NEW YORK INDEPENDENT SYSTEM OPERATOR

MANUAL 4

Installed Capacity Manual

March 2018

4.4 Operating Data Reporting Requirements (Section 5.12.5 *NYISO Services Tariff*)

Installed Capacity Suppliers shall submit Operating Data to the NYISO every month in accordance with the following subsections. Further details applicable to generating Resources are included in Attachment K to this *ICAP Manual*, at the NERC-GADS Web site http://www.nerc.com/page.php?cid=4|43 and in the NERC Data Reporting Instructions at http://www.nerc.com/page.php?cid=4|43|45. The NYISO collects a subset of the data covered by the NERC Data Reporting Instructions and is focused principally on outage types. For example, an exception to the NERC Data Reporting Instructions is covered in Section 4.6.2 of this *ICAP Manual*. The completeness, accuracy, and validity of the performance data sent to the NYISO are the responsibility of the Resource making such data submission. Installed Capacity Suppliers that do not comply with the following subsections shall be subject to the sanctions provided in Section 5.12.12 of the *NYISO Services Tariff* (available from the NYISO Web site at the following URL: http://www.nyiso.com/public/documents/tariffs/market_services.jsp).

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 *ICAP Manual*. Such designation shall be made in writing and received by the NYISO no later than 5:00:00 P.M. on the seventh (7th) calendar day before the date by which any of the relevant obligations or requirements must be fulfilled.

If no designation is made to the NYISO, the Seller shall be responsible for fulfilling all the obligations and requirements set forth in this Section 4.4 of this *ICAP 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 *NYISO Services Tariff* (available from the NYISO Web site at http://www.nyiso.com/public/documents/tariffs/market_services.jsp) as if they were a Seller.

4.4.1 Generators

Generators shall report to the NYISO Generating Availability Data System (GADS) Data or data equivalent to GADS Data pertaining to the previous month, which must be received no later than the 20th day of each month. For example, Generators shall report to the NYISO, which must be received by the NYISO on or before May 20, GADS Data or data equivalent to GADS Data pertaining to their operations during the month of April. Generators shall submit GADS Data or data equivalent to GADS Data in accordance with Attachment K of this *ICAP Manual*.

4.4.2 System Resources

System Resources shall provide to the NYISO GADS Data or data equivalent to GADS Data pertaining to the previous month, which must be received no later than the 20th day of each month. For example, System Resources shall report to the NYISO, which must be received by the NYISO on or before May 20, GADS Data or data equivalent to GADS Data

pertaining to their operations during the month of April. System Resources shall submit GADS Data or data equivalent to GADS Data in accordance with Attachment K of this *ICAP Manual*.

4.4.3 Control Area System Resources

Control Area System Resources or the purchasers of Unforced Capacity from those Resources shall report to the NYISO CARL (Control Area Resource and Load) Data pertaining to the previous month, so that it is received by the NYISO no later than the 20th day of each month. For example, Control Area System Resources shall report to the NYISO, so that it is received by the NYISO on or before October 20, CARL Data pertaining to their operations during the month of September.

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

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

Control Area System Resources shall report forecasted CARL Data for items (1) through (7) above for each month of the following Capability Period, so that it is received by the NYISO no later than forty-five (45) days prior to the first day of each Capability Period. Control Area System Resources shall report data for items (8) and (9) for each month for the NYISO's receipt no later than 20 days before the conclusion of each month.

During each Capability Period, a Control Area System Resources may submit revised forecasts of items (1) through (8) above for each month of that Capability Period. These forecasts may be revised to reflect changes in the allocation of planning reserve among the months of that Capability Period resulting from the amount of Installed Capacity actually sold by that Control Area System Resource earlier in the Capability Period. Such forecasts must be received on or before the 25th day before a month if they are to be used to

determine the amount of CARL Data for the whole Capability Period in light of the External firm Capacity engaged in the previous months.

4.4.4 Energy Limited and Capacity Limited Resources

Energy and Capacity Limited Resources shall report to the NYISO GADS Data or data equivalent to GADS Data pertaining to the previous month, so that it is received by the NYISO no later than the 20th day of each month. For example, Energy and Capacity Limited Resources shall report to the NYISO, which must be received by the NYISO on or before May 20, GADS Data or data equivalent to GADS Data pertaining to their operations during the month of April. Energy and Capacity Limited Resources shall submit GADS Data or data equivalent to GADS Data in accordance with Attachment K of this *ICAP Manual*.

4.4.5 (This Section intentionally left blank)

4.4.6 Intermittent Power Resources

Intermittent Power Resources shall report to the NYISO data pertaining to their net dependable Capacity, actual generation, maintenance outage hours, planned outage hours, and other information as may be reasonably requested by the NYISO, such as the location and name of the Intermittent Power Resource, so that such data and information is received by the NYISO no later than the 20th day of each month. Intermittent Power Resources shall report actual operating data pertaining to the previous month on or before the 20th day of each month and in accordance with Attachment K of this *ICAP Manual*. For example, data from Intermittent Power Resources shall be received on or before May 20 pertaining to their operations during the month of April.

4.4.7 Special Case Resources (Section 4.12 of this *ICAP Manual*)

RIPs shall report the performance data of each individual SCR directly into the DRIS, as specified in Section 4.12.4.8, each time the SCR is called upon to operate, using an import file formatted as specified in the *NYISO Demand Response Information System User's Guide* (available from the NYISO Web site at http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp).

4.4.7.1 Reporting of SCR Operating Data

The NYISO will treat the SCR-specific operating data that is received by the NYISO as confidential Transmission System Information and shall provide copies of such resource-specific (disaggregated) operating data to the transmission function of the Transmission Owner in whose transmission district the SCR is located in accordance with Section 4.0 of the NYISO's Code of Conduct (Attachment F to the *NYISO OATT*).

4.4.8 Municipally Owned Generation

Municipally owned generation shall report to the NYISO GADS Data or data equivalent to GADS Data pertaining to the previous month so that it is received by the NYISO no later than the 20th day of each month. For example, municipally owned generation shall report to the NYISO, which must be received by the NYISO on or before May 20, data equivalent to GADS Data pertaining to their operations during the month of April.

4.4.9 Resources Capable of Supplying Unforced Capacity in New York

This subsection applies to Resources that (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 *ICAP Manual*, and (3) want to supply Unforced Capacity to the NYCA in the future.

No later than the tenth (10th) day of the month preceding the month when a Resource wants to supply Unforced Capacity to the NYCA, the NYISO must receive from a Resource the appropriate Operating Data pertaining to its operations over the previous 17 months, if it was in operation. A Resource that wants to continue to supply Unforced Capacity in the NYCA immediately thereafter shall report the appropriate Operating Data, and such data must be received by the NYISO on or before 5:00:00 P.M. on the twentieth (20th) day of each month.

For example, a Resource that wants to supply Unforced Capacity during the month of July 2008, must report to the NYISO Operating Data pertaining to January 2007 to May 2008, inclusively, so that the NYISO receives such data on or before 5:00:00 P.M. on June 10. Thereafter, the NYISO must receive the Resource's Operating Data in accordance with Subsections 4.4.1 through 4.4.8 of this *ICAP Manual*, as applicable.

If an Installed Capacity Supplier intends to request rights to import Installed Capacity from a neighboring control area (as defined by and in accordance with this *ICAP Manual*, "Import Rights") in accordance with this *ICAP Manual*, the NYISO must receive the results of an appropriate demonstration test of the Resource (i.e., DMNC test data) and Operating Data pertaining to its operations covering at least the previous 17 months, if it was in operation, as prescribed by this *ICAP Manual*, and in the above paragraph, no later than 5:00:00 P.M. at least seven (7) business days before such Import Rights are to be requested.

4.4.10 Resources not in Operation for the Past 17 Months

A Resource that is required to report GADS Data or data equivalent to GADS Data that was not in operation for the past 17 months and that wants to qualify as an Installed Capacity Supplier shall report monthly Operating Data so that the NYISO receives it no later than 5:00:00 P.M. on thirtieth (30th) day after that Resource commenced commercial operation, in accordance with Subsections 4.4.1 through 4.4.8 of this *ICAP Manual*, as applicable.

4.4.11 Temporary Interruption in Availability

If a Generator in an otherwise operational state at the time of notice (that is, not otherwise forced out) does not sell or certify its Unforced Capacity (UCAP) on a temporary basis (i.e.,

elects not to participate in the UCAP Market or is not successful in selling its UCAP at auction or in a bilateral transaction), such interruption in availability of UCAP shall be taken on a monthly basis and may be treated for purposes of calculating the Equivalent Demand Forced Outage Rate (EFORd) for that unit as a maintenance outage with prior notification to the NYISO. If the Generator elects to bid the unit into the NYISO energy markets during such period, all such service hours and forced outage hours shall be included in the computation of the unit's EFORd, but periods where the unit is not selected may be reported as Reserve Shutdown Hours, as defined in Attachment J.

4.4.12 Generating Units that are Retired, Mothballed, in Inactive Reserves or in a Forced Outage or ICAP Ineligible Forced Outage

With the effective date of Section 5.18 of the Services Tariff, the NYISO Services Tariff defines five outage states; Inactive Reserve (IR), Mothballed (MB) or Retired (RU), ICAP Ineligible Forced Outage and Forced Outage. The outage states of Inactive Reserves, Mothball and Retired are considered to be "Inactive states". A Resource that is a Generator that is in an Inactive state or in an ICAP Ineligible Forced Outage is not qualified to participate in the NYISO Installed Capacity Market. A Market Participant that has a Generator defined to be in an Inactive state, ICAP Ineligible Forced Outage or Forced Outage state shall be required to comply with all requirements detailed in Section 5.18 of the NYISO Services Tariff as of the effective date of those requirements including, for purposes of this Manual, reporting requirements.

A Generator beginning a Forced Outage on or after the effective date of Section 5.18 of the Services Tariff shall have its Forced Outage expire on the last day of the month which contains the 180th day of its Forced Outage unless the Generator has Commenced Repair in accordance with Section 5.18 of the Services Tariff. Generators that have Commenced Repair may remain in the ICAP market in a Forced Outage state provided the repairs have not ceased or been unreasonably delayed. The Forced Outage of a Generator that Commenced Repair shall terminate on the last day of the month containing the date that the repairs ceased or were unreasonably delayed and the Generator shall be placed in an ICAP Ineligible Forced Outage.

A Generator whose Forced Outage has expired or been terminated shall be placed in an ICAP Ineligible Forced Outage on the day following the day its Forced Outage expired or was terminated.

A unit in an ICAP Ineligible Forced Outage shall report its status as a Forced Outage in its GADS Data submitted to the NYISO.

A Generator may voluntarily reclassify itself from a Forced Outage to an ICAP Ineligible Forced Outage if the Generator has been in a Forced Outage for at least sixty (60) days. Such Generator shall begin its ICAP Ineligible Forced Outage on the first day of the month following the month in which it voluntarily reclassified its outage.

A Generator in an ICAP Ineligible Forced Outage or in a Mothball Outage shall be Retired if either the CRIS rights for the unit have expired or if the unit has been in an ICAP Ineligible Forced Outage or Mothball Outage for 36 consecutive months in accordance with

Section 5.18 of the NYISO Services Tariff unless the tolling provisions of Sections 5.18.2.3.2 or 5.18.3.3.2 apply. A Generator in an ICAP Ineligible Forced Outage or in a Mothball Outage that has qualified for and is in a tolling period pursuant to the provisions of Sections 5.18.2.3.2 or 5.18.3.3.2 , respectively, shall be Retired on the earlier of i) 120 days from the date the outage would have otherwise expired or an ii) NYISO determination that the repairs have ceased or been unreasonably delayed.

A Generator in an Inactive Reserve state is unavailable for service for a limited period of time not to exceed six months for reasons that are not equipment related and that do not meet the criteria for classification of the Generator as in any other outage. This does not include units that may be idle because of equipment failure or reserve shutdown. A unit that is unavailable for reasons that are equipment related should be on a forced, maintenance or planned outage and remain on that outage until the proper repairs are completed and the unit can operate. With the effective date of Section 5.18 of the Services Tariff, Generators in Inactive Reserves are ineligible to participate in the ISO Installed Capacity market.

4.4.13 Units that have taken substantial actions inconsistent with an intention to Operate

With the effective date of Section 5.18 of the Services Tariff, a unit that has taken substantial actions inconsistent with an intention to return the Generator to operations and the Energy market shall be in an ICAP Ineligible Forced Outage as of the day following the day such actions began. Substantial actions inconsistent with an intention to return the Generator to operations and the Energy market include dismantling or disabling essential equipment without an active replacement plan. ICAP ineligibility continues until the actions taken that were inconsistent with an intention to return the Generator to operations and the Energy market have ceased and the generator demonstrates it has returned to the market.

4.5 Calculation of the Amount of Unforced Capacity each Resource may Supply to the NYCA (Section 5.12.6.1 *NYISO Services Tariff*)

(a) Definitions

For purposes of Sections 4.5 and 4.5.1:

"Solar Farm" means a collection of solar installations with its electrical output metered at the interconnection with the NYCA Transmission System and which metering determines the Solar Farm's delivery to the NYCA.

(b) Calculation Procedure

The NYISO will calculate the amount of Unforced Capacity that Resources are qualified to supply to the NYCA for each Capability Period. The Unforced Capacity methodology estimates the probability that a Resource will be available to serve Load, taking into account forced outages and forced deratings. To evaluate this probability, the NYISO will use the Operating Data submitted by each Resource in accordance with Section 4.4 of this

ICAP Manual, and the mathematical formulae included in Attachment J of this *ICAP Manual*. The value (termed "CRIS-adjusted DMNC") used in determining the ICAP equivalent of the Unforced Capacity will be the smaller of the then currently-effective DMNC rating or the CRIS value, as applicable. Unforced Capacity values will remain in effect for the entire Capability Period, except in cases where corrections to historical data are necessary.

A Generator returning to the market after being in Inactive Reserves or before its Mothball Outage or ICAP Ineligible Forced Outage has expired that returns with modifications to its operating characteristics determined by the NYISO to be material, and which, therefore, require the submission of a new Interconnection Request will receive, as the initial derating factor for calculation of the Generator's Unforced Capacity upon its return to service, the derating factor it would have received as a newly connected unit in lieu of a derating factor developed from unit-specific data.

A Generator returning to the market after being in an Inactive Reserves or before its Mothball Outage or ICAP Ineligible Forced Outage has expired that, upon its return, uses as its primary fuel a fuel not previously used at the facility for any purpose other than for ignition purposes will receive, as the initial derating factor for calculation of the Generator's Unforced Capacity upon its return to service, the NERC class average derating factor in lieu of a derating factor developed from unit-specific data even if the modifications to allow use of a new primary fuel are not material and do not require the submission of a new Interconnection Request.

For each Capability Period, the NYISO will base the amount of Unforced Capacity a generating Resource is qualified to supply on the average of EFORd values calculated for that Resource covering the 12-month periods ending in January, February, March, April, May and June for the subsequent Winter Capability Period and the average of EFORd calculations for that Resource covering the 12-month periods ending in July, August, September, October, November and December for the subsequent Summer Capability Period. Detailed procedures for calculating the 12-month EFORd values are described in Attachment J of this *ICAP Manual*. Such EFORd values shall be for the same interval used to determine the Minimum Installed Capacity Requirement to Minimum Unforced Capacity Requirement translation for a given Capability Period, as noted in Sections 2.5 and 2.6 of this *ICAP Manual*. For a Generator in Inactive Reserves, a Mothball Outage or an ICAP Ineligible Forced Outage that started on or after the effective date of Section 5.18 of the Services Tariff and that precluded its eligibility to participate in the Installed Capacity market at any time during any month from which GADS or other operating data would otherwise be used to calculate an individual Equivalent Demand Forced Outage Rate, the ISO shall replace such month's GADS or other operating data with GADS or other operating data from the most recent prior month in which the Generator was not in an outage state that precluded its eligibility to participate in the Installed Capacity market.

For Special Case Resources, Unforced Capacity values will be based on two successive seasonal performance factors of each individual Special Case Resource as described in Section 4.12 of this *ICAP Manual*.

The NYISO shall compute the amount of Unforced Capacity that each Limited Control Run-of-River Hydro Resource is authorized to provide in the NYCA separately for Summer

and Winter Capability Periods. The amount for each Capability Period shall be equal to the rolling average of the hourly net Energy provided by each Limited Control Run-of River Hydro Resource during the twenty (20) highest NYCA-integrated real-time load hours in each of the five (5) previous Summer or Winter Capability Periods, as appropriate, stated in megawatts. For a Limited Control Run-of-River Hydro Resource in an outage state that started on or after the effective date of Section 5.18 of the NYISO Services Tariff and that precluded its eligibility to participate in the Installed Capacity market during one of the 20 highest NYCA integrated real-time load hours in any one of the five previous Summer or Winter Capability Periods, the ISO shall replace the 20 highest NYCA integrated real-time load hours from that Winter or Summer Capability Period, as appropriate, with the 20 highest NYCA integrated real-time load hours from the next most recent Winter or Summer Capability Period such that the rolling average of the hourly net Energy provided by each such Resource shall be calculated from the 20 highest NYCA integrated real-time load hours in the five most recent prior Summer or Winter Capability Periods in which the Resource was not in an outage state that precluded its eligibility to participate in the Installed Capacity market on one of the 20 highest NYCA integrated real-time load hours in that Capability Period.

Intermittent Power Resource Unforced Capacity values will have Unforced Capacity values based on seasonal performance factors calculated in accordance with section 4.5.1 of this *ICAP Manual*. Unforced Capacity from an Intermittent Power Resource for the summer capability period shall be based on the average production during the 14:00 to 18:00 hours for the months of June, July and August during the Prior Equivalent Capability Period. Unforced Capacity from an Intermittent Power Resource for the winter Capability Period shall be based on the average production during the 16:00 to 20:00 hours for the months of December, January, and February during the Prior Equivalent Capability Period. This calculation shall not include hours in any month that the Intermittent Power Resource was in an outage state that started on or after the effective date that precluded its eligibility to participate in the ICAP market in accordance with section 5.12.6.1 of the NYISO Services Tariff.

Initial Unforced Capacity values for new generating Resources will be based on NERC class average EFORd values for Resources of the same type. If no NERC class average exists, the NYISO will estimate a class average using capacity values for Resources of the same type currently providing capacity in the NYISO market; provided however, that for a new Intermittent Power Resource that depends upon wind as fuel, the initial Unforced Capacity value (which is to be measured as the amount of capacity it can reliably provide during system peak Load hours) will be the product of the applicable Unforced Capacity percentage in the Table shown below and that resource's DMNC value (nameplate rating net of station power). The Unforced Capacity percentages set forth below are taken from the Report on Phase II System Performance Evaluation "The Effects of Integrating Wind Power on Transmission System Planning, Reliability, and Operations" prepared by GE Energy, March 4, 2005.

Unforced Capacity values for BTM:NG Resources are net values (i.e., Generation - Load), and will be based on two separate derating factors: (1) the EFORd for the Generator of BTM:NG Resource, as described in this section above, and (2) the NYCA Translation

factor as described in Section 2.5 of this ICAP Manual. Detailed procedures for calculating the Unforced Capacity values are described in Section 4.15.3.2 of this ICAP Manual.

Unforced Capacity Percentage – Wind			
	Zones A through J	**Zone K (land-based)**	**Zone K (off-shore)**
Summer	10%	10%	38%
Winter	30%	30%	38%

For a new Intermittent Power Resource that is a Solar Farm, the Unforced Capacity value shall be equal to the product of (a) the Summer or Winter Unforced Capacity percentage for the Solar Farm based on the characteristics at the time the Unforced Capacity value is determined using the Tables in this Section, (i) if a fixed array, the Unforced Capacity Percentage for fixed tilt arrays determined using the azimuth angle and the tilt angle for the Solar Farm, (ii) if a tracking array, the Unforced Capacity Percentage for tracking arrays, (b) the solar inverter and transformer efficiency multiplier determined based on the inverter efficiency supplied by the Installed Capacity Supplier on behalf of the Intermittent Power Resource, and (c) the sum of the nameplate DC power rating for all installations within the Solar Farm.

Summer Unforced Capacity Percentage – Solar (Fixed Tilt Arrays)											
Azimuth Angle (Degrees)	**Tilt Angle (Degrees)**										
	Below 3	**3 - 7**	**8 - 12**	**13 - 17**	**18 - 22**	**23 - 27**	**28 - 32**	**33 - 37**	**38 - 42**	**43 - 47**	**Above 47**
Below 163	36%	36%	36%	35%	35%	34%	33%	31%	30%	28%	26%
163 - 167	36%	36%	36%	36%	35%	35%	34%	33%	31%	30%	28%
168 - 172	36%	37%	37%	36%	36%	36%	35%	34%	33%	31%	30%
173 - 177	36%	37%	37%	37%	37%	36%	36%	35%	34%	33%	31%
178 - 182	36%	37%	37%	37%	37%	37%	37%	36%	35%	34%	33%
183 - 187	36%	37%	38%	38%	38%	38%	38%	37%	36%	36%	34%
188 - 192	36%	37%	38%	38%	39%	39%	39%	38%	38%	37%	36%
193 - 197	36%	37%	38%	39%	39%	40%	39%	39%	39%	38%	37%
198 - 202	36%	37%	39%	39%	40%	40%	40%	40%	40%	39%	38%
203 - 207	36%	38%	39%	40%	40%	41%	41%	41%	41%	40%	39%
208 - 212	36%	38%	39%	40%	41%	41%	42%	42%	42%	41%	41%
213 - 217	36%	38%	39%	40%	41%	42%	42%	42%	42%	42%	41%

Above 217	36%	38%	39%	41%	42%	42%	43%	43%	43%	43%	42%

Winter Unforced Capacity Percentage – Solar (Fixed Tilt Arrays)											
Azimuth Angle (Degrees)	**Tilt Angle (Degrees)**										
	Below 3	**3 - 7**	**8 - 12**	**13 - 17**	**18 - 22**	**23 - 27**	**28 - 32**	**33 - 37**	**38 - 42**	**43 - 47**	**Above 47**
Below 163	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
163 - 167	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%
168 - 172	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
173 - 177	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%
178 - 182	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%
183 - 187	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%
188 - 192	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%
193 - 197	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%
198 - 202	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	2%
203 - 207	0%	0%	1%	1%	1%	1%	1%	1%	1%	2%	2%
208 - 212	0%	0%	1%	1%	1%	1%	1%	1%	2%	2%	2%
213 - 217	0%	0%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Above 217	0%	0%	1%	1%	1%	1%	1%	2%	2%	2%	2%

Unforced Capacity Percentage – Solar (Tracking Arrays, 1 or 2 Axis)	
Summer	46%
Winter	2%

Solar Inverter and Transformer Efficiency Multiplier											
Inverter Efficiency	**0.88**	**0.89**	**0.90**	**0.91**	**0.92**	**0.93**	**0.94**	**0.95**	**0.96**	**0.97**	**0.98**
Applicable Multiplier	0.96	0.97	0.98	0.99	1	1.01	1.02	1.03	1.04	1.05	1.07

4.5.1 Calculation of UCAP for Intermittent Power Resources

This section describes the general procedure for calculating Unforced Capacity values for Intermittent Power Resources which include generators that depend on wind, solar, and landfill gas for their fuel.

(a) Definitions

For purposes of this Section 4.5.1:

For purposes of this Section 4.5.1:

"Unforced Capacity" means that amount of generating capacity, expressed to the nearest tenth of a MW, that an Intermittent Power Resource can reasonably be expected to contribute during summer or winter peak hours, as applicable.

"Production Factor" for an Intermittent Power Resource means a factor based on historic operating data, except for Intermittent Power Resources with less than sixty (60) days of historic operating data in the Prior Equivalent Capability Period (i) those fueled by wind or solar , initial Unforced Capacity will be determined using the factors defined in Section 4.5 above and in this Section 4.5.1, and (ii) those fueled by land fill gas, initial Unforced Capacity will be determined in accordance with Section 4.5(b) similar to other types of generating resources.

"Installed Capacity" means the sum of the nameplate ratings of the individual generating units in the Intermittent Power Resource.

"Hourly Output" means the metered output of the Intermittent Power Resource expressed to the nearest tenth of a MW and integrated over a one-hour period.

"Summer Peak Hours" means the hours beginning 14, 15, 16, and 17 during the three-month period from June 1 through August 31, inclusive.

"Winter Peak Hours" means the hours beginning 16, 17, 18 and 19 during the three-month period from December 1 through the last day of February.

(b) Calculation Procedure

Generally, the calculation of the Production Factor for an Intermittent Power Resource in a Capability Period is a two step process that is based on its operating data for the Prior Equivalent Capability Period. For facilities with less than sixty (60) days of historic operating data in the Prior Equivalent Capability Period, the initial Intermittent Power Resource Unforced Capacity will use the factors in Section 4.5. The Production Factor, when multiplied by the current Intermittent Power Resource's Installed Capacity yields the Unforced Capacity for that Intermittent Power Resource.

$UCAP^{Q}_{gm}$, the amount of Unforced Capacity that Resource *g* is qualified to provide in month *m*, is calculated as follows:

$UCAP^{Q}_{gm} = ProdF_{gm} \times NC_{gm}$,

where:

$ProdF_{gm}$ is the production factor used in the calculation of the amount of Unforced Capacity that Resource *g* is qualified to provide in month *m*; and

NC_{gm} is the nameplate capacity of Resource *g* that is applicable when determining the amount of Unforced Capacity that Resource *g* is qualified to provide in month *m*.

$ProdF_{gm}$, in turn, is calculated as follows:

$$ProdF_{gm} = \frac{\sum_{h \in CPPH_{gm}} E_{gh}}{\sum_{h \in CPPH_{gm}} NC_{gh}},$$

Where:

$CPPH_{gm}$ is the set of all Summer Peak Hours during the most recent Summer Capability Period preceding the Capability Period containing month *m* (if month *m* is part of a Summer Capability Period) during which Resource *g* was available for commercial operation, or the set of all Winter Peak Hours during the most recent Winter Capability Period preceding the Capability Period containing month *m* (if month *m* is part of a Winter Capability Period) during which Resource *g* was available for commercial operation;

E_{gh} is the amount of Energy delivered to the NYCA transmission system by Resource *g* during hour *h*; and

NC_{gh} is the nameplate capacity of Resource *g* that was applicable when determining the amount of Unforced Capacity that Resource *g* was qualified to provide in hour *h*;

except that for new Intermittent Power Resource for which less than sixty (60) days of production data are available to calculate $ProdF_{gm}$ using the equation above, $ProdF_{gm}$ instead will be calculated in accordance with Section 4.5.

4.6 Operating Data Default Value and Exception for Certain Equipment Failures (Section 5.12.6.2 and 5.12.6.3 NYISO 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 *ICAP Manual*, the NYISO will deem a Resource to be completely forced out during each month for which the Resource has not submitted its Operating Data in accordance with Section 4.4 of this *ICAP Manual*. Pursuant to Section 5.12.12 of the*NYISO Services Tariff* (available from the NYISO Web site at http://www.nyiso.com/public/documents/tariffs/market_services.jsp), Resources that do not comply with Section 4.4 of this *ICAP Manual* also are subject to information submission requirements sanctions.

Resources that are deemed to be completely forced out during any month may submit new Operating Data to the NYISO 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 NYISO 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 NYISO 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 *ICAP Manual*.

4.6.2 Exception for Certain Equipment Failures

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

This exception is limited to an equipment failure that involves equipment located on the electric network beyond the generator step-up transformer, and including such step-up transformer on the output side of the Generator, Energy/Capacity Limited Resource, System Resource, Intermittent Power Resource or Control Area System Resource. This exception does not apply to fuel related outages or derates or other cause codes that might be classified as Outside Management Control in the NERC Data reporting Instructions. In reporting Operating Data (GADS data), a Generator, Energy/Capacity Limited Resource, or System Resource shall report a generator outage or derating caused by an equipment failure that involves equipment located on the electric network beyond the step-up transformer, and including such step-up transformer, in accordance with normal outage reporting procedures and document them as a forced outage (U1, U2, U3, D1, D2 or D3) with a cause code of 9300.

Intermittent Power Resources will report generator outage and derated hours caused by an equipment failure that involves equipment located on the electric network beyond the step-up transformer, and including such step-up transformer, in accordance with normal outage reporting procedures and document them in accordance with instructions for Intermittent Power Resources to be found in Attachment K to this *ICAP Manual*.

If an outage occurs on the transmission system beyond the generator step-up transformer, and including such step-up transformer, at a time when a Generator has not placed its unit on a maintenance outage, such interruption in availability shall be treated for purposes of calculating the unit's EFORd rating as a maintenance outage (MO) in the case of a forced outage (U1, U2, U3) or as a maintenance derate (D4) in the case of a forced derating (D1, D2, D3).

If an outage occurs on the transmission system beyond the generator step-up transformer, and including such step-up transformer, at a time when a Generator is on a maintenance outage, such interruption in availability shall be treated for purposes of calculating the unit's EFORd rating as a maintenance outage. In the event that service resumes on the transmission system but the unit categorized as being on a reserve shutdown is not able to perform, the unit shall be charged with a forced outage from the time that the transmission outage ended until the time it resumes operations (the "post transmission outage period");

4.12.1 Claiming of Unforced Capacity and RIPs

The Unforced Capacity of a SCR except a New SCR in a Mitigated Capacity Zone (see Section 4.12.2 below) may be freely sold in Bilateral Transactions. However, such Unforced Capacity may not be claimed by an LSE towards satisfaction of its own LSE Unforced Capacity Obligation or be offered into an auction administered by the NYISO unless the SCR has enrolled with a RIP and been accepted by the NYISO. RIPs are Market Participants that are bound by the NYISO's tariffs and ISO Procedures, including the notification and other requirements applicable to RIPs under this Section 4.12. RIPs shall be responsible for all forms of communication to and from the NYISO for purposes of Minimum Payment Nomination, notification, dispatch, validation, billing and verification of SCRs and the Unforced Capacity associated with SCRs.

4.12.2 General Requirements

RIPs must comply with the rules applicable to SCRs set forth in the *NYISO Services Tariff* and ISO Procedures, including the obligation to meet the qualifications and comply with the procedures described below.

A RIP must enroll a SCR with the NYISO in accordance with the schedule specified in the ICAP Event Calendar and DRIS Event Calendar, which can be found at the following location on the NYISO Website:

http://icap.nyiso.com/ucap/public/evt_calendar_display.do

In order to enroll SCRs, a RIP must use the Demand Response Information System (DRIS) to import the specified enrollment file.

Prior to enrolling any SCRs, a RIP must register with the NYISO as an ICAP Supplier. The RIP must request enrollment for each SCR in DRIS, obtain a resource identification number for each SCR it enrolls, and subsequently the NYISO must approve the request, before a SCR's enrollment becomes effective and the Unforced Capacity from the SCR can be claimed by an LSE towards its LSE Unforced Capacity Obligation or offered in an auction administered by the NYISO.

Upon the initial enrollment of a SCR, or at any time when an enrollment change is made, the RIP must include as part of the enrollment file uploaded to the DRIS the SCR Aggregation ID to which the SCR is assigned. A RIP may request, in the DRIS, new SCR Aggregation IDs in a specific Load Zone, during the New Aggregation ID Request Period in the ICAP Event Calendar and DRIS Event Calendar. Any request for a new SCR Aggregation ID must be approved by the NYISO.

Interval meters are required of all SCRs, unless the SCRs are part of a small customer aggregation. Such metering must satisfy all requirements of the Metering, Verification, Billing and Settlement Section of the *NYISO Emergency Demand Response Program Manual*, available from the NYISO Web site at http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jspSingle metering of multiple end-use customers on primary, secondary, or tie-line feeders is prohibited.

The Unforced Capacity of SCRs may only be offered in auctions administered by the NYISO or be claimed by an LSE towards its LSE Unforced Capacity Obligation in whole increments of 100 kW in a Load Zone (e.g., 590 kW of Unforced Capacity would be truncated to 500 kW). However, SCRs may be aggregated into an SCR Aggregation to satisfy this requirement, provided that each such SCR Aggregation is identified as a single block of Unforced Capacity. SCR Aggregations of this type may be used to meet the 100 kW block requirement.

Enrolling SCRs with multiple account numbers located at a single service address

The method of enrollment for SCRs with multiple Transmission Owner or electric service provider account numbers located at a single end-use location (service address) is dependent on the metering configuration and account information of each Demand Side Resource.

Where a single end-use location (service address) has more than one Demand Side Resource with both (i) a unique Transmission Owner or electric service provider account number and (ii) an interval meter, each such Demand Side Resource must be enrolled as a separate SCR.

A single Transmission Owner or electric service provider account number may not be separated into multiple SCRs.

More than one Demand Side Resource located at a single end-use location (service address) may enroll as a single SCR only when:(i) the end-use location is associated with a single legal entity, (ii) each individual Demand Side Resource has a unique Transmission Owner or electric service provider account number, (iii) the individual Demand Side Resources do not have individual interval meters, and (iv) the end-use location does have an interval meter that aggregates all of the associated individual Demand Side Resource Transmission Owner or electric service provider account numbers located at the service address.

Examples:

- A single multi-unit building with multiple account numbers:

  Multiple Demand Side Resources (units) that wish to be a SCR must aggregate to form a single SCR where (i) the Demand Side Resources (units) are associated with a single legal entity, and (ii) the Demand Side Resources (units) do not have individual interval meters but the building does have an interval meter that aggregates all the associated individual Transmission Owner or electric service provider account numbers at the service address.

  Multiple Demand Side Resources (units) that wish to be a SCR may not aggregate to form a single SCR where (i) the Demand Side Resources (units) are associated with a single legal entity, and (ii) the Demand Side Resources (units) each have individual interval meters.

  Multiple Demand Side Resources (units) that wish to be a SCR may not enroll as a single SCR where (i) each Demand Side Resource (unit) at the single end-use location is separately owned, regardless of the end-use location's type of metering because, although there is one end-use location, each unique account number is associated with a separate legal entity.

- A commercial retail chain with multiple end-use locations and account numbers:

  Each individual end-use location that wishes to be a SCR must be enrolled separately as a single SCR using its unique Transmission Owner or electric service provider account number because, despite common ownership, the stores are not at a single end-use location.

  (*The examples above are provided only to demonstrate potential application of enrollment requirements. The examples do not limit application of the requirements discussed above.*)

  All unique Transmission Owner or electric service provider account numbers aggregated into a single SCR must be provided to the NYISO using the "Enrolling Multiple Account Numbers" form located on the NYISO website at:

  http://www.nyiso.com/public/markets_operations/market_data/demand_response/index.jsp

  RIPs are required to submit the form each time the enrollment of such SCRs is requested in DRIS. The NYISO must receive the completed form via electronic mail (at SCR_Registration@nyiso.com) by the SCR enrollment deadline as specified in the ICAP and DRIS Event Calendar.

Assignment of Performance Factors

The NYISO will assign performance factors as follows:

For a RIP enrolled in the SCR program in the Prior Equivalent Capability Period, the RIP performance factor for the current Capability Period shall be computed by the NYISO in accordance with Section 4.12.2.1.3 of this *ICAP Manual.*

For a RIP that did not participate in the SCR program in the Prior Equivalent Capability Period the RIP shall be assigned the SCR program performance factor for the current Capability Period as computed by the NYISO in accordance with Section 4.12.2.1.4 of this *ICAP Manual*.

For an individual SCR that was not enrolled in the SCR program in either the Prior Equivalent Capability Period or the Capability Period preceding the Prior Equivalent Capability Period, the SCR shall be assigned the performance factor of the RIP that enrolls the SCR in the current Capability Period.

The NYISO shall compute a separate SCR Aggregation performance factor, in accordance with Section 4.12.2.1.5 of this *ICAP Manual,* that recognizes over-performance by one SCR to compensate for under-performance by another SCR in the same SCR Aggregation in the same hour. The minimum hourly performance of an individual SCR shall be zero (0). SCRs may be transferred from one SCR Aggregation to another SCR Aggregation within a RIP's portfolio during the Aggregation Management period as specified in the ICAP Event Calendar and DRIS Event Calendar. Following the Aggregation Management period, the NYISO shall recalculate the SCR Aggregation performance factor for each SCR Aggregation.

Small Customer Aggregations

The NYISO will also allow participation by aggregations of small customers using alternative metering and performance measurement subject to the procedures and limitations set forth in the *NYISO Emergency Demand Response Program Manual* (available from the NYISO Web site at the following URL: http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp, except that the total of all such aggregations for SCRs shall not exceed 100 MW. Each small customer aggregation will be reviewed by the NYISO staff and the Installed Capacity Working Group, and must be approved by at least four of the Chairs and Vice-Chairs of the Management Committee and the Business Issues Committee and the Chairs of the Installed Capacity Working Group and Price Responsive Load Working Group. The RIP shall report the performance of each small customer aggregation (each aggregation separate from any other aggregation and separate from resources not in the aggregation) directly into the DRIS, using an import file formatted as specified in the *NYISO DRIS User's Guide*. The RIP shall provide additional documentation to verify performance as requested by the NYISO.

New SCR in a Mitigated Capacity Zone

A SCR that is enrolled must be accepted by the NYISO before the enrollment is effective. Once accepted, a SCR is a "New SCR in a Mitigated Capacity Zone" if it is enrolled in a Mitigated Capacity Zone. A New SCR in a Mitigated Capacity Zone shall be subject to an Offer Floor, in accordance with Section 23.4.5.7.5 of the *NYISO Services Tariff,* unless exempt (as described below), beginning with the month of its initial offer to supply Installed Capacity, and until its offers of Installed Capacity have been accepted in the ICAP Spot Market Auction at a price at or above its Offer Floor for a total of twelve (12), not necessarily consecutive, months.

New SCRs in a Mitigated Capacity Zone are eligible SCRs only in the ICAP Spot Market Auction; UCAP from a New SCR in a Mitigated Capacity Zone may not be used to cover UCAP offered in a Capability Period Auction, Monthly Auction, or through a Bilateral Transaction. If a New SCR in a Mitigated Capacity Zone is included in UCAP certified for a Capability Period Auction or Monthly Auction sale, or through a Bilateral Transaction certified by both parties to the transaction, the amount of UCAP attributable to the New SCR in a Mitigated Capacity Zone will constitute a shortfall.

A New SCR in a Mitigated Capacity Zone, except New York City, shall be exempt from the Offer Floor if (a) it was enrolled with the NYISO as a SCR for any month within the Capability Year that includes March 31 in an ICAP Demand Curve Reset Filing Year in which the NYISO proposes a New Capacity Zone that includes the location of the New SCR in a Mitigated Capacity Zone (e.g., any month in the 2012/13 Capability Year, for SCRs in the New Capacity Zone that was proposed in the 2013 Demand Curve Reset Filing Year) or (b) the NYISO projects that the ICAP Spot Market Auction price will exceed, the SCR's Offer Floor for the first twelve months that the SCR reasonably anticipated to offer to supply UCAP.

SCRs with Local Generators

SCRs that participate with a Local Generator must enroll as either response type B or response type G resources, as defined in the *NYISO DRIS User's Guide*, as required by the metering configuration of the SCR and the Local Generator. By enrolling a SCR that participates with a Local Generator, the RIP is certifying to the NYISO, on behalf of itself and the SCR, that the SCR has obtained all necessary regulatory approvals for the Local Generator to operate for the purposes of reducing the Load being supplied from the NYS Transmission System and/or distribution system during all NYISO initiated performance tests and events.

SCRs that use Local Generators that are operating to fully serve their Load do not qualify for participation in the SCR program. A Local Generator that is normally operating to partially serve its Load may participate in the program with any additional generation that is available to operate at the direction of the NYISO in order to reduce the remaining Load being supplied from the NYS Transmission System and/or distribution system. In no instance shall a Local Generator participate in the SCR program at a level that exceeds the SCR's applicable ACL baseline that was used for enrollment in the program.

A SCR that supplies Load reductions solely through the use of a Local Generator and that elects to measure such Load reductions by metering the output of such Local Generator in accordance with Section 4.12.2.1 of this *ICAP Manual* shall report to the NYISO performance test and event data, as specified in Section 4.12.4.8 of this ICAP Manual. A SCR that supplies Load reductions solely through the use of a Local Generator and that elects to measure such Load reductions by metering the output of such Local Generator in accordance with Section 4.12.2.1 of this *ICAP Manual* must only report the amount of generation that reduces Load from the NYS Transmission System and/or distribution system during an event or test as the performance of the SCR.

SCR Response Type for enrollment in DRIS

A RIP must identify a "Response Type" for each SCR it enrolls in DRIS based upon: (i) how the SCR will reduce its Load during a NYISO initiated performance test or event; and (ii) the meter configuration of the SCR's facility. Each SCR must be enrolled as: Response Type C (Curtailment), Response Type G (Generation), or Response Type B (Both).

A SCR must enroll as Response Type C when it reduces the Load supplied by the NYS Transmission System and/or distribution system during a NYISO initiated performance test or event only by curtailing the facility's Load, and submits the entire facility's net meter data as evidence of Load reduction (as specified in Section 5.1.2 of the NYISO's Emergency Demand Response Program ("EDRP") Manual).

A SCR must enroll as Response Type G when it reduces the Load supplied by the NYS Transmission System and/or distribution system during a NYISO initiated performance test or event only by using a Local Generator, and submits the Local Generator's meter data (not entire facility's net meter data) as evidence of Load reduction (as specified in Section 5.1.2 of the NYISO's EDRP Manual).

A SCR must enroll as Response Type B when:

(i) it uses both a Local Generator and curtailment of the facility's Load to reduce the Load supplied by the NYS Transmission System and/or distribution system during a NYISO initiated performance test or event, and submits

(a) the entire facility's net meter data, or

(b) the net of entire facility's Load meter data and Local Generator's meter data as evidence of Load reduction;

or

(ii) it uses only a Local Generator to reduce the Load supplied by the NYS Transmission System and/or distribution system during a NYISO initiated performance test or event, and submits

(a) the entire facility's net meter data, or

(b) the net of entire facility's Load meter data and Local Generator's meter data as evidence of Load reduction.

A SCR enrolled as Response Type G may not change its enrollment to either Response Type B or Response Type C within a single Capability Period. A SCR enrolled with either a Response Type B or a Response Type C may not change its enrollment to Response Type G within a single Capability Period.

4.12.2.1 Determination of ICAP, Performance Factors, UCAP, and Installed Capacity Equivalent of UCAP Sold

A RIP provides the load reduction capability associated with its SCRs as part of a SCR Aggregation. This section describes the procedures used for (1) translating the load reduction capability of a SCR to the ICAP value for the SCR, (2) calculating performance factors for a SCR, SCR Aggregation, RIP, and for the SCR program, (3) determining the UCAP value of the SCR Aggregation to which a SCR is assigned, and (4) determining the Installed Capacity Equivalent of UCAP sold of the SCR.

4.12.2.1.1 SCR ICAP

The ICAP of an individual SCR shall be computed as the applicable enrollment ACL minus the committed maximum demand multiplied by one plus the applicable transmission loss factor. The applicable transmission loss factor is determined, by the NYISO, according to the voltage service level of the SCR reported by the RIP on the SCR enrollment file imported into the DRIS for the Capability Period. The ICAP of an individual SCR is not dependent on the response type enrolled.

The precise formulation is as follows:

$$ICAP_{gm} = \left(ACL_{gm} - CMD_{gm}\right) \times \left(1 + TLF_{gv}\right)$$

Where:

$ICAP_{gm}$ = the Installed Capacity that Resource *g* is qualified to provide in month *m*;

ACL_{gm} = the applicable enrollment ACL, for Resource *g* applicable to month *m*, using data reported in the enrollment file uploaded to DRIS;

CMD_{gm} = the committed maximum demand for Resource *g* applicable to month *m*, using data reported in the enrollment file uploaded to DRIS;

TLF_{gv} = the applicable transmission loss factor for Resource g, expressed in decimal form (i.e., a loss factor of 8% is equal to .08) at voltage level v. The applicable transmission loss factor shall be the loss factor reflected in the relevant TO's then current retail electric rates approved by the PSC and stored in the DRIS for deliveries of Energy at voltage level v by the relevant TO to the Resource g.

4.12.2.1.2 SCR Performance Factors

The SCR performance factor for the current Capability Period shall be computed as the performance of the SCR in mandatory events and required tests, in accordance with Section 4.12.4.5 of this *ICAP Manual*, in which the SCR was required to reduce load from the Prior Equivalent Capability Period and the Capability Period immediately preceding the Prior Equivalent Capability Period. This individual SCR performance factor shall be the result of the average of the SCR's adjusted hourly performance factors for each of the SCR's best four consecutive hours in all of its mandatory events and required one-hour tests , in accordance with Section 4.12.4.5 of this *ICAP Manual*. Each adjusted hourly performance factor is the lesser of the raw performance factor or one.

If the SCR was not enrolled in any Capability Period required to calculate the performance factor for the current Capability Period, the SCR shall be assigned the performance factor of the RIP.

Performance Factor for a SCR with Load Curtailment

When the SCR is enrolled with a response type of B or C, as defined in the *NYISO DRIS User's Guide*, the raw hourly performance factor is computed as the hourly capacity reduction of the SCR divided by the applicable ACL of the SCR less the committed maximum demand of the SCR. The minimum hourly raw performance factor of a SCR shall be zero. The hourly capacity reduction is equal to the applicable ACL of the SCR minus the metered Load for the event or test hour. The minimum hourly capacity reduction for an individual SCR shall be zero.

The precise formulation is as follows:

$$SCR\ PF_{BCg} = \frac{\sum_{h \in NLRHgbe} \min\left(\frac{\max\left(ACL_{gh} - ML_{gh}, 0\right)}{ACL_{gh} - CMD_{gh}}, 1\right)}{NLRH_{gbe}}$$

Where:

$SCR\ PF_{BCg}$ = the performance factor of the Resource *g* with a response type B or C for the current Capability Period;

ACL_{gh} = the enrollment Net ACL or the Verified ACL, for Resource *g* applicable to hour *h* from the applicable Capability Period, using data reported in the DRIS;

ML_{gh} = the metered Load for Resource *g* for hour *h* from the applicable Capability Period, using data reported in the performance data file uploaded to DRIS;

CMD_{gh} = the committed maximum demand for Resource *g* applicable to hour *h* from the applicable Capability Period, using data reported by the RIP in the enrollment file uploaded to DRIS;

$NLRH_{gbe}$ = the number of hours from the applicable Capability Period, up to four per mandatory event plus any hour in which Resource *g* was required to demonstrate load reduction as part of one or more performance tests called by the NYISO where, in accordance with Section 4.12.4.5 of this ICAP Manual, the SCR may elect to demonstrate its maximum enrolled megawatt value by relying on its load reduction in a mandatory event hour in lieu of participation in the first performance test;

b = the Capability Period immediately preceding the Prior Equivalent Capability Period in which Resource *g* was enrolled and was obligated to respond to mandatory events and required tests, in accordance with Section 4.12.4.5 of this *ICAP Manual*, or the time at which Resource *g* began to serve as a SCR available to reduce load;

e = the most recent Prior Equivalent Capability Period in which Resource *g* was enrolled and was obligated to respond to mandatory events and required tests, in accordance with Section 4.12.4.5 of this *ICAP Manual*.

Performance Factor for a SCR enrolled with output from a Local Generator

When the SCR is enrolled with a response type of G, as defined in the *NYISO DRIS User's Guide*, the raw hourly performance factor is computed as the hourly capacity reduction of the SCR for the event or test hour divided by the applicable ACL of the SCR less the committed maximum demand of the SCR. The minimum hourly raw performance factor of a SCR shall be zero. The hourly capacity reduction is equal to the metered generator output for the event or test hour. The minimum hourly capacity reduction for an individual SCR shall be zero.

The precise formulation is as follows:

$$SCR\ PF_{Gg} = \frac{\sum_{h \in NLRHgbe} \min\left(\frac{\max\left(ML_{gh}, 0\right)}{ACL_{gh} - CMD_{gh}}, 1\right)}{NLRH_{gbe}}$$

Where:

$SCR\ PF_{Gg}$ = the performance factor of the Resource *g* with a response type G for the current Capability Period;

ACL_{gh} = the enrollment Net ACL or the Verified ACL, for Resource *g* applicable to hour *h* from the applicable Capability Period; using data reported in the DRIS;

ML_{gh} = the metered output of the Local Generator, less any output from the generator used to support the load of the SCR in accordance with Section 4.12.2 of this *ICAP Manual* subheading "SCRs with Local Generators", for Resource *g* for

hour *h* from the applicable Capability Period, using data reported in the performance data file uploaded to DRIS;

CMD_{gh} = the committed maximum demand for Resource *g* applicable to hour *h* from the applicable Capability Period, using data reported by the RIP in the enrollment file uploaded to DRIS;

$NLRH_{gbe}$ = the number of hours in which Resource *g* was required to reduce load during the applicable Capability Period, up to four per mandatory event plus any hour in which Resource *g* was required to demonstrate load reduction as part of one or more performance tests called by the NYISO, where, in accordance with Section 4.12.4.5 of this ICAP Manual, the SCR may elect to demonstrate its maximum enrolled megawatt value by relying on its load reduction in a mandatory event hour in lieu of participation in the first performance test;

b = the Capability Period immediately preceding the Prior Equivalent Capability Period in which Resource *g* was enrolled and was obligated to respond to mandatory events and required tests, in accordance with Section 4.12.4.5 of this *ICAP Manual*;

e = the Prior Equivalent Capability Period in which Resource *g* was enrolled and was obligated to respond to mandatory events and required tests, in accordance with Section 4.12.4.5 of this *ICAP Manual*.

4.12.2.1.3 RIP Performance Factor

The RIP performance factor for the current Capability Period shall be computed as the sum of the proportional declared value of all SCRs that were enrolled by the RIP in the Prior Equivalent Capability Period divided by the sum of the maximum declared value of all SCRs that were enrolled by the RIP in the Prior Equivalent Capability Period. The proportional declared value of an individual SCR is computed as the maximum declared value of the SCR from the Prior Equivalent Capability Period multiplied by the raw performance factor, calculated in accordance with Section 4.12.2.1.2 of this *ICAP Manual*, of the SCR for the current Capability Period. The maximum declared value of an individual SCR shall be set to the greatest declared value from the SCR enrollment in the Prior Equivalent Capability Period.

When more than one RIP has enrolled a SCR in the Prior Equivalent Capability Period, the SCR's performance will be included in the RIP performance factor of the RIP that last enrolled the SCR in the Prior Equivalent Capability Period.

The precise formulation is as follows:

$$RIP\ PF_r = \frac{ProportionalDV_{RIPSCRg}}{MaxDV_{RIPSCRg}}$$

Where:

$RIP\ PF_r$ = the performance factor of the RIP *r* for the current Capability Period;

ProportionalDV$_{RIPSCRg}$= the sum of the maximum declared value of each Resource *g* enrolled by the RIP in the Prior Equivalent Capability Period multiplied by the corresponding raw performance factor that is not capped at 1.0 of the Resource *g* for the current Capability Period;

MaxDV$_{RIPSCRg}$ = the sum of the greatest declared value of each Resource *g* from its enrollment by the RIP in the Prior Equivalent Capability Period;

4.12.2.1.4 SCR Program Performance Factor

The SCR program performance factor for the current Capability Period shall be computed as the sum of the proportional declared value of all SCRs that were enrolled in the Prior Equivalent Capability Period divided by the sum of the maximum declared value of all SCRs that were enrolled in the Prior Equivalent Capability Period. The proportional declared value of an individual SCR is computed as the maximum declared value of the SCR from the Prior Equivalent Capability Period multiplied by the raw performance factor, calculated in accordance with Section 4.12.2.1.2 of this ICAP Manual, of the SCR for the current Capability Period. The maximum declared value of an individual SCR shall be set to the greatest declared value from the SCR enrollment in the Prior Equivalent Capability Period.

The precise formulation is as follows:

$$ICAP/SCR\ PROG\ PF = \frac{ProportionalDV_{ALLSCRg}}{MaxDV_{ALLSCRg}}$$

Where:

ICAP/SCR PROG PF = the performance factor of the SCR program for the current Capability Period;

ProportionalDV$_{ALLSCRg}$ = the sum of the proportional declared values for each Resource *g* enrolled in the SCR program in the Prior Equivalent Capability Period;

MaxDV$_{ALLSCRg}$ = the sum of the maximum declared value for each Resource *g* enrolled in the SCR program in the Prior Equivalent Capability Period;

4.12.2.1.5 SCR Aggregation Performance Factor

The SCR Aggregation performance factor is calculated each month, after the close of Aggregation Management as specified in the ICAP Event Calendar and DRIS Event Calendar. The SCR Aggregation performance factor for the current Capability Period and auction month shall be determined using enrollment and hourly event and required test response data, in accordance with Section 4.12.4.5 of this *ICAP Manual*, from all SCRs assigned to the SCR Aggregation from the Prior Equivalent Capability Period and the Capability Period immediately preceding the Prior Equivalent Capability Period.

To compute the hourly raw performance of the SCR Aggregation for each hour that the SCRs assigned to the SCR Aggregation were required to reduce load in a mandatory event

and required one-hour tests, in accordance with Section 4.12.4.5 of this *ICAP Manual*, from the Prior Equivalent Capability Period and the Capability Period immediately preceding the Prior Equivalent Capability Period, the hourly raw performance of the SCR Aggregation shall be the sum of the capacity reduction value from all SCRs assigned to the SCR Aggregation for the month divided by the difference between the sum of the ACLs and the sum of the CMDs from all of the SCRs assigned to the SCR Aggregation for the month.

The adjusted SCR Aggregation performance factor for each hour is the lesser of the hourly raw performance factor or one. The SCR Aggregation performance factor for the month shall be the result of the sum of the hourly adjusted performance factors during the best four consecutive hours in each mandatory event and one-hour tests, in accordance with Section 4.12.4.5 of this *ICAP Manual*, from the Prior Equivalent Capability Period and the Capability Period immediately preceding the Prior Equivalent Capability Period divided by the total number of hours in which the SCR Aggregation was required to reduce load for the mandatory events, up to a maximum of four consecutive hours per mandatory event, and required one-hour tests, in accordance with Section 4.12.4.5 of this *ICAP Manual*, from the Prior Equivalent Capability Period and the Capability Period immediately preceding the Prior Equivalent Capability Period.

If a SCR assigned to the SCR Aggregation for the current Capability Period was not enrolled in any Capability Period required to calculate the performance factor for the current Capability Period and auction month, the SCR will not be included in the calculation of the SCR Aggregation performance factor.

The precise formulation is as follows:

$$SCR\ Aggregation\ PF_{am} = \frac{\sum_{h \in NLRHabe} \min\left(\frac{\sum_{g \in ah}\left(max\left(ACL_{BCgh} - ML_{BCgh}, 0\right) + max\left(ML_{Ggh}, 0\right)\right)}{\sum_{g \in ah}\left(ACL_{gh} - CMD_{gh}\right)}, 1\right)}{NLRH_{abe}}$$

Where:

SCR Aggregation PF_{am} = the performance factor of the SCR Aggregation *a*, as determined for month *m*;

ACL_{BCgh} = the enrollment Net ACL or the Verified ACL, for the SCR *g* with response type B or response type C assigned to the SCR Aggregation *a* , using data reported in the DRIS *l*;

ML_{BCgh}= the metered Load for SCR *g* with response type B or response type C assigned to the SCR Aggregation *a* for hour *h*, using data reported in the performance data file uploaded to DRIS;

ML_{Ggh} = the metered output of the Local Generator, less any output from the generator used to support the load of the SCR in accordance with Section 4.12.2 of this *ICAP Manual* subheading "SCRs with Local Generators", for Resource *g* for hour *h* from the applicable Capability Period, using data reported in the performance data file uploaded to DRIS;

ACL_{gh} = the enrollment Net ACL or the Verified ACL, for the SCR *g* assigned to the SCR Aggregation *a*, using data reported in the DRIS;

CMD_{gh} = the committed maximum demand for Resource *g* applicable to hour *h* from the applicable Capability Period, using data reported by the RIP in the enrollment file uploaded to DRIS;

$NLRH_{abe}$ = the number of hours in which Resource *g* was required to reduce load during the applicable Capability Period, up to four per mandatory event plus any hour in which Resource *g* was required to demonstrate load reduction as part of one or more performance tests called by the NYISO, where, in accordance with Section 4.12.4.5 of this ICAP Manual, the SCR may elect to demonstrate its maximum enrolled megawatt value by relying on its load reduction in a mandatory event hour in lieu of participation in the first performance test;

b = the Capability Period immediately preceding the Prior Equivalent Capability Period in which the SCR was enrolled and was obligated to respond to mandatory events and required tests, in accordance with Section 4.12.4.5 of this *ICAP Manual*;

e = the most recent Prior Equivalent Capability Period in which the SCR was enrolled and was obligated to respond to mandatory events and required tests, in accordance with Section 4.12.4.5 of this *ICAP Manual*;

4.12.2.1.6 SCR Contribution to SCR Aggregation UCAP

For SCRs that have a SCR performance factor:

The UCAP contribution of the SCR to the SCR Aggregation UCAP shall be computed as the calculated ICAP for the SCR multiplied by the SCR Aggregation performance factor.

The precise formulation is as follows:

$$UCAPContr^{SCR}_{gm} = ICAP^{Q}_{gm} \times SCR\ Aggregation\ PF_{am}$$

Where:

$UCAPContr^{SCR}_{gm}$ = the Unforced Capacity that Resource *g* is qualified to provide in month *m*, as part of the SCR Aggregation;

$ICAP^{Q}_{gm}$ = the Installed Capacity that Resource *g* is qualified to provide in month ,; calculated in accordance with Section 4.12.2.1.1 of this *ICAP Manual*;

Aggregation PF_{am} = the performance factor of the SCR Aggregation *a* as determined for the Capability Period and month *m*, calculated in accordance with Section 4.12.2.1.5 of this *ICAP Manual;*

For SCRs that have been assigned the performance factor of the RIP:

The UCAP contribution of the SCR to the SCR Aggregation UCAP shall be computed as the calculated ICAP for the SCR multiplied by the performance factor of the RIP.

The precise formulation is as follows:

$$UCAPContr^{RIP}_{gm} = ICAP^{Q}_{gm} \times RIP\ PF_{g}$$

Where:

UCAPContr$^{RIP}_{gm}$ = the Unforced Capacity that Resource *g* is qualified to provide in month *m*, as part of the SCR Aggregation;

ICAP$^{Q}_{gm}$ = the Installed Capacity that Resource *g* is qualified to provide in month *m*, calculated in accordance with Section 4.12.2.1.1 of this *ICAP Manual*;

RIP PF $_{g}$ = the performance factor of the RIP *g*, calculated in accordance with Section 4.12.2.1.3 or Section 4.12.2.1.4 of this *ICAP Manual*, as applicable;

4.12.2.1.7 SCR Aggregation UCAP

The SCR Aggregation UCAP, for the applicable auction month shall be computed as the sum of the UCAP contribution to the SCR Aggregation UCAP of each SCR in the SCR Aggregation using the SCR Aggregation performance factor plus the sum of the UCAP contribution to the SCR Aggregation UCAP of each SCR in the SCR Aggregation using the performance factor of the RIP.

The precise formulation is as follows:

$$UCAP^{Q}{}_{am} = \sum_{am}\left(UCAPContr^{SCR}_{gm}\right) + \sum_{am}\left(UCAPContr^{RIP}_{gm}\right)$$

Where:

UCAP$^{Q}_{am}$ = the Unforced Capacity of that SCR Aggregation *a* is qualified to provide in month *m*;

UCAPContr$^{SCR}_{gm}$ = the Unforced Capacity that Resource *g* is qualified to provide in month *m* using the SCR Aggregation performance factor, as calculated in accordance with Section 4.12.2.1.6 of this *ICAP Manual*;

UCAPContr$^{RIP}_{gm}$ = the Unforced Capacity that Resource *g* is qualified to provide in month *m* using the performance factor for the RIP, as calculated in accordance with Section 4.12.2.1.6 of this ICAP Manual;

4.12.2.1.8 SCR Installed Capacity Equivalent

The Installed Capacity Equivalent (ICE) for a SCR, for the applicable auction month, shall equal the UCAP sales of the SCR for the auction month divided by the applicable performance factor (i.e. SCR Aggregation performance factor or performance factor for the RIP).

For SCRs included in the SCR Aggregation performance factor, the Installed Capacity Equivalent is equal to:

The precise formulation is as follows:

$$ICE_{gm}^{SCR} = UCAPContr_{gm}^{SCR} \div AggregationPF_{am}$$

Where:

ICE^{SCR}_{gm} = the Installed Capacity Equivalent that Resource *g* is obligated to deliver in month *m*, at the direction of the NYISO;

$UCAPContr^{SCR}_{gm}$ = the Unforced Capacity sold by Resource *g* in month *m*, using the SCR Aggregation performance factor, as calculated in accordance with Section 4.12.2.1.6 of this *ICAP Manual*;

$AggregationPF_{am}$ = the performance factor of the SCR Aggregation *a*, as determined for month *m*;

For SCRs assigned the performance factor for the RIP, the Installed Capacity Equivalent is equal to:

The precise formulation is as follows:

$$ICE_{gm}^{RIP} = UCAPContr_{gm}^{SCR} \div RIP\ PF$$

Where:

ICE^{RIP}_{gm} = the Installed Capacity Equivalent that Resource *g* is obligated to deliver in month *m*, at the direction of the NYISO;

$UCAPContr^{SCR}_{gm}$ = the Unforced Capacity sold by Resource *g* in month *m*, using the performance factor of the RIP, as calculated in accordance with Section 4.12.2.1.6 of this *ICAP Manual*;

RIP PF_{am} = the performance factor of the RIP;

4.12.3 Minimum Payment Nomination Requirements

For each month in which a SCR supplies Unforced Capacity to the NYCA, the RIP must specify in the DRIS a Minimum Payment Nomination that will reflect the minimum guarantee price the SCR will be paid if called upon to reduce Load equal to the Installed Capacity Equivalent of the amount of Unforced Capacity it has supplied.

A Minimum Payment Nomination is specified by the RIP, in the DRIS, for each SCR Aggregation and applies to all individual SCRs within that SCR Aggregation. A SCR's Minimum Payment Nomination cannot exceed $500/MWh. This Minimum Payment Nomination, or Energy curtailment payment designation, associated with a SCR's Unforced Capacity will not be entered in the Day-Ahead Market, but instead will serve as a strike price that the NYISO can use to prioritize which SCRs to call. Unlike a Generator or other

Resource's Bid to supply Energy associated with Unforced Capacity, a SCR's Minimum Payment Nomination cannot be revised prior to Settlement in the Day-Ahead Market. A SCR's Minimum Payment Nomination is set for the entire month.

The Minimum Payment Nomination for a new SCR Aggregation ID must be specified by the RIP at the time of the SCR Aggregation ID request. The RIP may change the Minimum Payment Nomination for each auction month during the dates and times specified in the ICAP Event Calendar and DRIS Event Calendar for Strike Price Management.

SCR Minimum Payment Nominations will be used only when the NYISO Operations department determines the need to call on these SCRs in accordance with the NYISO Emergency Operations Manual. In the event the NYISO Operations department makes such a determination, the Minimum Payment Nominations placed for each SCR will allow the NYISO to call for Load reduction based on SCR zone location and price. As a result, the NYISO will be able to call less than the total pool of SCRs in the NYCA and in each NYCA zone.

As an example, the NYISO may determine that it needs a Demand Reduction response of 25 MW in Zone J. A total of 50 MW of SCRs located in Zone J is supplying Unforced Capacity. For this example, assume that each MW of SCR Capacity entered a different Minimum Payment Nomination, from $0/MWh to $500/MWh. In order to fulfill its need for 25 additional MW of reserves, the NYISO will call the 25 MW of SCRs in economic order based on their submitted Minimum Payment Nominations starting with the lowest values. See Section 4.12.7 for situations where multiple SCRs have placed the same top Minimum Payment Nomination called upon by the NYISO and the total MW offered at that price exceed the ISO's needs.

4.12.4 Performance Obligations

A SCR must be capable of making Energy available (*i.e.*, take action, in response to the NYISO direction, that causes a measurable and verifiable reduction of Load from the New York State Transmission System and/or distribution system during an event or test), for a minimum four (4) hour block (except where environmental constraints that have been previously considered and approved by the NYISO require a shorter block), in amounts that correspond to the Installed Capacity Equivalent of the amount of Unforced Capacity it has been committed to supply for each month through the NYISO's Installed Capacity Market. The obligation to reduce Load shall commence at the top of the hour after the NYISO has provided the following notices:

a. on the day before the SCR's performance may be required, the NYISO shall provide twenty-one (21) hour notice to the RIP, so long as notification is provided by 3:00 PM ET. If notice is provided to the RIP after 3:00 PM ET on the day before the SCR's performance may be required, then the NYISO shall instead provide twenty-four (24) hours notice;
b. following the advance notice described in (a) above, on the operating day the NYISO shall provide at least two (2) hours notice to the RIP that the SCR's performance will be required. The SCR shall reduce its Load or transfer Load to a Local Generator (as appropriate) commencing at the top of the hour immediately after the two-hour notice period has expired. In the alternative, the

NYISO may specify the hour at which the SCR shall commence performance of its obligation by reducing its Load or transferring Load to a Local Generator (as appropriate), so long as the start hour specified by the NYISO is at least two hours in the future.

There shall be no relief from penalties or other obligations for failure to perform if the RIP was an Installed Capacity Supplier in any month within a Capability Period.

When requested by the Transmission Owner, the NYISO may call SCRs to reduce Load in targeted sub-load pockets within Load Zone J for the Targeted Demand Response Program (TDRP) as specified in Section 6 of the NYISO's EDRP Manual. Response to TDRP events activated by the NYISO at the request of a Transmission Owner is voluntary. Response to a TDRP event will not be used to measure performance for either the SCR or the RIP.

4.12.4.1 Average Coincident Load

The ACL is the baseline Load used by the NYISO for measuring the amount of Load reduction that a SCR enrolled in the NYISO's SCR program can provide during a specific Capability Period. An ACL is calculated by the NYISO for each SCR, except those SCRs that are eligible to enroll with a Provisional ACL, in accordance with Section 5.12.11.1.1 of the *NYISO Services Tariff*. An increase to the ACL may be reported in accordance with Section 5.12.11.1.5 of the *NYISO Services Tariff* and Section 4.12.4.3.1 of this *ICAP Manual*. A decrease to the ACL is required to be reported in accordance with Section 5.12.11.1.3 of the *NYISO Services Tariff* and Sections 4.3.3 and 4.12.4.3.2 of this ICAP Manual.

The NYISO will post to its website, and import into the DRIS, the top 40 NYCA peak Load hours for the Prior Equivalent Capability Period for each Load Zone ninety (90) days prior to the beginning of the Capability Period for which the ACL will be in effect. RIPs shall only report metered hourly Load consumed by the SCR that is supplied by the NYS Transmission System and/or the distribution system when uploading metered data into the DRIS for calculating or verifying an ACL. Any Load supported by generation produced from a Local Generator, other behind-the-meter generator, or other supply resource located behind the SCR's meter operating during the Capability Period SCR Peak Load Zone Hours, may not be added to the metered Load values submitted. In instances where the metered Load captures both the energy provided from the NYS Transmission System and/or distribution system with the energy provided by a Local Generator, other behind-the-meter generator, or other supply resource located behind the SCR's meter, the total amount of supply from behind-the-meter sources shall be netted out of the metered Load data submitted to the NYISO for calculating or verifying an ACL.

If a RIP attempts to change the value of any hour used in the ACL calculation in a subsequent enrollment during the same Capability Period, the SCR's enrollment record will be set to a Pending status in the DRIS and must be approved by the NYISO before the SCR can be enrolled with a revised ACL.

4.12.4.2 Provisional Average Coincident Load

A RIP may enroll a SCR with a Provisional ACL in accordance with Section 5.12.11.1.2 of the *NYISO Services Tariff*. The RIP must report the meter installation date on the

enrollment upload to the DRIS for each SCR being enrolled with a Provisional ACL. The meter installation date of the SCR must remain the same for the entire period in which the SCR is enrolled with a Provisional ACL with the same RIP. The RIP must maintain records sufficient to demonstrate compliance with Section 5.1 of the NYISO's EDRP Manual and to confirm the meter installation date reported in DRIS.

A demand response resource enrolled in the Prior Equivalent Capability Period in the NYISO Emergency Demand Response Program (EDRP) is ineligible to enroll in the SCR program with a Provisional ACL when being enrolled with the same RIP.

Determining Eligibility to Enroll A SCR with A Provisional ACL

Beginning with the 2014 Summer Capability Period, a RIP may verify the eligibility of a SCR to enroll with a Provisional ACL during the time frame corresponding to the SCR enrollment period as specified in the ICAP Event Calendar and DRIS Event Calendar and using the Transmission Owner Account Number of the SCR and the Provisional ACL Eligibility Import file through the DRIS. The Provisional ACL Eligibility Import will provide the RIP with one of the following results: (a) the SCR is eligible to enroll using a Provisional ACL and may be enrolled through the SCR enrollment process; (b) the SCR is ineligible to enroll using a Provisional ACL in accordance with Section 4.12.4.2.2 of this *ICAP Manual*.

All Provisional ACLs shall be subject to verification using the Verified ACL calculated in accordance with the verification process set forth in Section 5.12.11.1.2 of the *NYISO Services Tariff*. The RIP is responsible for uploading into the DRIS the interval billing meter data of the SCR for the Capability Period SCR Load Zone Peak Hours from the Capability Period in which the SCR was enrolled with a Provisional ACL, beginning with hours that fall between the meter installation date for the SCR enrolled with a Provisional ACL through the end of the Capability Period in which the SCR was enrolled with a Provisional ACL. Any Load supported by generation produced from a Local Generator, other behind-the-meter generator, or other supply source located behind the SCR's meter operating during the applicable Capability Period SCR Peak Load Zone Hours may not be included in the SCR's metered Load values reported for the verification of its Provisional ACL.

For a resource with a Provisional ACL, if twenty (20) or more Capability Period SCR Load Zone Peak Hours occur during the period between the meter installation date and the end of the Capability Period, the NYISO shall calculate a Verified ACL from the Provisional ACL verification data as the average of the SCR's highest twenty hourly loads taken from the relevant interval metered load dataset reported to the DRIS by the RIP.

For a resource with a Provisional ACL, if there are fewer than twenty (20) applicable Capability Period SCR Load Zone Peak Hours occurring during the period between the meter installation date and the end of the Capability Period the NYISO shall set the Verified ACL equal to the Provisional ACL from the SCR enrollment.

Failure by a RIP to report required interval data for the Provisional ACL verification process in accordance with Section 5.12.11.1.2 of the *NYISO Services Tariff* shall result in the Verified ACL being set to zero for the Capability Period in which the resource was enrolled with a Provisional ACL.

The Verified ACL will be used in the calculation of the SCR's performance factor, and all other associated performance factors (*i.e.*, RIP and SCR Aggregation performance factors), and where applicable, potential deficiency charges.

In accordance with Section 5.14.2.3.1 of the *NYISO Services Tariff* SCRs enrolled with a Provisional ACL shall be subject to potential deficiency charges as a result of overstating the Provisional ACL and shall be subject to all other shortfalls and deficiency charges that may apply to the RIP under Section 5.14.2 as an Installed Capacity Supplier, including but not limited to those that may result from the invalid enrollment of the SCR, failure to timely report a Qualified Change of Status Condition, and the underperformance of the SCR in the RIP portfolio. When a single SCR's participation in the SCR program gives rise to more than one potential shortfall within the Capability Period, the NYISO shall assess to the RIP the greatest deficiency charge for the Capability Period for the single SCR. The greatest deficiency charge for the Capability Period shall be the greatest sum of the monthly deficiency charges calculated for the single SCR from among the specific shortfall types identified under Section 5.14.2.3 of the *NYISO Services Tariff* .

Pursuant to Section 5.12.12.2 of the *NYISO Services Tariff* SCRs enrolled with a Provisional ACL may also be subject to potential sanctions for failure to report the metered Load data required for verification of the Provisional ACL. The SCR may also be subject to a financial sanction for failure to timely report a Qualified Change of Status Condition, in addition to the corresponding shortfall penalty as provided in Section 5.14.2.3.3 of the *NYISO Services Tariff*.

4.12.4.2.1 Continued Use of a Provisional Average Coincident Load

A SCR enrolled with a Provisional ACL may be enrolled with a Provisional ACL in subsequent Capability Periods in accordance with Section 5.12.11.1.2 of the *NYISO Services Tariff*.

The Provisional ACL may be applicable to a new SCR for up to three (3) consecutive Capability Periods, when enrolled with the same RIP, beginning with the Capability Period in which the SCR is first enrolled with the RIP. If the SCR is enrolled by another RIP in a subsequent Capability Period and the SCR is still eligible to enroll with a Provisional ACL, the enrolling RIP is required to enter a meter installation date when enrolling the SCR.

A SCR enrolled with a Provisional ACL that reported metered Load data for twenty (20) or more of the Capability Period SCR Load Zone Peak Hours is not eligible to enroll with a Provisional ACL in the next equivalent Capability Period. When interval billing meter data from the Prior Equivalent Capability Period necessary to compute the ACL is available in the DRIS and a different RIP is enrolling the SCR in the next equivalent Capability Period the enrolling RIP may request that the NYISO use the existing interval billing meter data in accordance with Section 4.12.4.2.2 of this *ICAP Manual* for enrollment of the SCR. When no such interval billing meter data or insufficient data exists in the DRIS, the RIP enrolling the SCR in the next equivalent Capability Period is eligible to enroll the SCR with a Provisional ACL.

4.12.4.2.2 Request for SCR Meter Data: ACL Data Request Enrollment Procedures

Beginning with the 2014 Summer Capability Period, when a RIP does not have and cannot obtain the interval billing meter data from the Prior Equivalent Capability Period necessary to compute an ACL for enrollment of a SCR, the RIP may enroll the SCR using existing data in the DRIS, to the extent the necessary data is available in the DRIS, by requesting such data from the NYISO ("ACL data request enrollment"). The DRIS Provisional ACL Eligibility Import will indicate whether the ACL data necessary for enrollment of a SCR exists in the DRIS (refer to the *NYISO DRIS User's Guide* for details on this import).

Below is a summary of the process the RIP is required to take to enroll a SCR using existing data from the DRIS. A more detailed description of the ACL data request enrollment process is provided in the *NYISO DRIS User's Guide*.

- The request to use existing ACL data and the meter installation date of the SCR shall be included as part of the enrollment file upload to the DRIS upon the initial enrollment of the SCR by the RIP.
- An ACL data request enrollment that passes validations as part of the enrollment file upload to the DRIS shall be placed in a *Pending* enrollment request status, which will require further action by the RIP to be taken following the close of SCR enrollment and before the close of Aggregation Management as specified in the ICAP Event Calendar and DRIS Event Calendar.
- The RIP will be required to approve or decline the use of existing ACL data as specified in the *NYISO DRIS User's Guide*.
  - When a RIP approves, the RIP is required to enter additional enrollment values for the SCR prior to acceptance by the DRIS.
  - If the RIP declines, the SCR is not enrolled.
- All ACL data request enrollments that have not been acted on by the RIP (*i.e.*, approved or declined) by the close of Aggregation Management will be automatically declined or denied by the DRIS and the SCRs associated with the ACL data request enrollments will not be enrolled.
- A RIP that declines an ACL data request enrollment for a SCR, or an enrollment that is declined by the DRIS, may not subsequently enroll the SCR using RIP obtained interval billing meter data for the remainder of the Capability Period. The same RIP may make another request to use existing interval meter data from the DRIS during subsequent enrollment windows within the same Capability Period.

4.12.4.3 Changes to ACL

4.12.4.3.1 Increase to ACL: Incremental ACL

A RIP may increase the ACL of a SCR in accordance with Section 5.12.11.1.5 of the *NYISO Services Tariff* by reporting the qualifying increase, the Incremental ACL value, on the enrollment upload to the DRIS for the first month of enrollment with an Incremental ACL. The RIP may also report an increase to the declared value of a SCR that meets the criteria of a SCR Load Change Reporting Threshold as defined in Section 2.19 of the *NYISO Services Tariff*. The Incremental ACL must be reported for each subsequent month

that the RIP reports a change to the SCR enrollment within the Capability Period. When the Incremental ACL crosses into the following Capability Period, the RIP must report the Incremental ACL value for the first month of enrollment within the following Capability Period and each subsequent month within that Capability Period that the RIP reports a change to the SCR enrollment within the Capability Period.

When a RIP enrolls a SCR using the ACL data request enrollment process set forth in Section 4.12.4.2.2 of this *ICAP Manual*, the RIP may report an Incremental ACL value for the SCR upon viewing and approving the use of existing ACL data.

All Incremental ACLs shall be subject to verification using the Verified ACL calculated in accordance with the verification process set forth in Section 5.12.11.1.5 of the *NYISO Services Tariff*. The RIP is responsible for uploading into the DRIS the required interval billing meter data of the SCR for each month's Monthly SCR Load Zone Peak Hours from the Capability Period in which the SCR was enrolled with an Incremental ACL. Such Monthly SCR Load Zone Peak Hours shall be posted to the NYISO website and imported into the DRIS during the time frame corresponding to the posting of the Capability Period SCR Load Zone Peak Hours in accordance with Section 5.12.11.1.1 of the *NYISO Services Tariff* and Section 4.12.4.1 of this *ICAP Manual*. Any Load supported by generation produced from a Local Generator, other behind-the-meter generator, or other supply source located behind the SCR's meter operating during the applicable Monthly SCR Load Zone Peak Hours may not be included in the SCR's metered Load values reported for the verification of its Incremental ACL.

Failure by a RIP to report required interval data for the Incremental ACL verification process in accordance with Section 5.12.11.1.5 of the *NYISO Services Tariff* shall result in the Verified ACL being set to zero for all months within the Capability Period in which the resource was enrolled with an Incremental ACL.

The Verified ACL will be used in the calculation of the SCR's performance factor, and all other associated performance factors (*i.e.*, RIP and SCR Aggregation performance factors), and where applicable, potential deficiency charges.

Any SCR enrolled with an Incremental ACL that was required to perform in a mandatory event hour or in the first performance test in the Capability Period in accordance with Section 4.12.4.5, may also be required to perform in the second performance test in the Capability Period in accordance with Section 5.12.11.1.5 of the *NYISO Services Tariff*. Subsequent to the first performance test in the Capability Period, the DRIS may be used by the RIP to identify SCRs required to perform in the second performance test, including SCRs enrolled with an Incremental ACL. The detailed process for identifying these SCRs is described in the *NYISO DRIS User's Guide*. When a SCR is required to demonstrate performance in either a mandatory event hour or in the first performance test, and then again in the second performance test in the Capability Period, performance from both test hours shall be considered in the calculation of the SCR's performance factor and all other associated performance factors (*i.e.*, RIP and SCR Aggregation performance factors), and where applicable, potential shortfalls and deficiency charges. Provided, however, that with respect to the first performance test, the SCR may, in accordance with Section 4.12.4.5 of this *ICAP Manual*, demonstrate its maximum enrolled megawatt value by relying on its

load reduction in a mandatory event hour in lieu of participation in the first performance test.

In accordance with Section 5.14.2.3.2 of the *NYISO Services Tariff* SCRs enrolled with an Incremental ACL shall be subject to potential shortfalls and deficiency charges as a result of overstating the Incremental ACL and shall be subject to all other shortfalls and deficiency charges that may apply to the RIP under 5.14.2 as an Installed Capacity Supplier, including but not limited to those shortfalls that may result from the invalid enrollment of the SCR, failure to timely report a Qualified Change of Status Condition, and the underperformance of the SCR in the RIP portfolio. Where a single SCR's participation in the SCR program gives rise to more than one potential shortfall within the Capability Period , the NYISO shall assess to the RIP the greatest deficiency charge for the Capability Period for the single SCR. The greatest deficiency charge for the Capability Period shall be the greatest sum of the monthly deficiency charges calculated for the single SCR from among the specific shortfall types identified under Section 5.14.2.3 of the *NYISO Services Tariff* .

Pursuant to Section 5.12.12.2 of the *NYISO Services Tariff* SCRs enrolled with an Incremental ACL may also be subject to potential sanctions for failure to report the metered Load data required for verification of the Incremental ACL and failure to report the metered Load data when the SCR is required to perform in the second performance test in the Capability Period. The SCR may also be subject to a financial sanction for failure to timely report a Qualified Change of Status Condition, in addition to the corresponding shortfall penalty as provided in Section 5.14.2.3.3 of the *NYISO Services Tariff*.

4.12.4.3.2 Decrease to ACL: SCR Change of Status

A RIP is required to report a decrease, to the ACL of a SCR, a SCR Change of Status, in accordance with Section 5.12.11.1.3.2 of the *NYISO Services Tariff* and Section 4.3.3.2 of this *ICAP Manual*.

When a RIP enrolls the SCR using the ACL data request enrollment process set forth in Section 4.12.4.2.2 of this *ICAP Manual*, the RIP must report, when applicable, a SCR Change of Status for the SCR upon viewing and approving the use of existing ACL data when such SCR Change of Status begins or is occurring on the effective date of the SCR enrollment.

Any SCR enrolled with a SCR Change of Status that was required to perform in a mandatory event hour or in the first performance test in the Capability Period in accordance with Section 4.12.4.5, may also be required to perform in the second performance test in the Capability Period in accordance with Section 5.12.11.1.3.2 of the *NYISO Services Tariff*. When a RIP reports a SCR Change of Status for a SCR after the close of enrollment for the last month of the Capability Period, the SCR will not be required to perform in the second performance test, and shall be evaluated for a potential shortfall for SCR Change of Status; no sanction shall be applied for failure to report performance for the second performance test. Subsequent to the first performance test in the Capability Period, the DRIS may be used by the RIP to identify SCRs required to perform in the second performance test, including SCRs with a SCR Change of Status. The detailed process of identifying these SCRs is described in the *NYISO DRIS User's Guide*. When a SCR is required to

demonstrate performance in either a mandatory event hour or the first performance test, and then again in the second performance test in the Capability Period, performance from both test hours shall be considered in the calculation of the SCR's performance factor and all other associated performance factors (*i.e.*, RIP and SCR Aggregation performance factors), and where applicable, potential shortfall and deficiency charges except when the SCR Change of Status is reported after the close of enrollment for the last month of the Capability Period as described above. Provided, however, that with respect to the first performance test, the SCR may, in accordance with Section 4.12.4.5 of this *ICAP Manual*, demonstrate its maximum enrolled megawatt value by relying on its load reduction in a mandatory event hour in lieu of participation in the first performance test.

Changes to ACL due to a reported SCR Change of Status as required per Section 4.3.3.2 of this *ICAP Manual* are also subject to in-period verification using actual hourly interval billing meter data for the applicable Capability Period.

In accordance with Section 5.14.2.3.3 of the *NYISO Services Tariff* a RIP that has enrolled a SCR that experiences a SCR Change of Status shall be subject to potential deficiency charges as a result of failing to timely report the SCR Change of Status and shall be subject to all other shortfalls and deficiency charges that may apply to the RIP under Section 5.14.2 as an Installed Capacity Supplier, including but not limited to those that may result from the invalid enrollment of the SCR, overstating the SCR's Provisional ACL or Incremental ACL, and the underperformance of the SCR in the RIP portfolio. Where a single SCR's participation in the SCR program gives rise to more than one potential shortfall within the Capability Period , the NYISO shall assess to the RIP the greatest deficiency charge for the Capability Period for the single SCR. The greatest deficiency charge for the Capability Period shall be the greatest sum of the monthly deficiency charges calculated for the single SCR from among the specific shortfall types identified under Section 5.14.2.3 of the *NYISO Services Tariff*.

Pursuant to Section 5.12.12.2 of the *NYISO Services Tariff* SCRs experiencing a SCR Change of Status may also be subject to a potential sanction for failure to report the metered Load data when the SCR is required to perform in the second performance test in the Capability Period. The SCR may also be subject to a financial sanction for failure to timely report a Qualified Change of Status Condition, in addition to the corresponding shortfall penalty as provided in Section 5.14.2.3.3 of the *NYISO Services Tariff*.

4.12.4.4 Use of Generation by a SCR

Only a Local Generator available to respond to the NYISO direction and effect a real time load reduction may be enrolled as a SCR ("enrolled SCR generator"). When a Local Generator normally operates to serve its resource's Load, it may participate in the SCR program only to the extent that it can shift additional Load from the NYS Transmission System and/or distribution system onto the Local Generator at the direction of the NYISO.

In order for a RIP to enroll a SCR that uses an eligible Local Generator, any amount of generation that can reduce Load from the NYS Transmission System and/or distribution system at the direction of the NYISO that was produced by the Local Generator during the hour coincident with the NYCA or Locality peaks, upon which the Unforced Capacity Obligation of the LSE that serves that SCR is based, must be accounted for when the LSE's