
- The Unforced Capacity Equivalent of the Locational Installed Capacity Requirement will be determined at a later date by the ISO.

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

- The maximum Installed Capacity that may be located outside the NYCA is 2558 MW. This number will be updated annually based on ISO reliability studies.
- The maximum amount of Installed Capacity that may be located in each of the following control areas is as follows:

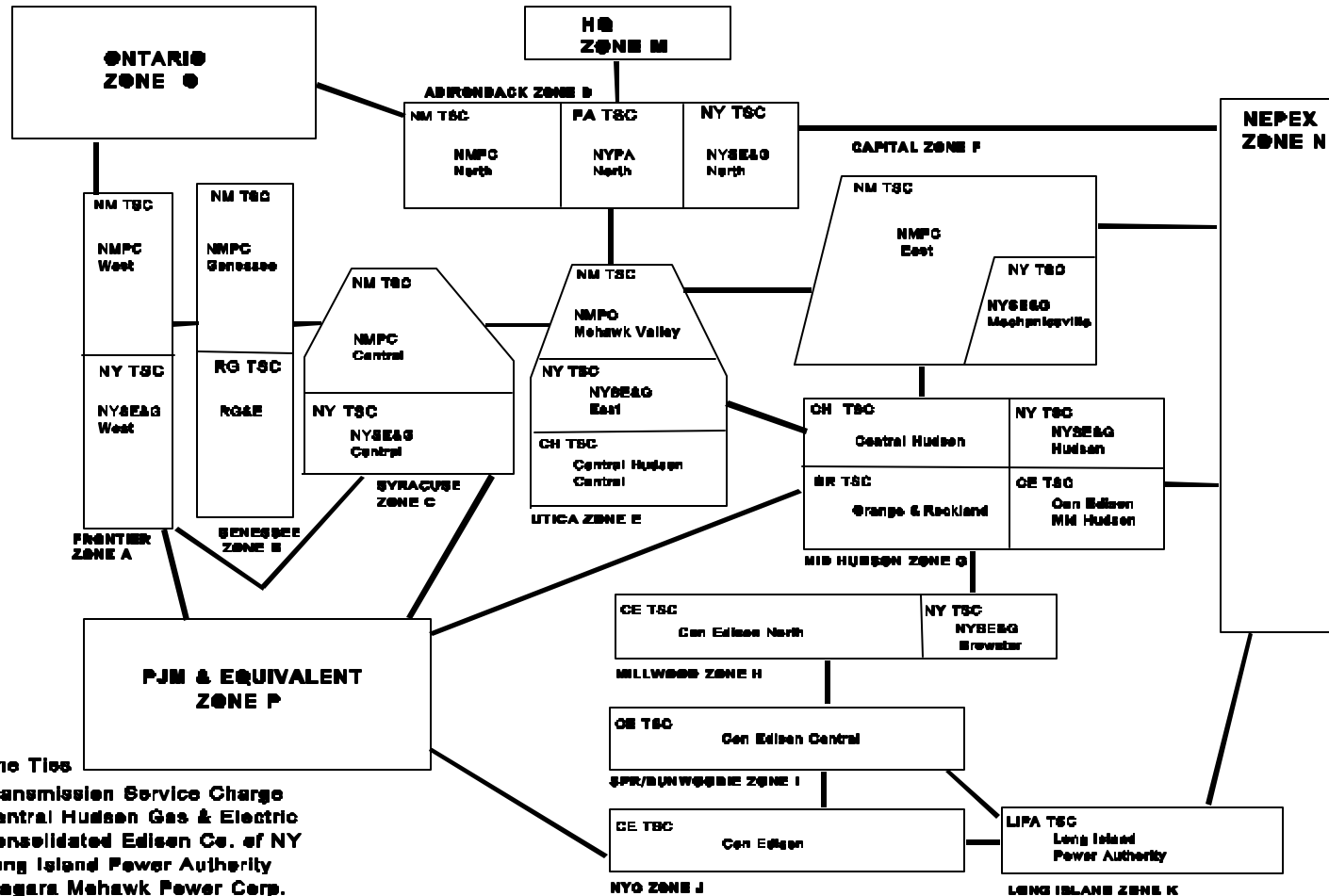
Neighboring Control Area	Total (MW)	Grandfathered (MW)	Remaining (MW)
PJM	1253	117	1136*
ISO-NE	50	50	0
Ontario-IMO	55	55	0
Hydro Quebec	1200	400	800
Totals	2558	622	1936

\* 1080 MW 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).

# **Attachment C:**

## **Maps of the NYCA Transmission Districts and Zones**

# Maps of the NYCA Transmission Districts and Zones



# Attachment D:

## Dependable Maximum Net Generating Capability Audit Forms and the Procedure to Weather Adjust DMNC Test Data

The following forms are included in this attachment:

- Steam Generation
- Hydro Generation
- Internal Combustion and Combustion Turbine Generation
- Combined Cycle Generation
- Other

### Procedure to Weather Adjust DMNC Test Data

All DMNC tests on internal combustion, combustion units and combined cycles units must be temperature adjusted. The temperature to be used for the temperature adjustment is the average ambient and cooling system temperature at the generator location experienced at the time of the TD peak during the previous four (4) relevant Capability Periods. The dates and times of the TD peak in each Capability Period are posted on the ISO website at [www.nyiso.com](http://www.nyiso.com) under “General Installed Capacity Information.”

- Determine the weather adjusted DMNC rating for the generator using the manufacturer’s provided temperature adjustment curves and generator specific curves (if applicable) produced from historical experience.
- Provide both sets of ratings and temperature adjustment curves.
- The higher of the two values may be claimed. The ISO may lower the value claimed for the weather-adjusted DMNC, if the provided temperature adjustment curves are significantly different.

## **Submission of DMNC Test Data**

DMNC test data should be submitted to the address listed below. Data should be submitted in accordance with Attachment A and Section 4.2 of the Installed Capacity Manual.

Manager Resource Reliability  
C/o New York Independent System Operator  
290 Washington Ave. Ext.  
Albany, NY 12203

**NEW YORK ISO**  
**DEPENDABLE MAXIMUM NET GENERATING CAPABILITY AUDIT**  
Fossil or Nuclear Steam Generation

Sheet \_\_\_\_\_  
Date \_\_\_\_\_

Company \_\_\_\_\_

Generator or Station	Date of Test	DEPENDABLE MAXIMUM NET CAPABILITY (MW)					Pre-Test DMNC Rating*	Post-Test DMNC Rating	Difference (Post-Pre)	Test			Remarks
		Demonstrated				Average				A	B	C	
		Hourly											
		1	2	3	4								

- A. Over Pressure
- B. Top Feed Water Heater OS
- C. Exceptions to Procedure Explained in Remarks Section
- \* From Last Like Capability Period

Signed: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_





**NEW YORK ISO**  
**DEPENDABLE MAXIMUM NET GENERATING CAPABILITY AUDIT**  
 Hydro Generation

Sheet \_\_\_\_\_  
 Date \_\_\_\_\_

Company \_\_\_\_\_

Generator or Station	Date of Test	DEPENDABLE MAXIMUM NET CAPABILITY (MW)						Pre-Test DMNC Rating*	Post-Test DMNC Rating	Difference (Post-Pre)	Test			Remarks
		Demonstrated				Average	A				B	C		
		Hourly												
		1	2	3	4									

\* From Last Like Capability Period

Signed: \_\_\_\_\_

Title: \_\_\_\_\_

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Date: \_\_\_\_\_

**DEPENDABLE MAXIMUM NET GENERATING CAPABILITY AUDIT**  
Internal Combustion and Combustion Turbine Generation

Sheet \_\_\_\_\_  
Date \_\_\_\_\_

Company \_\_\_\_\_

Generator or Station	Date of Test	CAPABILITY AT TEST TEMP. (MW)				Avg. Amb Temp (/F)	DMNC AT AVG. AMBIENT TEMP. (MW)		Remarks
		Test Temp. (/F)	Demonstrated	Per Curve	Excess (+) Deficiency (-)		Pre-Test DMNC Rating*	Post Test DMNC Rating	

\* From Last Like Capability Period

Signed: \_\_\_\_\_  
Title: \_\_\_\_\_

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Date: \_\_\_\_\_

**NEW YORK ISO**  
**DEPENDABLE MAXIMUM NET GENERATING CAPABILITY AUDIT**  
Combined Cycle Generation

Sheet \_\_\_\_\_  
Date \_\_\_\_\_

Company \_\_\_\_\_

Generator or Station	Date of Test	CAPABILITY AT TEST TEMP. (MW)					Avg.	DMNC AT AVG. AMBIENT TEMP. (MW)		Remarks		
		Test Temp. (/F)	Demonstrated					Per Curve	Excess(+) Deficiency(-)		Pre- Test DMNC Rating*	Post Test DMNC Rating
			Hourly 1   2   3   4	Aver.								

\* From Last Like Capability Period

Signed: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**NEW YORK ISO  
DEPENDABLE MAXIMUM NET GENERATING CAPABILITY AUDIT**

Other Generation or Production Data in Lieu of DMNC Test Data

Sheet \_\_\_\_\_  
Date \_\_\_\_\_

Company \_\_\_\_\_

Generator or Station	Date of Test	DEPENDABLE MAXIMUM NET CAPABILITY (MW)						Pre-Test DMNC Rating*	Post-Test DMNC Rating	Difference (Post-Pre)	Test			Remarks
		Demonstrated				Average	A				B	C		
		Hourly												
		1	2	3	4									

\* From Last Like Capability Period

Signed: \_\_\_\_\_

Title: \_\_\_\_\_

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Date: \_\_\_\_\_



# Attachment E:

## Grandfathered External Installed Capacity Agreements

Existing Installed Capacity Agreements entered into by Load Serving Entities and Suppliers in the neighboring Control Areas prior to September 17, 1999 have a Grandfathered status for the duration of the original contract.

Grandfathered External Installed Capacity rights are described in Section 5.12.2 of the ISO Services Tariff.

The Grandfathered contracts associated with each of the neighboring Control Areas are listed below:

Neighboring Control Area	Grandfathered (MW)	Contract Est. Date	Contract End Date
PJM	37	10/1/1990 11/1/1990	10/1/2030 11/1/2030
PJM	55	12/31/1996	8/31/2007
PJM	25	2/22/1999	4/30/2008
ISO-NE	50	9/25/1996	12/31/2013
Ontario-IMO	55	8/16/1996	12/31/2008
Hydro Quebec	400	4/1/1999	3/31/2004

# Attachment F: Agreement To Purchase Unforced Capacity in NYISO Installed Capacity Auctions

THIS AGREEMENT TO PURCHASE UNFORCED CAPACITY (the "Purchase Agreement"), dated as of this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, is given by \_\_\_\_\_, having a principal business address at \_\_\_\_\_ (the "Bidder").

## RECITALS

WHEREAS, pursuant to the terms of the New York Independent System Operator Services Tariff (the "ISO Services Tariff") and the NYISO Installed Capacity Manual (the "ICAP Manual"), the New York Independent System Operator, Inc. (the "NYISO") will administer "Strip" (twice per year), "Monthly" (12 per year), and as needed "Deficiency" auctions (the "Auctions"), wherein Offerors may sell and Bidders may purchase Unforced Capacity; and

WHEREAS, all capitalized terms used herein without definition shall have the meaning ascribed thereto in the ISO Services Tariff and/or the Independent System Operator Agreement (the "ISO Agreement") and the ICAP Manual; and

WHEREAS, to the extent that Bidder purchases Unforced Capacity under the terms of this Purchase Agreement, Bidder satisfies its Unforced Capacity requirements with respect to the Unforced Capacity so purchased; and

WHEREAS, Bidder is an Eligible Customer and intends that the submission of this Purchase Agreement, coupled with the submission of a properly formatted bid via electronic mail ("Electronic Bid") (together, "Bid Package"), shall constitute an official bid for purposes of each Auction in which the Bidder submits an Electronic Bid and that the Bid Package will be recorded and objectively analyzed pursuant to the ISO Services Tariff and the ICAP Manual, which materials have been reviewed by the Bidder;

NOW, THEREFORE, in consideration of the NYISO including Bidder's Electronic Bids in the Auctions, which Bidder acknowledges and agrees is adequate consideration for its obligations hereunder, Bidder and the NYISO (together the "Parties") hereby agree to the following:

### 1. Bid to Purchase Unforced Capacity.

- (a) The Parties agree that Auctions will be conducted in accordance with the ISO Services Tariff and the ICAP Manual.
- (b) The Parties agree that each Electronic Bid submitted is valid for only one Auction and that an Electronic Bid must be submitted for each Auction in which the Bidder desires to participate.
- (c) The Bidder agrees to purchase Unforced Capacity in the amounts, for the monthly effective periods, in the locations and for the maximum price (or less) listed in the Bidder's Electronic Bids (each individual bid listed in the Bidder's Electronic Bid being referred to as an "Individual Bid") and requests that the NYISO include the Individual Bids in the Auction for which they are submitted.
- (d) The Parties agree that the purchase price for the Unforced Capacity offered in each Individual Bid in an Auction shall be the Market Clearing Price established in that Auction (as determined by the NYISO, or its designee); provided, however, that if the Unforced Capacity is from a Subject Generator (as defined in Attachment I of the ICAP Manual) then the purchase price shall be adjusted in the same manner as the sale price is adjusted under the ICAP Manual.
- (e) The Parties agree that the Bidder's submission of a completed Bid Package represents a binding obligation of the Bidder to purchase and pay for the amount of Unforced Capacity designated by the NYISO in the Award Notice (as defined below) pursuant to the terms of the ISO Services Tariff and the ICAP Manual.
- (f) The Parties agree that the mere submission of a Bid Package does not obligate the NYISO to accept the Bid Package, in whole or in part, nor does the submission of a Bid Package grant any right to the Bidder to purchase any Unforced Capacity.
- (g) The Parties agree that the Market Clearing Price for Unforced Capacity could be positive or zero.
- (h) The Parties agree that the bids contained in the Bidder's Electronic Bid may be amended by the Bidder at any time during the period in which Electronic Bids are accepted (the "Bidding Period") by submitting a new Electronic Bid which must be received in accordance with this Section and the ICAP Manual. If an amendment is timely and correctly submitted by the Bidder as provided herein, the most recently received Electronic Bid, as indicated by the date and time of submission reported on the Electronic Bid, will supersede any previous Electronic Bid(s) and any previous Electronic Bid(s) will have no further force or effect.
- (i) The Parties agree that the original of this Purchase Agreement must be received by the NYISO by overnight mail service or delivery service requiring the signature of the addressee by **12:00 PM** on the business day before the first Auction in which the Bidder desires to participate, as specified in Attachment A of the ICAP Manual. Express mail deliveries must be delivered to:

ICAP Auctioneer  
C/o New York Independent System Operator  
290 Washington Ave. Ext.  
Albany, NY 12203

- (j) The Parties agree that to complete the Bid Package, the Bidder must submit, in addition to a Purchase Agreement, a properly formatted Electronic Bid to the NYISO at <buyicap@nyiso.com> prior to close of the Bidding Period in each Auction in which the Bidder wishes to participate. The Parties further agree that the Electronic Bid must be submitted in the format provided by the NYISO using Microsoft Excel software, that the Bidder must provide all information required on the Electronic Bid, that the Bidder must password-protect the file before transmitting it to the NYISO, and that the time of submission for all Electronic Bids will be determined by the date and time stamp of the automatic return receipt transmitted by the NYISO to the Bidder upon receipt of the Electronic Bid.
- (k) The Parties agree that timely submission of a Bid Package does not guarantee that the Bid Package is valid for inclusion in an Auction. The Parties agree that a Bid Package that has not been completed in conformity with the ICAP Manual and this Purchase Agreement, in the NYISO's sole judgment, shall be invalid and will be rejected.
- (l) In the event that the NYISO invalidates a Bidder's Bid Package, it shall notify the Bidder as soon as reasonably possible via email. If a Bidder's Bid Package is invalidated, the Bidder shall have the right to submit a revised Bid Package at any time until the close of the Bidding Period.
- (m) The Parties agree that the Bidder bears the sole responsibility for submitting a correct and complete Bid Package.
- (n) The Parties agree that the Bidder will not assign any of its rights or obligations under a Bid Package unless the assignee of such rights and obligations makes the representations and warranties in Section 3(a)(i), (ii) and (iii).

## **2. Payment Procedures for the Purchase of Unforced Capacity.**

- (a) The Bidder's obligation to purchase and pay for Unforced Capacity shall become effective upon the distribution of written notice (the "Award Notice") following each Auction, as specified in Attachment A to the ICAP Manual. The Award Notice shall specify the amount of Unforced Capacity, if any, that the Bidder shall be required to purchase (the "Awarded Unforced Capacity"), the Market Clearing Price of such Awarded Unforced Capacity, the location of such Awarded Unforced Capacity, the Total Purchase Price (as defined in this Section 2(a)) and wiring instructions for paying the Total Purchase Price for the Awarded Unforced Capacity. The total purchase price (the "Total Purchase Price") shall equal the sum of the products of the amount of Unforced Capacity and the Market Clearing Price for each

Individual Bid, except, if any Individual Bid to be included in such calculation includes Unforced Capacity from a Subject Generator, then the purchase price shall be adjusted in the same manner as the sale price is adjusted under the ICAP Manual.

- (b) Amounts due on Unforced Capacity purchased in the Strip Auctions will be settled on a monthly basis. In each monthly billing, the NYISO will issue bills for one sixth of the Total Purchase Price specified in the Award Notice for the last Capability Period Auction. Bills issued by the NYISO for the purchase of Unforced Capacity will be net of any rebates due to the Bidder.
- (c) Amounts due on Unforced Capacity purchased in the Monthly and Deficiency Auctions will be settled on a monthly basis. In each monthly billing, the NYISO will issue bills for the Total Purchase Price specified in the Award Notice for the last Auction. Bills issued by the NYISO for the purchase of Unforced Capacity will be net of any rebates due to the Bidder.
- (d) By 10:00 AM on the first banking day after the fifteenth day of the month after the month for which Unforced Capacity was purchased, Bidder shall cause funds to be wired to the accounts specified in the Award Notice in an amount equal to the Total Purchase Price, as indicated in the monthly bill issued by the NYISO for that Auction.
- (e) Within six (6) business days after receipt of an Award Notice by the Bidder, to the extent that the Bidder disputes the calculation of the Total Purchase Price due and payable, the Bidder shall give written notice to the NYISO, or its designee, setting forth in reasonable detail the basis for any such disagreement (“Dispute”). If the Bidder does not give written notice within the six (6) business day period, the Bidder shall be deemed to have irrevocably accepted the Total Purchase Price in the manner specified in the Award Notice as delivered to the Bidder by the NYISO, or its designee.
- (f) If a timely filed written notice of Dispute is given, the Bidder and the NYISO, or its designee, shall promptly commence good faith negotiations with a view to resolving the Dispute(s) within five (5) business days of the NYISO’s receipt of such notice. If the Dispute(s) are not resolved within the five (5) business day period, then the Dispute(s) shall thereafter be referred by either the Bidder or the NYISO, or its designee, to Richard L. Miles, Director, of the FERC Office of Dispute Resolution Service, or his successor in office (the “Director”) for a resolution of such Dispute(s) in accordance with this Purchase Agreement and the ICAP Manual. The resolution of the Dispute(s) shall be conducted in the following manner:
  - (i) Within three (3) business days after being notified of a Dispute, the Director shall identify and create a list of five (5) arbitrators who must be knowledgeable about the energy industry, to be delivered to the Bidder and the NYISO, or its designee.

- (ii) Within five (5) business days of receipt of such list from the Director, the Bidder and the NYISO, or its designee, separately, shall select three (3) arbitrators from the Director's list and resubmit their selections to the Director.
  - (iii) Within two (2) business days of the Director's receipt of the resubmitted list of arbitrators from the Bidder and the NYISO, or its designee, the Director shall select in its sole discretion one arbitrator (the "Arbitrator") to resolve the Dispute(s) in accordance with the terms and conditions of this Purchase Agreement and the ICAP Manual. The decision and resolution of the Arbitrator shall be rendered within twenty (20) business days after referral of the Dispute(s) to the Arbitrator and shall be final and binding upon the parties. During this twenty (20) business day period, the Bidder and the NYISO, or its designee, will be allowed to make written and oral presentations to the Arbitrator. The Bidder and the NYISO, or its designee, shall use their best efforts to cause the Arbitrator to render its decision within the twenty (20) business day period described above, and each shall cooperate with the Arbitrator and provide the Arbitrator with access to the books, records and representatives of each as the Arbitrator may require in order to render its determination. All of the fees and expenses of any Arbitrator retained pursuant to this Section shall be paid by the party who does not prevail in the Dispute(s).
  - (iv) In the event that the Bidder is barred, by law, from entering into binding arbitration, Disputes shall be heard in a court of competent jurisdiction in the State of New York.
- (g) To the extent that the Bidder disputes the calculation of the Total Purchase Price due and payable, the Bidder shall remain obligated to make payment in full for the Unforced Capacity, as indicated in the Award Notice. If it is later determined, in accordance with this Section 2, that an overpayment has been made by the Bidder to the NYISO, then the NYISO shall refund the amount overpaid to the Bidder. If it is later determined, in accordance with this Section 2, that an underpayment has been made by the Bidder, then the Bidder shall pay the amount owed to the NYISO. Payments made pursuant to this Section 2(e) shall also include interest calculated from the date that the overpayment or underpayment was made, in accordance with the methodology specified for interest on refunds in the FERC regulations at 18 C.F.R. § 35.19a(a)(2)(iii).
- (h) If a mistake is discovered in the calculation of information provided in an Award Notice after its delivery, the NYISO reserves the right and has the obligation to revise the Award Notice and the information therein, and the Bidder acknowledges that it will be obligated to make arrangement for payment or receipt of payment in accordance with the revised Award Notice. Prior to making such revision, the NYISO shall notify Bidder of the mistake and provide Bidder with an explanation of the basis for the revised Award Notice.

### **3. Representations and Warranties of the Bidder.**

- (a) The Bidder hereby represents and warrants to the NYISO as follows:
- (i) Bidder is an Eligible Customer and is purchasing Unforced Capacity solely for purposes related to its business as a producer, processor, commercial user of or a merchant handling Unforced Capacity or the products or by-products thereof.
  - (ii) Bidder shall not resell any Unforced Capacity purchased through the Auctions for the purpose of meeting the Installed Capacity requirements imposed by operators of External Control Areas.
  - (iii) Bidder has full power and authority to execute and deliver the Bid Package and to perform its obligations hereunder. The completed Bid Package constitutes a valid and legally binding obligation of the Bidder.
  - (iv) The execution and delivery of the Bid Package and the consummation of the transactions contemplated hereby have been duly and validly approved by all requisite action, corporate or otherwise, on the part of Bidder, and no other proceedings, corporate or otherwise, on the part of Bidder are necessary to approve and submit the Bid Package and to consummate the transactions contemplated hereby.
  - (v) Bidder is qualified to purchase the Unforced Capacity and has sufficient funds to purchase the Unforced Capacity as contemplated herein.
  - (vi) Bidder holds all licenses, franchises, permits and authorizations in compliance with any applicable laws, rules and regulations that are necessary for the lawful ownership and/or use of the Unforced Capacity.
  - (vii) Other than providing the information required by this Purchase Agreement, Bidder has not amended or changed this Purchase Agreement in any way to make it different from the "Purchase Agreement" attached to the ICAP Manual as Attachment F.
- (b) All representations and warranties contained herein shall be deemed to be made again as of the purchase and sale of the Unforced Capacity as contemplated in this Purchase Agreement.

#### **4. Indemnification; Release of Liability.**

- (a) Bidder agrees to indemnify and save and hold harmless the NYISO, and all of its respective officers, directors, employees, and agents, from and against any and all losses, damages, expenses, liabilities, claims or demands, including attorney's fees, (collectively, the "Damages") whatsoever suffered or incurred by such parties resulting, arising from or relating to Bidder's breach of any of its agreements, covenants, representations or warranties contained herein, except for those Damages resulting from the ISO's gross negligence or intentional misconduct.

- (b) Bidder hereby releases the NYISO, and all of its officers, directors, employees and agents, from any and all liability arising from or relating to the Auctions, except with respect to any gross negligence or intentional misconduct on the part of the NYISO, its officers, directors, employees, or agents.

**5. Miscellaneous.**

- (a) All inquires, notices, and communications can be given by the NYISO to the Bidder as follows:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

- (b) All representations, warranties, covenants, and obligations of this Purchase Agreement shall survive the purchase of the Unforced Capacity by the Bidder.
- (c) The Bidder's Bid Package, together with the ISO Services Tariff and the ICAP Manual, constitute the entire agreement between the Parties on the subject matter hereof and supersede all prior discussions, agreements, and understandings of any kind and nature between them.
- (d) It is understood and agreed that the provisions of this Purchase Agreement are intended for the benefit of the Bidder and the NYISO and may be enforced directly by the NYISO against Bidder or by the Bidder against the NYISO.
- (e) This Purchase Agreement and all Electronic Bids shall be governed by and construed in accordance with the laws of the State of New York without giving effect to its conflict of laws provisions.



IN WITNESS WHEREOF, this Purchase Agreement has been submitted as of the date first above written.

NAME OF BIDDER:

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

New York Independent System Operator, Inc.

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

# Attachment G

## Agreement To Sell Unforced Capacity in NYISO Administered Installed Capacity Auctions

THIS AGREEMENT TO SELL UNFORCED CAPACITY (the "Sale Agreement"), dated as of this \_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, is given by \_\_\_\_\_, having a principal business address at \_\_\_\_\_ (the "Offeror").

### RECITALS

WHEREAS, pursuant to the terms of the New York Independent System Operator Services Tariff (the "ISO Services Tariff") and the NYISO Installed Capacity Manual (the "ICAP Manual"), the New York Independent System Operator, Inc. (the "NYISO") will administer "Strip" (twice per year), "Monthly" (12 per year), and as needed "Deficiency" auctions (the "Auctions"), wherein Offerors may sell and Bidders may purchase Unforced Capacity; and

WHEREAS, all capitalized terms used herein without definition shall have the meaning ascribed thereto in the ISO Services Tariff and/or the Independent System Operator Agreement (the "ISO Agreement") and the ICAP Manual; and

WHEREAS, Offeror is an Eligible Customer and intends that the submission of this Sale Agreement, coupled with the submission of a properly formatted offer via electronic mail ("Electronic Offer") (together the "Offer Package"), shall constitute an official offer for purposes of each Auction in which the Offeror submits an Electronic Offer and that the Offer Package will be recorded and objectively analyzed pursuant to the ISO Services Tariff and the ICAP Manual, which materials have been reviewed by the Offeror;

NOW, THEREFORE, in consideration of the NYISO including Offeror's Electronic Offers in the Auctions, which Offeror acknowledges and agrees is adequate consideration for its obligations hereunder, Offeror and the NYISO (together the "Parties") hereby agree to the following:

#### 1. Offer to Sell Unforced Capacity.

- (a) The Parties agree that the Auctions will be conducted in accordance with the ISO Services Tariff and the ICAP Manual.

- (b) The Parties agree that each Electronic Offer submitted is valid for only one Auction and that an Electronic Offer must be submitted for each Auction in which the Offeror desires to participate.
- (c) The Offeror agrees to sell Unforced Capacity in the amounts, for at least the minimum prices, and from the resources specified in Offeror's Electronic Offers (each individual offer listed in an Offeror's Electronic Offer being referred to as an "Individual Offer") and requests that the NYISO submit the Individual Offers in Auction for which they are submitted. The Parties agree that the sale price for the Unforced Capacity offered in each Individual Offer in an Auction shall be the Market Clearing Price established in that Auction (as determined by the NYISO, or its designee); provided, however, that if the Unforced Capacity is from a Subject Generator (as defined in the Attachment I of the ICAP Manual) then the sale price for the Unforced Capacity indicated in such Individual Offer shall be calculated pursuant to the ICAP Manual.
- (d) The Parties agree that the Offeror's submission of a completed Offer Package represents a binding obligation of the Offeror to sell the amount of Unforced Capacity referenced in its Electronic Offer.
- (e) The Parties agree that the mere submission of an Offer Package does not obligate the NYISO to accept the Offer Package, in whole or in part, nor does the submission of an Offer Package grant any right to the Offeror to sell any Unforced Capacity.
- (f) The Parties agree that the Market Clearing Price for Unforced Capacity could be positive or zero.
- (g) The Parties agree that the offers contained in Offeror's Electronic Offer may be amended by the Offeror at any time during the period in which Electronic Offers are accepted (the "Offering Period") by submitting a new Electronic Offer which must be received in accordance with this Section and the ICAP Manual. If an amendment is timely and correctly submitted by the Offeror as provided herein, the most recently received Electronic Offer, as indicated by the date and time of submission reported on the Electronic Offer, will supersede any previous Electronic Offer(s) and any previous Electronic Offer(s) will have no further force or effect.
- (h) The Parties agree that the original of this Sale Agreement must be received by the NYISO by overnight mail service or delivery service requiring the signature of the addressee by **12:00 PM** on the business day before the first Auction in which the Offeror desires to participate, as specified in Attachment A of the ICAP Manual. Express mail deliveries must be delivered to:  
  
ICAP Auctioneer  
C/o New York Independent System Operator  
290 Washington Ave. Ext.  
Albany, NY 12203
- (i) The Parties agree that to complete the Offer Package, the Offeror must submit, in addition to a Sale Agreement, a properly formatted Electronic Offer to the NYISO at <sellicap@nyiso.com>

prior to close of the Offering Period in each Auction in which the Offeror wishes to participate. The Parties further agree that the Electronic Offer must be submitted in the format provided by the NYISO using Microsoft Excel software, that the Offeror must provide all information required on the Electronic Offer, that the Offeror must password-protect the file before transmitting it to the NYISO, and that the time of submission for all Electronic Offers will be determined by the date and time stamp of the automatic return receipt transmitted by the NYISO to the Offeror upon receipt of the Electronic Offer.

- (j) The Parties agree that timely submission of an Offer Package does not guarantee that the Offer Package is valid for inclusion in an Auction. The Parties agree that an Offer Package that has not been completed in conformity with the ICAP Manual and this Sale Agreement, in the ISO's sole judgment, shall be invalid and will be rejected.
- (k) In the event that the NYISO invalidates an Offeror's Offer Package, it shall notify the Offeror as soon as reasonably possible via email. If an Offeror's Offer Package is invalidated, the Offeror shall have the right to submit a revised Offer Package at any time until the close of the Offering Period.
- (l) The Parties agree that the Offeror bears the sole responsibility for submitting a correct and complete Offer Package.

## **2. Payment Procedures for Sale of Unforced Capacity**

- (a) The Offeror's obligation to sell Unforced Capacity shall become effective upon the distribution of written notice (the "Award Notice") following each Auction, as specified in Attachment A to the ICAP Manual. The Award Notice shall specify the amount of Unforced Capacity that the Offeror has sold in the Auction, the Market Clearing Price of such Unforced Capacity, the location of the resource and the Total Selling Price (as defined in this Section 2(a)). The total selling price ("Total Selling Price") shall equal the sum of the products of the amount of Unforced Capacity and the Market Clearing Price for each Individual Offer, except, if any Individual Offer to be included in such calculation includes Unforced Capacity from a Subject Generator (as defined in the Attachment I of the ICAP Manual), then the individual sales price for any such Individual Offer that must be included in the calculation of Total Selling Price shall be calculated pursuant to the ICAP Manual.
- (b) Within six (6) business days of Offeror's receipt of the Award Notice, Offeror shall give wiring instructions to the NYISO, or its designee, designating the account(s) to which funds generated from the Auction will be transferred by the NYISO pursuant to the ICAP Manual.
- (c) By 10:00 AM on the first banking day after the 20th day of the month after the month for which Unforced Capacity was sold, the NYISO shall cause funds to be wired to the accounts specified in Section 2(b) of this Sale Agreement in an amount equal to the Total Selling Price specified in the Award Notice for that Auction.

- (d) Unforced Capacity sold in the Strip Auction will be paid at one sixth the total amount specified in the Award Notice after the month for which Unforced Capacity was sold, and each month thereafter until the total award value is satisfied.
- (e) Within six (6) business days after receipt of an Award Notice by the Offeror, to the extent that the Offeror disputes the calculation of the Total Selling Price due and payable, the Offeror shall give written notice to the NYISO, or its designee, setting forth in reasonable detail the basis for any such disagreement (“Dispute”). If the Offeror does not give written notice within the six (6) business day period, the Offeror shall be deemed to have irrevocably accepted the Total Selling Price in the manner specified in the Award Notice as delivered to the Offeror by the NYISO, or its designee.
- (f) If a timely filed written notice of Dispute is given, the Offeror and the NYISO, or its designee, shall promptly commence good faith negotiations with a view to resolving the Dispute(s) within five (5) business days of the ISO’s receipt of such notice. If the Dispute(s) are not resolved within the five (5) business day period, then the Dispute(s) shall thereafter be referred by either the Offeror or the NYISO, or its designee, to Richard L. Miles, Director, of the FERC Office of Dispute Resolution Service, or his successor in office (the “Director”) for a resolution of such Dispute(s) in accordance with this Sale Agreement and the ICAP Manual. The resolution of the Dispute(s) shall be conducted in the following manner:
  - (i) Within three (3) business days after being notified of a Dispute, the Director shall identify and create a list of five (5) arbitrators who must be knowledgeable about the energy industry, to be delivered to the Offeror and the NYISO, or its designee.
  - (ii) Within five (5) business days of receipt of such list from the Director, the Offeror and the NYISO, or its designee, separately, shall select three (3) arbitrators from the Director’s list and resubmit their selections to the Director.
  - (iii) Within two (2) business days of the Director’s receipt of the resubmitted list of arbitrators from the Offeror and the NYISO, or its designee, the Director shall select in its sole discretion one arbitrator (the “Arbitrator”) to resolve the Dispute(s) in accordance with the terms and conditions of this Sale Agreement and the ICAP Manual. The decision and resolution of the Arbitrator shall be rendered within twenty (20) business days after referral of the Dispute(s) to the Arbitrator and shall be final and binding upon the parties. During this twenty (20) business day period, the Offeror and the NYISO, or its designee, will be allowed to make written and oral presentations to the Arbitrator. The Offeror and the NYISO, or its designee, shall use their best efforts to cause the Arbitrator to render its decision within the twenty (20) business day period described above, and each shall cooperate with the Arbitrator and provide the Arbitrator with access to the books, records and representatives of each as the Arbitrator may require in order to render its determination. All of the fees and expenses

of any Arbitrator retained pursuant to this Section shall be paid by the party who does not prevail in the Dispute.

- (iv) In the event that the Offeror is barred, by law, from entering into binding arbitration, Disputes shall be heard in a court of competent jurisdiction in the State of New York.
- (f) To the extent that the Offeror disputes the calculation of the Total Selling Price due and payable, NYISO shall remain obligated to make payment in full for the Unforced Capacity as indicated in the Award Notice. If it is later determined, in accordance with this Section 2 that an underpayment has been made by the NYISO to the Offeror, then the NYISO shall pay the amount owed to the Offeror. If it is later determined, in accordance with this Section 2, that an overpayment has been made by the NYISO to the Offeror, then the Offeror shall refund the amount of the overpayment to the NYISO. Payments made pursuant to this Section 2(f) shall also include interest calculated from the date that the underpayment or overpayment was made, in accordance with the methodology specified for interest on refunds in the FERC regulations at 18 C.F.R. § 35.19a(a)(2)(iii).
- (g) If a mistake is discovered in the calculation of information provided in an Award Notice after its delivery, the NYISO reserves the right and has the obligation to revise the Award Notice and the information therein, and the Offeror acknowledges that it will be obligated to make arrangement for payment or receipt of payment in accordance with the revised Award Notice. Prior to making such revision, the NYISO shall notify Offeror of the mistake and provide the Offeror with an explanation of the basis for the revised Award Notice.

### **3. Representations and Warranties of the Offeror.**

- (a) The Offeror hereby represents and warrants to the NYISO as follows:
  - (i) Offeror is an Eligible Customer and is selling Unforced Capacity solely for purposes related to its business as a producer, processor, commercial user of or a merchant handling Unforced Capacity or the products or by-products thereof.
  - (ii) Offeror has full power and authority to execute and deliver the Offer Package and to perform its obligations thereunder. The completed Offer Package constitutes a valid and legally binding obligation of the Offeror.
  - (iii) The execution and delivery of the Offer Package and the consummation of the transactions contemplated thereby have been duly and validly approved by all requisite action, corporate or otherwise, on the part of Offeror, and no other proceedings, corporate or otherwise, on the part of Offeror are necessary to approve and submit the Offer Package and to consummate the transactions contemplated hereby.
  - (iv) Offeror is the Installed Capacity Holder (as defined in the ICAP Manual) of the Unforced Capacity being offered pursuant to this Sale Agreement free and clear of any

restrictions on transfer (other than imposed under the ISO Services Tariff and the ICAP Manual), taxes, security interests, options, warrants, purchase rights, contracts, commitments, equities, claims, or demands.

(v) The amount of Unforced Capacity that Offeror has offered for sale pursuant to the Sale Agreement does not exceed the amount of Qualified Installed Capacity, as defined in the ICAP Manual, that the resource from which such Unforced Capacity is obtained (the "Selected Resource") is permitted to provide. Offeror will provide documentation evidencing the amount of Qualified Installed Capacity that the Selected Resource may provide.

(vi) The amount of Unforced Capacity that the Offeror is offering for sale pursuant to the Sale Agreement does not exceed the Offeror's share of the amount of Unforced Capacity that the Selected Resource is permitted to provide.

(vii) Offeror [owns] [has contracted to purchase] [is designated as the agent for the owner of] the share of the Selected Resource offered pursuant to this Sale Agreement. (Circle the bracketed language that is applicable and strike the remaining bracketed language.) If Offeror has contracted to purchase or is designated as the agent for the owner of the share of the Selected Resource offered, evidence of such arrangement has been attached to this Sale Agreement.

(viii) The Unforced Capacity offered for sale pursuant to this Sale Agreement has not previously been committed in the New York market or in any other market.

(ix) The Unforced Capacity sold by the Offeror in the Auctions is thereby committed to the NYCA and cannot be released by the Offeror outside the NYCA until the term of the Unforced Capacity sold in the Auctions has expired.

(x) Offeror shall hold, use, and assign any Unforced Capacity offered in the Auctions in accordance with the terms and conditions set forth in the ISO Services Tariff and the ICAP Manual.

(xi) Other than providing the information required by this Sale Agreement, Offeror has not amended or changed this Sale Agreement in any way to make it different from the Sale Agreement attached to the ICAP Manual as Attachment G.

(b) All representations and warranties contained herein shall be deemed to be made again as of the purchase and sale of the Unforced Capacity contemplated in this Sale Agreement.

#### **4. Indemnification; Release of Liability.**

(a) Offeror agrees to indemnify and save and hold harmless the NYISO, and all of its respective officers, directors, employees, and agents, from and against any and all losses, damages, expenses, liabilities, claims, or demands, including attorney's fees, (collectively, the "Damages") whatsoever

suffered or incurred by such parties resulting, arising from or relating to Offeror's breach of any of its agreements, covenants, representations, or warranties contained herein, except for those Damages resulting from the ISO's gross negligence or intentional misconduct.

(b) Offeror hereby releases the NYISO, and all of its officers, directors, employees and agents, from any and all liability arising from or relating to the Auctions, except with respect to any gross negligence or intentional misconduct on the part of the NYISO, its officers, directors, employees, or agents.

**5. Miscellaneous.**

(a) All inquires, notices and communications can be given by the NYISO to the Offeror as follows:

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

(b) All representations, warranties, covenants, and obligations of this Sale Agreement shall survive the sale of the Unforced Capacity by the Offeror.

(c) The Offeror's Offer Package, together with the ISO Services Tariff and the ICAP Manual, constitute the entire agreement between the Parties on the subject matter hereof and supersede all prior discussions, agreements, and understandings of any kind and nature between them.

(d) It is understood and agreed that the provisions of this Sale Agreement are intended for the benefit of the Offeror and the NYISO and may be enforced directly by the NYISO against Offeror or by the Offeror against the NYISO.

(e) This Sale Agreement and all Electronic Bids shall be governed by and construed in accordance with the laws of the State of New York without giving effect to its conflict of laws provisions.

IN WITNESS WHEREOF, this Sale Agreement has been submitted as of the date first above written.

NAME OF OFFEROR:



4:07 PM, 05/17/2001

**CLEAN Proposed Stage 2 ICAP Manual  
Dated May 17, 2001, for BIC Consideration**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

New York Independent System Operator, Inc.

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

# Attachment H:

## NYISO Administered Installed Capacity Auctions: Illustrations of Market-Clearing Price Calculations

### Example 1: No Locational Constraints Bind, Partially Selected Offer

Suppose that the following offers are made into a second phase of a two-phase auction (or into the single phase of a one-phase auction):

- 100 MW of Unforced Capacity from Generator X, which is located in the NYCA but not in any other Locality, is offered at \$2/kW month.
- 100 MW of Unforced Capacity from Generator Y, located in Locality Z, is offered at \$5/kW month.

Also suppose the following bids are made into that phase:

- Bidder A offers to purchase 150 MW of Unforced Capacity at \$6/kW month.
- Bidder B offers to purchase 75 MW of Unforced Capacity at \$3/kW month.

Both Bidders state that the Unforced Capacity they are purchasing must be located in the NYCA, but do not place further restrictions on the location of the Installed Capacity Supplier.

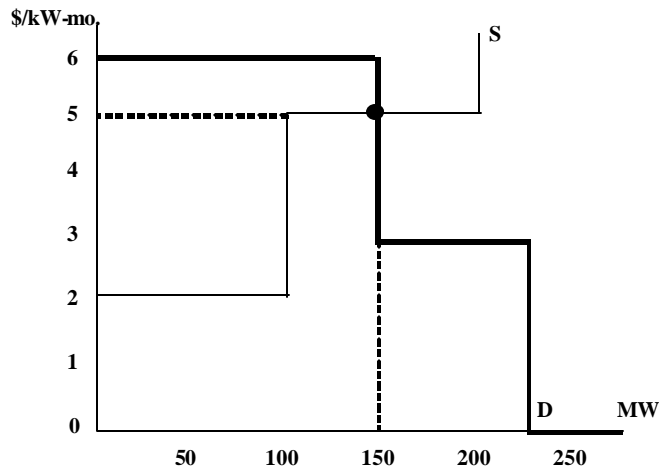
The ISO will select the following offers and bids in this phase:

- All of the 100 MW of Unforced Capacity offered from Generator X.
- 50 MW of the 100 MW of Unforced Capacity offered from Generator Y.
- All of the 150 MW that Bidder A Bids to purchase.
- None of the 75 MW that Bidder B Bids to purchase.

Since all of the Unforced Capacity offered in this phase meets the locational criteria stated in each of the bids, the locational constraints did not affect the ISO's selection of Installed Capacity Suppliers. This also means that the ISO will only calculate a single Market-Clearing Price for Unforced Capacity for this phase, which will apply to all locations.

That Market-Clearing Price shall be the bid cost of meeting demand for a small incremental amount of Unforced Capacity at the lowest cost. If it had been necessary to acquire an additional MW of Unforced Capacity in this phase,<sup>1</sup> (1) the ISO could have selected 51 MW from Generator Y, instead of 50 MW; or (2) it could have selected only 149 MW of Bidder A's 150 MW bid to purchase Energy. Since Generator Y's offer price is \$5/kW month, while Bidder A's bid price is \$6/kW month, it would be less expensive to purchase additional Installed Capacity from Generator Y than to buy it back from Bidder A. Therefore, Generator Y's bid of \$5/kW month will set the Market-Clearing Price of Unforced Capacity. (If the price were set at \$6/kW month, 200 MW would be offered, while only 150 MW are demanded. Therefore, a price of \$6/kW month would not clear the market, and it is necessary to bring the price down to \$5/kW month to bring the quantity offered into the market down to 150 MW.)

### Example 1



<sup>1</sup> The size of the increment of demand that the NYISO will actually use to determine Market-Clearing Prices will be smaller than the minimum increment specified for bids and offers in the ISO Procedures. Therefore, if the ISO Procedures call for the number of MWs of Unforced Capacity that a Bidder Bids to buy or an Offeror offers to sell to be stated in terms of tenths of a MW, for example, then the ISO would determine Market-Clearing Prices of Unforced Capacity by calculating the bid cost of meeting an incremental demand for a quantity of Unforced Capacity that is smaller than a tenth of a MW.

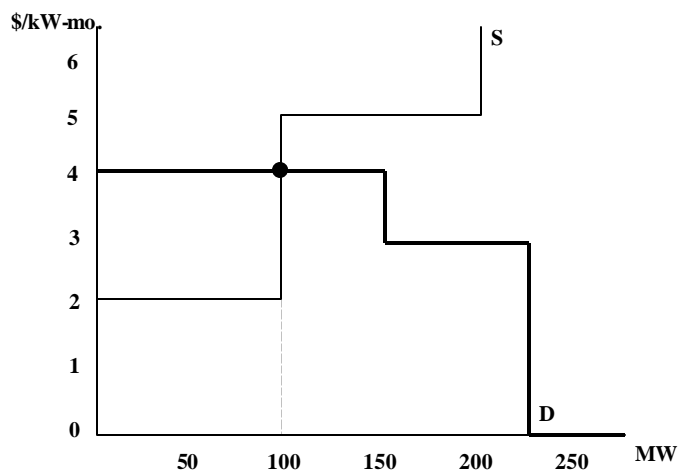
## Example 2: No Locational Constraints Bind, Partially Selected Bid

If we modify the preceding example by changing the price specified by Bidder A to \$4/kW month (but not making any other changes), then the ISO would select the following offers and bids in this phase:

- All of the 100 MW of Unforced Capacity offered from Generator X.
- None of the 100 MW of Unforced Capacity offered from Generator Y.
- 100 of the 150 MW that Bidder A bids to purchase.
- None of the 75 MW that Bidder B bids to purchase.

If it had been necessary to acquire an additional MW of Unforced Capacity in this phase, (1) the ISO could have selected 1 MW from Generator Y, instead of 0 MW; or (2) it could have selected only 99 MW of Bidder A's 150 MW bid to purchase Energy. Bidder A's bid price is now \$4/kW month, lower than Generator Y's \$5/kW-month offer price, so Bidder A's bid price will be used to set the Market-Clearing Price of Unforced Capacity at \$4/kW month for this phase. (If the price were set at \$5/kW month, then Bidder A would be charged more than it has agreed to pay for the Unforced Capacity it has purchased in the auction. In order not to charge more than Bidder A has agreed to pay, it is necessary to bring the price down to \$4/kW month. That price permits the market to clear at a quantity of 100 MW.)

### Example 2



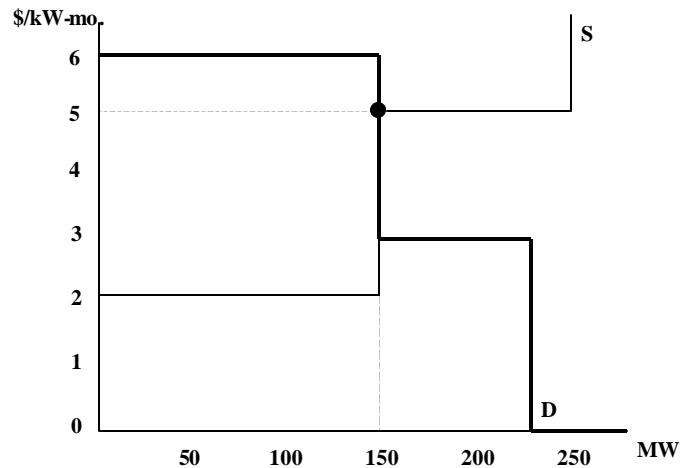
### Example 3: No Locational Constraints Bind, No Partially Selected Offers or Bids, Offer Sets the Price

Now modify Example 1 so that the amount of Unforced Capacity offered from Generator X increases to 150 MW (still at a price of \$2/kW month). The ISO would select the following offers and bids in this phase:

- All of the 150 MW of Unforced Capacity offered from Generator X.
- None of the 100 MW of Unforced Capacity offered from Generator Y.
- All of the 150 MW that Bidder A Bids to purchase.
- None of the 75 MW that Bidder B Bids to purchase.

If it had been necessary to acquire an additional MW of Unforced Capacity in this phase, (1) the ISO could have selected 1 MW from Generator Y, instead of 0 MW; or (2) it could have selected only 149 MW of Bidder A's 150 MW bid to purchase Energy. Since Generator Y's offer price is \$5/kW month, while Bidder A's bid price is \$6/kW month, the Market-Clearing Price of Unforced Capacity for this phase will be set at the lower of these, or \$5/kW month. The consequences of choosing a higher price are the same as in Example 1.

### Example 3



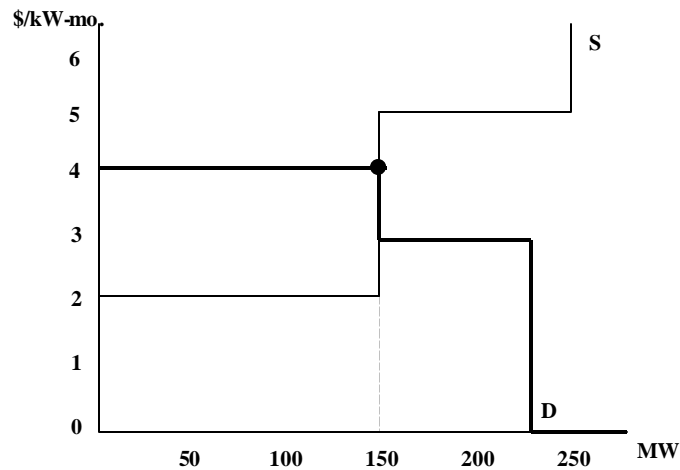
### Example 4: No Locational Constraints Bind, No Partially Selected Offers or Bids, Bid Sets the Price

Next, modify Example 3 by changing the price specified by Bidder A to \$4/kW month. Then the ISO would select the following offers and bids:

- All of the 150 MW of Unforced Capacity offered from Generator X.
- None of the 100 MW of Unforced Capacity offered from Generator Y.
- All of the 150 MW that Bidder A Bids to purchase.
- None of the 75 MW that Bidder B Bids to purchase.

If it had been necessary to provide an additional MW of Unforced Capacity in this phase, (1) the ISO could have selected 1 MW from Generator Y, instead of 0 MW; or (2) it could have selected only 149 MW of Bidder A's 150 MW bid. Since Generator Y's offer price is \$5/kW month, while Bidder A's bid price is \$4/kW month, the lower of these, or \$4/kW month, will be used to set the Market-Clearing Price of Unforced Capacity for this phase.

### Example 4



### Example 5: Locality Constraint Binds

Return again to Example 1, but add the assumption that Bidder A has specified that its bid is valid for Unforced Capacity located in Locality Z only.

The ISO would select the following offers and bids in this phase:

- 75 MW of the 100 MW of Unforced Capacity offered from Generator X.

- All of the 100 MW of Unforced Capacity offered from Generator Y.
- 100 MW of the 150 MW that Bidder A Bids to purchase.
- All of the 75 MW that Bidder B Bids to purchase.

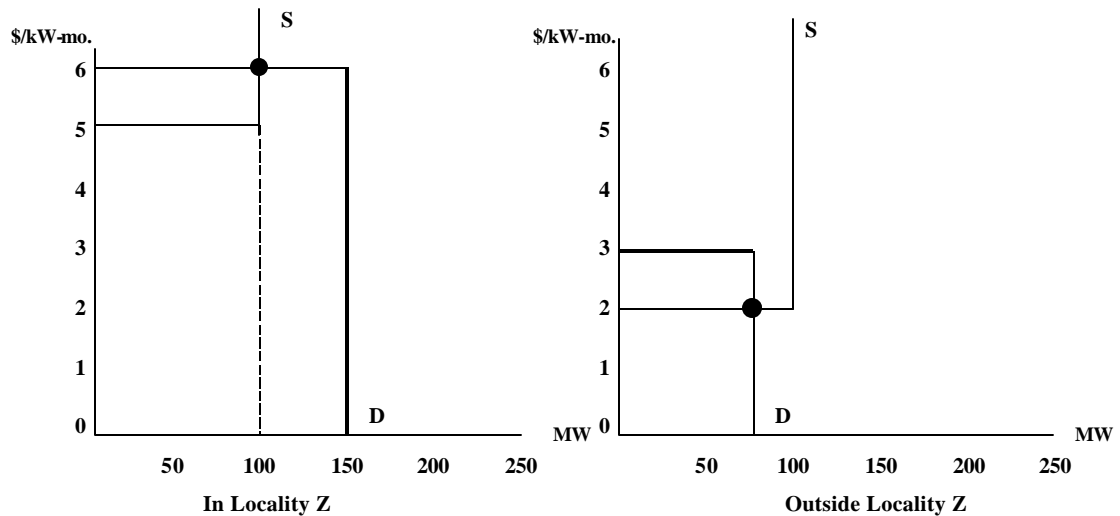
While there is more than 150 MW of Unforced Capacity available with an offer price of less than \$6/kW-month (Bidder A's bid price), most of it is not located in Locality Z. Only the 100 MW offered from Generator Y at \$5/kW month is located in Locality Z, so only 100 MW of Bidder A's bid was selected.

All of Generator Y's offer was selected, even though Generator X's Unforced Capacity was offered at a lower price and not all of it was selected. This means that the Locality Z constraint is binding (since Generator Y is located in Locality Z), so the ISO will calculate two different Market-Clearing Prices for this phase: one for Unforced Capacity in Locality Z and one for Unforced Capacity everywhere else.

If it had been necessary to acquire an additional MW of Unforced Capacity in this phase in Locality Z, the ISO would have had to select only 99 MW of Bidder A's 150 MW bid. (There are no alternatives in this example because Generator Y was the only Installed Capacity Supplier in Locality Z, and all of Generator Y's Unforced Capacity was selected in the auction, so none remains available to meet any additional demand in Locality Z.) Since Bidder A's bid price is \$6/kW month, the Market-Clearing Price of Unforced Capacity in Locality Z in this phase will be \$6/kW month.

If it had been necessary to acquire an additional MW of Unforced Capacity in this phase outside Locality Z, (1) the ISO could have selected 76 MW from Generator X, instead of 75 MW; or (2) it could have selected only 74 MW of Bidder B's 75 MW bid to purchase Energy. Since Generator X's offer price is \$2/kW month, while Bidder B's bid price is \$3/kW-month, the lower of these, or \$2/kW month, will set the Market-Clearing Price of Unforced Capacity outside Locality Z in this phase.

## Example 5



### Example 6: External Control Area Constraint Binds

Again, return to Example 1, but change the locational constraint that Bidder B specified in its bid. Instead of the constraint specified in Example 1, assume that Bidder B specified that while the Unforced Capacity it is bidding to purchase could be located anywhere in the NYCA, it also could be located in External Control Areas P or Q. Bidder A will continue to require that all of its Unforced Capacity be located within the NYCA.

In addition, assume that the following new offers of Unforced Capacity are submitted into this phase:

- 50 MW of Unforced Capacity from a Generator located in External Control Area P is offered at \$1/kW month.
- 50 MW of Unforced Capacity from a Generator located in External Control Area Q is offered at \$2/kW month.

The ISO would select the following offers and bids:



- All of the 100 MW of Unforced Capacity offered from Generator X.
- 50 MW of the 100 MW of Unforced Capacity offered from Generator Y.
- All of the 50 MW of Unforced Capacity offered from External Control Area P.
- 25 MW of the 50 MW of Unforced Capacity offered from External Control Area Q.
- All of the 150 MW that Bidder A Bids to purchase.
- All of the 75 MW that Bidder B Bids to purchase.

Bidder B is the only Bidder that can purchase the Unforced Capacity offered from the External Generators, since Bidder A stated that its Unforced Capacity must be located in the NYCA. Since Bidder B's \$3/kW month bid price exceeds the offer prices for the Unforced Capacity from these External Generators, all of Bidder B's 75 MW bid to purchase Energy was selected in this phase.

Part of Generator Y's offer was selected, even though not all of the Unforced Capacity in External Control Area Q, which was offered at a lower price, was selected. The reason is the constraint that Bidder A placed upon its bid. This causes the External Control Area constraint to bind for External Control Areas P and Q, so the ISO will calculate two different Market-Clearing Prices for this phase: one for Unforced Capacity in External Control Areas P and Q, and one for Unforced Capacity everywhere else.

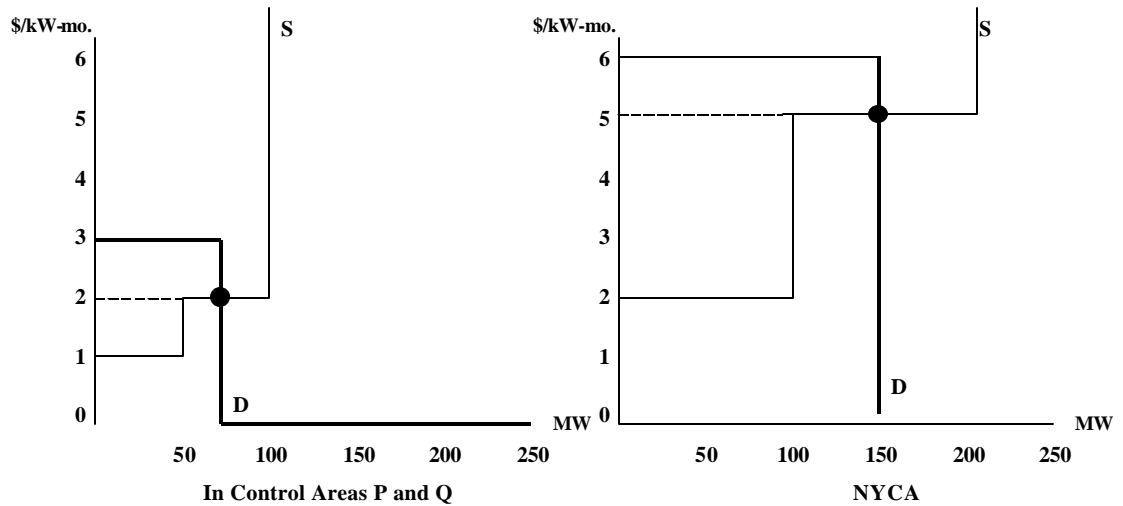
(Note that the ISO will calculate a single price that will apply to both External Control Areas P and Q. Bidder B, which is the sole purchaser of Unforced Capacity located in these External Control Areas in this phase, has stated that it will accept Unforced Capacity from either External Control Area, without any limitations on the amount that it will accept from an individual External Control Area. Therefore, Unforced Capacity located in either of these External Control Areas can be substituted for Unforced Capacity in the other External Control Area, for the purposes of this phase, so these External Control Areas constitute a single market, with a single price.)

If it had been necessary to acquire an additional MW of Unforced Capacity in this phase in External Control Areas P or Q, (1) the ISO could have selected 26 MW from External Control Area Q, instead of 25 MW; or (2) it could have selected only 74 MW of Bidder B's 75 MW bid to purchase Energy. Since the offer price from External Control Area Q is \$2/kW month, while Bidder B's bid price is \$3/kW month, the lower of these, or \$2/kW month, will be used to set the Market-Clearing Price of Unforced Capacity for this phase in External Control Areas P and Q.

If it had been necessary to acquire an additional MW of Unforced Capacity in this phase outside External Control Areas P or Q — *i.e.*, if it had been necessary to acquire an additional MW of Unforced Capacity in the NYCA, since there are no other External Control Areas in

this example—(1) the ISO could have selected 51 MW from Generator Y, instead of 50 MW; or (2) it could have selected only 149 MW of Bidder A's 150 MW bid to purchase Energy. Since Generator Y's offer price is \$5/kW month, while Bidder A's bid price is \$6/kW month, the lower of these, or \$5/kW month, will be used to set the Market-Clearing Price of Unforced Capacity for this phase in the NYCA. (This price also applies to all Localities within the NYCA, since no Locality constraints are binding in this example).

## Example 6



# Attachment I:

## Miscellaneous Auction Procedures

### Section 1: Procedures Applicable to Installed Capacity Buyers

#### 1.1 Submission of Bid Packages

Buyers Bidding to purchase Unforced Capacity must submit a complete Bid Package to the ISO in the form prescribed in Attachment F to this Manual, i.e., a completed Purchase Agreement and a properly formatted Electronic Bid, as those terms are defined in Attachment F to this Manual.

Purchase Agreements must be submitted to the ISO via an overnight mail service or a delivery service that requires the signature of the addressee in order to record the date and time of delivery. Purchase Agreements may not be submitted via FAX or email. Each Purchase Agreement, upon receipt, will be time stamped by the ISO.

Electronic Bids must be submitted via e-mail to the ISO at [buyicap@nyiso.com](mailto:buyicap@nyiso.com). An Electronic Bid may contain more than one individual bid (each an "Individual Bid"). All Individual Bids must be contained in only one Electronic Bid.

If the ISO invalidates a Bid Package for any reason, it will notify the Buyer that submitted the Bid Package, via e-mail, on the same day that the Bid Package was received.

Buyers may revise their Bid Packages at any time during the bidding Period by submitting a new Electronic Bid. If a new Electronic Bid is timely, correctly and completely submitted by the Seller, it will completely override any previous Electronic Bid(s) and any previous Electronic Bid(s) will have no further force or effect.

Buyers may not submit negative dollar bids. Only bids specifying a price greater than or equal to zero will be accepted.

#### 1.2 Invalidation of Bids

The ISO shall invalidate an Electronic Bid for any of the following reasons:

- a) The Electronic Bid is received by the ISO outside the bidding Period;
- b) The Electronic Bid does not include all information required by the Electronic Bid form;

- c) The Electronic Bid contains an incorrect registrant name;
- d) The Electronic Bid has been modified, amended or changed other than to provide required information and other than in connection with the submission of a revised Electronic Bid;
- e) The Electronic Bid is not password-protected using the password provided to the Buyer by the ISO; or
- f) The Electronic Bid is submitted with a date and time stamp identical to any other Electronic Offer submitted by the Seller.

The ISO shall invalidate an Individual Bid for any of the following reasons:

- a) The bid price is less than zero;
- b) The quantity of Unforced Capacity specified is not given to a tenth of a MW;
- c) The Price is not specified to two decimal places;
- d) Missing information in either the Price or MW columns; or
- e) Multiple months are included in the 'Monthly Effective Period' field.

## **Section 2: Procedures Applicable to Installed Capacity Sellers**

### **2.1 Submission of Offer Packages**

Sellers offering to sell Unforced Capacity must submit a complete Offer Package to the ISO in the form prescribed in Attachment G to this Manual, i.e., a completed Sale Agreement and a properly formatted Electronic Offer, as those terms are defined in Attachment G to this Manual. Offer Packages must be submitted during the Offering Period established in Attachment A, and described in Attachment G, to this manual.

Sale Agreements must be submitted to the ISO via an overnight mail service or a delivery service that requires the signature of the addressee in order to record the date and time of delivery. Sale Agreements may not be submitted via FAX or email. Each Sale Agreement, upon receipt, will be time stamped by the ISO.

Electronic Offers must be submitted via e-mail to the ISO at sellicap@nyiso.com. An Electronic Offer may contain more than one individual offer (each an "Individual Offer"). All Individual Offers must be contained in only one Electronic Offer.

Sellers may revise their Offer Packages at any time during the Offering Period by submitting a new Electronic Offer. If a new Electronic Offer is timely, correctly and completely submitted by the Seller, it will completely override any previous Electronic Offer(s) and any previous Electronic Offer(s) will have no further force or effect.

If the ISO invalidates an Offer Package for any reason it will notify the Seller that submitted the Offer Package, via email, on the same day that the completed Offer Package was received.

## **2.2 Invalidation of Offers**

The ISO shall invalidate an Electronic Offer for any of the following reasons:

- a) The Electronic Offer is received by the ISO outside of the Offering Period;
- b) The Electronic Offer does not contain all information required by the Electronic Offer form;
- c) The Electronic Offer contains an incorrect registrant name;
- d) The Offer Package has been modified, amended or changed other than to provide required information and other than in connection with the submission of a revised Electronic Offers;
- e) The Electronic Offer is not password protected using the password provided to the Seller by the ISO;
- f) The Electronic Offer is submitted with a date and time stamp identical to any other Electronic Offer submitted by the Seller.

The ISO shall invalidate an Individual Offer for any of the following reasons:

- a) More than one location has been specified;
- b) The Resource name does not correspond to the Resource for which the Seller holds Unforced Capacity;
- c) The offer price is less than zero;
- d) The quantity of Unforced Capacity offered is not given to a tenth of a MW;
- e) The quantity of Unforced Capacity offered is less than or equal to zero;
- f) The quantity of Unforced Capacity offered for a Resource is greater than the amount of Unforced Capacity the Seller is authorized to sell from that Resource;

- g) The Price is not specified to two decimal places;
- h) Missing information in either the Price, MW or Resource name columns;
- i) Non-unique prices are given for Individual Offers to sell capacity for the same Resource; or
- j) Multiple months are included in the 'Monthly Effective Period' field.

**2.3 Multiple Offers from the Same Installed Capacity Supplier**

Installed Capacity Suppliers may submit multiple offers to sell Unforced Capacity associated with a given Installed Capacity Supplier. However, the total amount of Unforced Capacity offered for sale from a given Installed Capacity Supplier must not exceed the total amount of Unforced Capacity that may be supplied from that Installed Capacity Supplier, as determined pursuant to Section 4 of this manual.

Example: Valid offers to sell Unforced Capacity from an Installed Capacity Supplier that is qualified to supply 100.5 MW of Unforced Capacity. In this example, the Installed Capacity Supplier has offered the maximum allowable amount of Unforced Capacity.

<b>Resource Name</b>	<b>Unforced Capacity Offered (MW)</b>	<b>Offer Price (\$/kW - month)</b>
<b>XYZ - ABC</b>	<b>50.5</b>	<b>10.50</b>
<b>XYZ - ABC</b>	<b>50.0</b>	<b>11.25</b>

Example: Invalid offers to sell Unforced Capacity from a Resource that is qualified to sell 100.5 MW of Unforced Capacity. In this example, all offers from this Installed Capacity Supplier are invalidated because the total Unforced Capacity offered exceeds the maximum amount of Unforced Capacity that the Installed Capacity Supplier is qualified to sell.

<b>Resource Name</b>	<b>Unforced Capacity Offered (MW)</b>	<b>Offer Price (\$/kW - month)</b>
<b>XYZ - ABC</b>	<b>50.3</b>	<b>10.50</b>
<b>XYZ - ABC</b>	<b>50.3</b>	<b>11.25</b>

## 2.4 Requirement that Offers be Unique

All offers to sell Unforced Capacity associated with a given Installed Capacity Supplier must be made at a unique price.

Example: Invalid offers to sell Unforced Capacity from an Installed Capacity Supplier that is qualified to sell 100 MW of Unforced Capacity. In this example, all offers to sell Unforced Capacity are invalidated because the offer prices were not unique.

Resource Name	Unforced Capacity Offered (MW)	Offer Price (\$/kW - month)
XYZ - ABC	60.0	11.25
XYZ - ABC	40.0	11.25

## 2.5 Subject Generators and the Capacity Reference Price

With respect to Subject Generators, if the Price for a MW of Unforced Capacity offered in the Auction is calculated to be greater than the Capacity Reference Price (see below), then the offer for that MW of Installed Capacity would be invalidated.

# Section 3: Subject Generators

## 3.1 Definition and Requirements

Some Installed Capacity Suppliers located within the New York City Locality are subject to a FERC and PSC-approved Installed Capacity price cap of [to be determined]/kW-year ("Subject Generators").

Subject Generators may only sell their available Unforced Capacity in one or more ISO-administered Installed Capacity Auctions. Under certain conditions, described in detail in Section 5 of this Manual and in Section 5.13 of the ISO Services Tariff, Subject Generators will be restricted in their ability to participate in the second phase of certain ISO-administered Installed Capacity Auctions.

## 3.2 Subject Generator List

The Resources listed below shall be Subject Generators:

- Arthur Kill Units 2 and 3;
- Arthur Kill GT;

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- Astoria Units 3, 4 and 5;
- Astoria GTs;
- East River Units 6 and 7;
- Gowanus GTs;
- Narrows GTs;
- Ravenswood Units 1, 2 and 3;
- Ravenswood GTs; and
- Waterside Units 6, 8 and 9.

## **Section 4: Proration of Installed Capacity Awards**

### **4.1 Proration Methodology**

In any Monthly Auction, if multiple bids to purchase Unforced Capacity in a Locality have the same bid price and that bid price equals the Market Clearing Price for that Locality, the MW amount of the awarded Unforced Capacity to each of these Buyers will be prorated so that the MWs of Capacity awarded to each Buyer in association with that bid will be calculated as the product of the MW amount of the bid and the ratio of the MW amount awarded to Bidders Bidding that price in that Locality to the total MW amount of all the bids to purchase in that Locality at that Market Clearing Price.

In any Monthly Auction, the ISO will award as many bids to buy Capacity as possible, subject to the limitation that the Market Clearing Price not exceed the price specified in the Buyer's bid.

As a result of the proportional allocation of MWs, Market Participants who purchased Unforced Capacity in an ISO-administered Installed Capacity auctions may be awarded MWs in 0.1 MW increments.

## **Section 5: Award Notices**

### **5.1 Electronic Distribution of Award Notices**

The ISO will send each Buyer and Seller that is selected to buy or sell Unforced Capacity an Award Notice, as defined in Attachments F and G to this manual, respectively, via e-mail within five (5) business days of the conclusion of the Capability Period Auction or the Obligation Procurement Period auction.



Buyers and Sellers shall be presumed to have received Award Notices on the first business day after the Award Notices are e-mailed by the ISO.

## **5.2 Content of Award Notices**

Award Notices sent to Buyers shall set forth the Market Clearing Price, the amount of Unforced Capacity purchased, the location of Installed Capacity Suppliers associated with the Unforced Capacity and the Total Purchase Price, as that term is defined in Attachment F to this Manual.

Award Notices sent to Sellers shall set forth the Market Clearing Price, the total amount of Unforced Capacity sold, the location of the Installed Capacity Supplier(s) associated with the Unforced Capacity and the Total Selling Price, as that term is defined in Attachment G to this Manual.

## **5.3 Disputes Concerning Award Notices**

Any Buyer or Seller that disputes an Award Notice, or the calculations underlying an Award Notice, must provide written notice to the ISO within the earlier of three (3) business days after the date that the Award Notice was received, or 11 calendar days after the relevant Installed Capacity auction. All disputes other than those concerning the Total Purchase Price or Total Selling Price shall be resolved pursuant to the Dispute Resolution Procedures set forth in the ISO Services Tariff. Disputes concerning Total Purchase Price or Total Selling Price shall be resolved pursuant to the procedures set forth in Attachments F and G to this Manual, respectively.

# **Section 6: Posting of Installed Capacity Auction Results**

## **6.1 Information Posted in Auction Results**

The ISO will publicly post on the website <http://www.nyiso.com> for each "Monthly Effective Period," the results of the Installed Capacity Auction and will include the following information:

- 1) The Market Clearing Price determined for each Locality in each Installed Capacity Auction;
- 2) The total amount of Unforced Capacity in each Locality, in the portion of the NYCA not included in any Locality, and in each External Control Area that was sold in each Monthly Auction;
- 3) The total amount of Unforced Capacity purchased in each Monthly Auction, broken down by the constraint placed upon the location of that Unforced Capacity by the Bidders placing those bids; and

- 4) The MW aggregate of the bids to purchase and the Offers to sell Unforced Capacity.

# Attachment J:

## Unforced Capacity for Installed Capacity Suppliers

### 1.0 Fundamental Formulae

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

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

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

**Note:** Divide by 0 logic provided below in (1-5).

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

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

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

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

(1-5) Divide by 0 logic:

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

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

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

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

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 <sub>D</sub> .....	Equivalent Demand Forced Outage Rate
DMNC.....	per Tariff definition
ICAP <sub>eq</sub> .....	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 <sub>f</sub> .....	full f-factor (see formula in Section 1.0)
f <sub>p</sub> .....	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](http://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<sub>D</sub> 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<sub>D</sub>

$UCAP_{gm} = (1 - EFOR_{Dgm}) DMNC_{gm}$ ; and

$ICAP_{eq} = UCAP_{gmp} / (1 - EFOR_{Dgm})$

where:

$UCAP_{gm}$  is the 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:

$$EFOH_{gbe} = \sum_{all\ i} \frac{(NDC_{gi} - NAC_{gi})H_{gi}}{NDC_{gi}}, \text{ and}$$

where:

$NDC_{gi}$  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;

$H_{gi}$  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:

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

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

$$f_{pgbe} = \frac{SH_{gbe}}{AH_{gbe}}$$

where:

AH<sub>gbe</sub> 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.

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

$$\text{UCAP}_{gm} = (1 - \text{OF}_{gm})\text{DMNC}_{gm}; \text{ and}$$

$$\text{ICAP}_{eq} = \text{UCAP}_{gmp} / (1 - \text{OF}_{gm})$$

where:

UCAP<sub>gm</sub> is the Unforced Capacity that supplier *g* is qualified to provide in month *m*;

UCAP<sub>gmp</sub> is the Unforced Capacity that supplier *g* provides in month *m*;

OF<sub>gm</sub> 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<sub>gm</sub> 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<sub>D</sub> for August will be based on data submitted for June of the prior year through May of the current year).

$$\text{OF}_{gm} = \frac{\text{IST}_{ge}}{12} \times (1 - \text{CF}_{gbe}) + \left(1 - \frac{\text{IST}_{ge}}{12}\right) (1 - \text{CCF}_g)$$

where:

OF<sub>gm</sub> 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

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

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  $e$ .

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

$$UCAP_{gm} = (APMD_{gm} - CMD_{gm}) \times \frac{\sum_{h \in LRH_{gbe}} \min\left(\frac{APMD_{gh} - AMD_{gh}}{APMD_{gh} - CMD_{gh}}, 1\right)}{NLRH_{gbe}};$$

$$ICAP_{eq} = (APMD_{gm} - CMD_{gm})$$

Where:

$UCAP_{gm}$  is the Unforced Capacity that Resource  $g$  is permitted 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 months of June, July, August and September that had occurred as of the end of month  $m$ ; 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 months of November, December, January and February that had occurred as of the end 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 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 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 months of November, December, January and February 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 applicable 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;

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

$e$  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).

### 3.4 Calculation of UCAP for Winter-Peaking Control Area System Resources

The ISO shall determine the amount of Unforced Capacity that a Control Area System Resource or the purchasers of Unforced Capacity from a Control Area System Resource may supply to the NYCA in the following manner. All calculations will be made based on the forecasted CARL Data reported by the Control Area System Resource pursuant to Section 4.4.3 of this Manual.

For the eight month period from April through November, the amount of Unforced Capacity available from a Control Area System Resource shall not exceed, for any month, the single lowest monthly value in that eight month period, derived by using the following formula:

$$UCAP = (CAP + EP - MPL - EF - PM - FO - OR)$$

If the amount of Unforced Capacity that is available from a Control Area System Resource, using the above formula, is less than the amount of Unforced Capacity that was committed, a deficiency charge will be assessed to the supplier for applicable current and previous months in the April through November period. The supplier will have an opportunity to mitigate future deficiencies by entering into bilateral transactions or NYISO administered auctions.

A separate calculation of the available Unforced Capacity from a Control Area System Resource will be made for the months of December through March using the formula

below. The product of the formula will equal the amount of Unforced Capacity available from a Control Area System Resource in each of the four months.

$$\text{UCAP} = (\text{CAP} + \text{EP} - \text{WPL} - \text{EF} - \text{PR} - \text{PM}) \times (1 - \text{AFO})$$

If the amount of Unforced Capacity that is available from a Control Area System Resource, using the above formula, is less than the amount of Unforced Capacity that was committed, a deficiency charge will be assessed to the supplier for applicable current and previous months in the December through March period. The supplier will have an opportunity to mitigate future deficiencies by entering into bilateral transactions or NYISO administered auctions.

(All acronyms used in this section 3.4 of this Attachment, are defined in section 4.4.3 of this Manual.)

# 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](http://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@nyiso.com](mailto:gads@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<sub>D</sub>. 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

All NYISO Required Fields are highlighted & identified.

**PERFORMANCE FILE LAYOUT**

82 Columns per RECORD  
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82

RECORD 01  
 9 5 1 2 3 8 0 1 2 0 0 0 1 0  
 Card Code 1-2 Year 9-12 Month 13-14  
 Utility Code 3-5 Revision Code 15  
 Unit Code 6-8  
 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

82 Columns per RECORD  
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82

RECORD 02  
 9 5 1 2 3 8 0 1 2 0 0 0 1 0 0 1 6 4 4  
 Card Code 1-2 Year 9-12 Unit Service Hrs. 16-19 Synch. Cond. Hrs. 28-31 Forced Outage Hrs. 40-43 Unavailable Hours 52-55  
 Utility Code 3-5 Month 13-14 Reserve Shutdown 20-23 Available Hrs. 32-35 Pumping Hrs. 24-27  
 Unit Code 6-8 Revision Code 15  
 Planned Outage Hrs. 36-39 Ext. of Sched. Outages 48-51  
 Period Hours 56-59  
 Record Number 81-82

\* 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  
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82

RECORD 01  
 9 7 1 2 3 8 0 2 2 0 0 0 0 0 1 0 1 0 0 1 1 5 0 0 0 1  
 Card Code 1-2 Year 9-12 Event Type 18-19 Start of Event 20-27  
 Utility Code 3-5 Event Number 13-16 Revision Code 17  
 Unit Code 6-8  
 End of Event 48-55  
 Gross Avail. Cap 56-59  
 Net Avail. Cap 60-63  
 Record Number 81-82

\* Do not zero-fill or asterisk-fill unused data fields.  
 \*\*\* Columns 81-82 identify the component records.

**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<sub>D</sub>. See Attachment J for the actual calculation methodology.

**Performance Data**

Card 01

*Card Code	Required
*Utility Code	Required if known,
TBD	
*Unit Code	Required if known,
TBD	
*Year	Required
*Report Period	Required
*Report 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
Verbal Description	-
*Card Number	Required

Card 02

*Card Code	Required
*Utility Code	Required if known,
TBD	
Unit Code	Required if known,
TBD	
*Year	Required
*Report Period	Required
*Report Revision Code	Required
*Unit Service Hours (SH)	Required
*Reserve Shutdown Hours (RH)	Required
*Pumping Hours	Required
*Synchronous Condensing Hours	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
*Card Number	Required

Card 03 Not Required

Card 04 Not Required

### Event Report Data

#### Card 01

Card Code	Required
Utility Code	Required if known,
TBD	
Unit Code	Required if known,
TBD	
Year	Required
Report Period	Required
Report 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
Card Number	Required

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

## Special Case Resource Certification/Qualification

Rules:

1. Determine Average of Peak Monthly Demand (Figure 1).
2. Document/Certify a Minimum Load Commitment (the Load the customer will reduce its demand to - sign agreement below).
3. Report actual Load from meter readings covering the time period of the request (Figure 2).

Entity (SCR Customer) Name: \_\_\_\_\_  
 Certifying Entity(TO/LSE/Aggregator): \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-mail: \_\_\_\_\_

**Figure 1  
Peak Load Certification  
Actual Maximum Monthly One-hour Integrated Demand  
(for last two Capability Periods)**

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)					

LBMP Zone \_\_\_\_\_  
 Minimum Load Commitment \_\_\_\_\_ (MW)  
 Installed Capacity Claimed \_\_\_\_\_ (MW)  
 (Applicable Average Monthly Peak Load – Minimum Load Commitment)

**Figure 2  
Minimum Load Demonstration  
Demonstrated Demand During Special Case Resource Implementation**

Event #			Event #		
Requested Start Date/Time			Requested Start Date/Time		
Requested End Date/Time			Requested End Date/Time		
Date/Time	Meter Reading	Cumulative Energy	Date/Time	Meter Reading	Cumulative Energy
Avg. Min. Demand			Avg. Min. Demand		

IN WITNESS WHEREOF, this Installed Capacity Certification has been submitted on this, the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

Name of Certifying Entity: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

4:07 PM, 05/17/2001

**CLEAN Proposed Stage 2 ICAP Manual  
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Title:

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# Attachment L

## 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 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 Attachment A for the data submittal schedule.

The ISO will use this data for two purposes:

- (1) To set each LSE's 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 5<sup>th</sup>. 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 Attachment A 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 5<sup>th</sup> 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 Attachment A.

**CLEAN Proposed Stage 2 ICAP Manual  
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**ISO Customer Switching Reporting Format  
Data Submittal One**

**LSE:** XYZ Electric  
**Month:** Jun-00  
**Transmission Owner:** Acme Transmission Owner  
**Vintage:** 7-Jun-00

Date	Total		In-City		On-Island	
	Load	Load Shift	Load	Load Shift	Load	Load Shift
01-Jun-00	101.2	1.2	50.6	0.6	25.2	0.2
02-Jun-00	102.2	1.0	51.1	0.5	25.4	0.2
03-Jun-00	100.9	-1.3	50.5	-0.7	25.2	-0.3
04-Jun-00	120.0	19.1	60.0	9.6	29.0	3.8
05-Jun-00	125.0	5.0	62.5	2.5	30.0	1.0
06-Jun-00	117.0	-8.0	58.5	-4.0	28.4	-1.6
07-Jun-00	113.0	-4.0	56.5	-2.0	27.6	-0.8
08-Jun-00	112.5	-0.5	56.3	-0.3	27.5	-0.1
09-Jun-00	117.8	5.3	58.9	2.7	28.6	1.1
10-Jun-00	114.5	-3.3	57.3	-1.7	27.9	-0.7
11-Jun-00	114.5	0.0	57.3	0.0	27.9	0.0
12-Jun-00	114.5	0.0	57.3	0.0	27.9	0.0
13-Jun-00	114.5	0.0	57.3	0.0	27.9	0.0
14-Jun-00	114.5	0.0	57.3	0.0	27.9	0.0
15-Jun-00	114.5	0.0	57.3	0.0	27.9	0.0
16-Jun-00	114.5	0.0	57.3	0.0	27.9	0.0
17-Jun-00	114.5	0.0	57.3	0.0	27.9	0.0
18-Jun-00	114.5	0.0	57.3	0.0	27.9	0.0
19-Jun-00	114.5	0.0	57.3	0.0	27.9	0.0
20-Jun-00	114.5	0.0	57.3	0.0	27.9	0.0
21-Jun-00	114.5	0.0	57.3	0.0	27.9	0.0
22-Jun-00	114.5	0.0	57.3	0.0	27.9	0.0
23-Jun-00	115.0	0.5	57.5	0.3	28.0	0.1
24-Jun-00	116.0	1.0	58.0	0.5	28.2	0.2
25-Jun-00	112.0	-4.0	56.0	-2.0	27.4	-0.8
26-Jun-00	113.0	1.0	56.5	0.5	27.6	0.2
27-Jun-00	112.7	-0.3	56.4	-0.2	27.5	-0.1
28-Jun-00	119.9	7.2	60.0	3.6	29.0	1.4
29-Jun-00	121.9	2.0	61.0	1.0	29.4	0.4
30-Jun-00	120.9	-1.0	60.5	-0.5	29.2	-0.2
01-Jul-00	121.0		61.0		29.5	



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**ISO Customer Switching Reporting Format  
Data Submittal Two**

**LSE:** XYZ Electric  
**Month:** Jun-00  
**Transmission Owner:** Acme Transmission Owner  
**Vintage:** 22-Sep-00

Date	Total		In-City		On-Island	
	Load	Load Shift	Load	Load Shift	Load	Load Shift
01-Jun-00	101.2	0.0	50.6	0.0	25.2	0.0
02-Jun-00	102.2	1.0	51.1	0.5	25.4	0.2
03-Jun-00	100.9	-1.3	50.5	-0.7	25.2	-0.3
04-Jun-00	120.0	19.1	60.0	9.6	29.0	3.8
05-Jun-00	125.0	5.0	62.5	2.5	30.0	1.0
06-Jun-00	117.0	-8.0	58.5	-4.0	28.4	-1.6
07-Jun-00	115.0	-2.0	57.5	-1.0	-0.5	-0.2
08-Jun-00	114.5	-0.5	57.3	-0.3	-0.6	-0.1
09-Jun-00	119.8	5.3	59.9	2.7	0.5	1.1
10-Jun-00	116.5	-3.3	58.3	-1.7	-0.2	-0.7
11-Jun-00	116.5	0.0	58.3	0.0	-0.2	0.0
12-Jun-00	116.5	0.0	58.3	0.0	-0.2	0.0
13-Jun-00	116.5	0.0	58.3	0.0	-0.2	0.0
14-Jun-00	116.5	0.0	58.3	0.0	-0.2	0.0
15-Jun-00	116.5	0.0	58.3	0.0	-0.2	0.0
16-Jun-00	116.5	0.0	58.3	0.0	-0.2	0.0
17-Jun-00	116.5	0.0	58.3	0.0	-0.2	0.0
18-Jun-00	116.5	0.0	58.3	0.0	-0.2	0.0
19-Jun-00	116.5	0.0	58.3	0.0	-0.2	0.0
20-Jun-00	116.5	0.0	58.3	0.0	-0.2	0.0
21-Jun-00	116.5	0.0	58.3	0.0	-0.2	0.0
22-Jun-00	116.5	0.0	58.3	0.0	-0.2	0.0
23-Jun-00	117.0	0.5	58.5	0.3	-0.1	0.1
24-Jun-00	118.0	1.0	59.0	0.5	0.1	0.2
25-Jun-00	114.0	-4.0	57.0	-2.0	-0.7	-0.8
26-Jun-00	115.0	1.0	57.5	0.5	-0.7	0.2
27-Jun-00	114.7	-0.3	57.4	-0.2	-0.5	-0.1
28-Jun-00	121.9	7.2	61.0	3.6	0.9	1.4
29-Jun-00	123.9	2.0	62.0	1.0	1.3	0.4
30-Jun-00	122.9	-1.0	61.5	-0.5	1.1	-0.2

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