Attachment J:

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

The amount of UCAP that can be provided by a Special Case Resource that provides capacity wholly or partially by means of non-generator based load reduction shall be calculated using the equations specified in subsection (a). The amount of UCAP that can be provided by a Special Case Resource that provides capacity solely by means of load reductions achieved through operation of one or more generators may be calculated using the equations specified in either subsection (a) or subsection (b). The Installed Capacity Equivalent of Special Case Resources shall be as specified in subsection (c). The "SCR Workbook" refers to the Excel Workbook posted on the NYISO website at http://www.nyiso.com/public/products/icap/auctions.jsp.

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

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

where:

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

$APMD_{gm}$ is the Average of Peak Monthly Demands for Resource *g* applicable to month *m*, using data submitted in accordance with the ~~Attachment K~~SCR Workbook~~, Special Case Resource Certification~~; if month *m* is in the Summer Capability Period, the Average of Peak Monthly Demands is calculated using the peak monthly demands ~~during the hours between noon and 8 PM~~ during the hours between noon and 8 PM for that supplier for the ~~most recent consecutive~~ months of June, July, August and September in the prior like (Prior Equivalent) Capability P~~p~~eriod ~~that had occurred as of the beginning of month *m*~~ (e.g., if month *m* is August 200~~6~~~~1~~, then the peak monthly demands to be counted would be for the months of June, July, August and September of 200~~5~~~~0~~); and if month *m* is in the Winter Capability Period, the Average of Peak Monthly Demands is calculated using the peak monthly demands during the hours between noon and 8 PM for that supplier for the ~~most recent consecutive~~ months of December, January, February and March in the prior like (Prior Equivalent) Capability Period that had occurred as of the beginning of month *m*;

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

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

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

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

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

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

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

e is the end of the applicable Capability Period in which Resource g was registered to reduce load~~month occurring three months before month m (e.g., if month m is September 2001, then e is the end of June 2001)~~; and

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

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

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

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

where:

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

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

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

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

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

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

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

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

e is the end of the applicable Capability Period in which Resource g was registered to reduce load~~month occurring three months before month *m* (e.g., if month *m* is September 2001, then *e* is the end of June 2001~~; and

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

If $NLRH_{gbe} = 0$, , the Special Case Resource will be assigned a Unforced Capacity value based on the ratio of the sum of all Unforced Capacity values to the sum of all Installed Capacity values of all Special Case Resources in the associated RIP's portfolio of resources. ~~then the calculation of $UCAP^{Q}_{gm}$ shall be performed as though the value of~~

~~$$\frac{\sum_{h \in LRHgbe} \min\left(\frac{AGO_{gh}}{CGO_{gh}}, 1\right)}{NLRH_{gbe}}$$~~ ~~in the equation above were 1; provided, however, that if Resource g had not begun to serve as a Special Case Resource at time e, then the value of~~

~~$$\frac{\sum_{h \in LRHgbe} \min\left(\frac{AGO_{gh}}{CGO_{gh}}, 1\right)}{NLRH_{gbe}}$$~~ ~~in the equation above shall be set equal to an average historical performance factor calculated by the ISO for all Special Case Resources. Until such a calculation is performed and posted by the ISO, this factor shall equal 1.~~

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

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

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

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

where:

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

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

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

(2) ICE for a Generator Based Special Case Resource

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

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

where:

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

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

3.4 Calculation of UCAP for Control Area System Resources

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

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

where:

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

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

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

and

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

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

where:

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

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

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

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

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

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

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

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

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

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

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

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

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

E is the month containing e;

B is the month containing *b;*

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

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

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

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

where:

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

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

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