24 Attachment R Cost Allocation and Measurement and Verification Methodologies for Demand Reductions Arising Under the Incentivized Day-Ahead Economic Load Curtailment Program

Under the Incentivized Day-Ahead Economic Load Curtailment Program ("Program"), costs incurred by the ISO in covering Demand Reduction Providers' Curtailment Initiation Costs and making Demand Reduction Incentive Payments for scheduled and verified Demand Reductions, are to be recovered under Schedule 1. Measurement and verification of actual Demand Reductions scheduled under the Program shall be conducted in accordance with subsections 24.2 and 24.3 and ISO Procedures.

24.1 Cost Allocation Methodology for Payments to Demand Reduction Providers under the Program Recovered Pursuant to Schedule 1

The "Schedule 1 Program Costs" for scheduled and verified Demand Reductions shall be allocated to Transmission Customers, pursuant to the methodology set forth below, on the basis of their Load Ratio Shares and in proportion to the probability, given historical transmission congestion patterns, that a particular Demand Reduction will benefit them by reducing Energy costs in their Load Zones or "Composite Load Zones" (see below).

More specifically, Schedule 1 Program Costs shall be allocated to Transmission Customers each Billing Period as follows:

a) Schedule 1 Program Costs shall initially be attributed to the Load Zone where the Generator Bus that was used to bid the Demand Reduction associated with them is located.

b) In determining whether and how Transmission Customers located in particular Load Zones, or Composite Load Zones, have benefited from the Demand

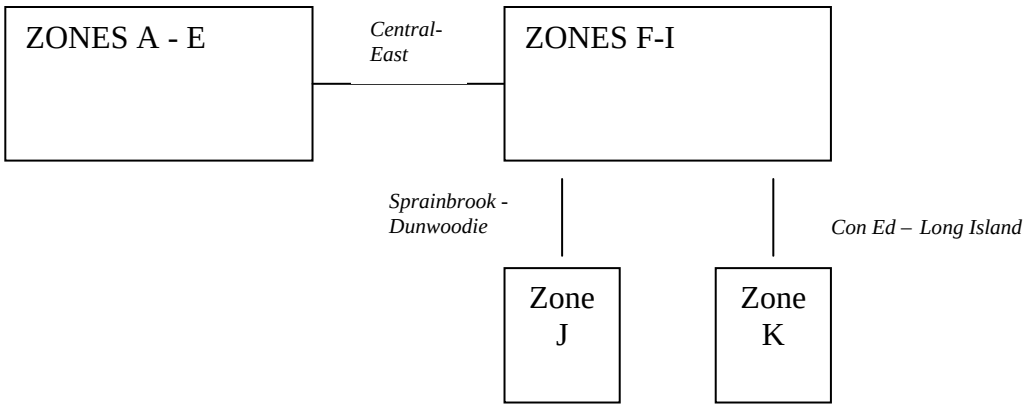
Reduction, and how much they shall be required to pay a share of the associated Schedule 1 Program Costs, the ISO shall account for the effects of congestion at the most frequently constrained NYCA interfaces. When none of these interfaces are constrained Transmission Customers in all Load Zones shall be deemed to have benefited from the Demand Reduction and shall pay a share of the associated Schedule 1 Program Costs. When one or more of the most frequently constrained NYCA interfaces is constrained, then Transmission Customers located in a Load Zone, or Composite Load Zone, that is upstream of the constrained interface, shall be deemed to have benefited from an upstream Demand Reduction and shall be required to pay a share of the associated Schedule 1 Program Costs. Similarly, when one or more of the interfaces is congested, Transmission Customers located in a Load Zone, or Composite Load Zone, that is downstream of a constrained interface, shall be deemed to have benefited from a downstream Demand Reduction and shall be required to pay a share of the associated Schedule 1 Program Costs. By contrast, Transmission Customers that are "separated" from a Demand Reduction by a constrained interface shall be deemed not to have benefited from it and shall not be required to pay a share of the associated Schedule 1 Program Costs.

c) The ISO shall determine the extent of congestion at the most frequently constrained interfaces using a series of equations that calculate the static probability that: (i) no constraints existed in the transmission system serving the Load Zone or Composite Load Zone; (ii) the Composite Load Zone was upstream of a constraint and curtailment pursuant to the Program occurred upstream, and

(iii) the Composite Load Zone was downstream of a constraint and curtailment pursuant to the Program occurred downstream.

d) Costs shall be allocated to each Transmission Customer that is deemed to have benefited from the scheduled and verified Demand Reduction on a Load Ratio Share basis, using Real-Time metered daily Load data.. The three most frequently constrained interfaces are currently the "Central-East" interface, which divides western from eastern New York State, the Sprainbrook-Dunwoodie interface, which divides New York City and Long Island from the rest of New York State, and the Consolidated Edison Company ("ConEd") - Long Island. Interface, which divides New York City from Long Island Given these limiting interfaces, four Composite Load Zones currently exist, *i.e.,* West of Central-East (Load Zones A, B, C, D, E,), East Upstate Excluding New York City and Long Island (Load Zones F, G, H, I), New York City (Load Zone J), and Long Island (Load Zone K). The geographic configuration of these Composite Load Zones is depicted in the illustration below.

Relationship Between Frequently Constrained Interfaces and Composite Load Zones



Based on these factors, Schedule 1 Program Costs shall be allocated to Transmission Customers as follows:

For Transmission Customer m in Load Zones A-E:

$a_1 * (cost_A+\ldots+cost_K) * load_m / (load_A+\ldots+load_K) +$ **'no constraints**
$a_2 * (cost_A+\ldots+cost_E) * load_m / (load_A+\ldots+load_E) +$ **'Central East const**
$a_3 * (cost_A+\ldots+cost_I+cost_K) * load_m / (load_A+\ldots+load_I+load_K) +$ **'NYC constraint**
$a_4 * (cost_A+\ldots+cost_J) * load_m / (load_A+\ldots+load_J) +$ **'LI constraint**
$a_5 * (cost_A+\ldots+cost_E) * load_m / (load_A+\ldots+load_E) +$ **'Cent East + NYC**
$a_6 * (cost_A+\ldots+cost_E) * load_m / (load_A+\ldots+load_E) +$ **'Cent East + LI**
$a_7 * (cost_A+\ldots+cost_I) * load_m / (load_A+\ldots+load_I) +$ **'NYC + LI**
$a_8 * (cost_A+\ldots+cost_E) * load_m / (load_A+\ldots+load_E)$ **'Cent East + NYC + LI**

For Transmission Customer m in Load Zones F-I:

$a_1 * (cost_A+\ldots+cost_K) * load_m / (load_A+\ldots+load_K) +$ **'no constraints**
$a_2 * (cost_F+\ldots+cost_K) * load_m / (load_F+\ldots+load_K) +$ **'Central East const**
$a_3 * (cost_A+\ldots+cost_I+cost_K) * load_m / (load_A+\ldots+load_I+load_K) +$ **'NYC constraint**
$a_4 * (cost_A+\ldots+cost_J) * load_m / (load_A+\ldots+load_J) +$ **'LI constraint**
$a_5 * (cost_F+\ldots+cost_I+cost_K) * load_m / (load_F+\ldots+load_I+load_K) +$ **'Cent East + NYC**
$a_6 * (cost_F+\ldots+cost_J) * load_m / (load_F+\ldots+load_J) +$ **'Cent East + LI**
$a_7 * (cost_A+\ldots+cost_I) * load_m / (load_A+\ldots+load_I) +$ **'NYC + LI**
$a_8 * (cost_F+\ldots+cost_I) * load_m / (load_F+\ldots+load_I)$ **'Cent East + NYC + LI**

For Transmission Customer m in Load Zone J:

$a_1 * (cost_A+\ldots+cost_K) * load_m / (load_A+\ldots+load_K) +$ **'no constraints**
$a_2 * (cost_F+\ldots+cost_K) * load_m / (load_F+\ldots+load_K) +$ **'Central East const**
$a_3 * cost_J * load_m / load_J +$ **'NYC constraint**
$a_4 * (cost_A+\ldots+cost_J) * load_m / (load_A+\ldots+load_J) +$ **'LI constraint**
$a_5 * cost_J * load_m / load_J +$ **'Cent East + NYC**
$a_6 * (cost_F+\ldots+cost_J) * load_m / (load_F+\ldots+load_J) +$ **'Cent East + LI**
$a_7 * cost_J * load_m / load_J +$ **'NYC + LI**
$a_8 * cost_J * load_m / load_J$ **'Cent East + NYC + LI**

For Transmission Customer m in Load Zone K:

$a_1 * (cost_A+\ldots+cost_K) * load_m / (load_A+\ldots+load_K) +$ **'no constraints**
$a_2 * (cost_F+\ldots+cost_K) * load_m / (load_F+\ldots+load_K) +$ **'Central East const**
$a_3 * (cost_A+\ldots+cost_I+cost_K) * load_m / (load_A+\ldots+load_I+load_K) +$ **'NYC constraint**
$a_4 * cost_K * load_m / load_K +$ **'LI constraint**
$a_5 * (cost_F+\ldots+cost_I+cost_K) * load_m / (load_F+\ldots+load_I+load_K) +$ **'Cent East + NYC**
$a_6 * cost_K * load_m / load_K +$ **'Cent East + LI**
$a_7 * cost_K * load_m / load_K +$ **'NYC + LI**
$a_8 * cost_K * load_m / load_K$ **'Cent East + LI + NYC**

In all cases, the variables are:

a_1 = fraction of time when no constraints exist
a_2 = fraction of time when Central East interface alone is constraining
a_3 = fraction of time when Sprainbrook-Dunwoodie interface alone is constraining
a_4 = fraction of time when Con Ed-Long Island and Y49/Y50 interfaces are constraining, but Central East and Sprainbrook-Dunwoodie interfaces are not constraining
a_5 = fraction of time when Central East and Sprainbrook-Dunwoodie interfaces are constraining
a_6 = fraction of time when Central East, Con Ed-Long Island and Y49/Y50 interfaces are constraining
a_7 = fraction of time when Sprainbrook-Dunwoodie, Con Ed-Long Island and Y49/Y50 interfaces are constraining
a_8 = fraction of time when Central East, Sprainbrook-Dunwoodie, Con Ed-Long Island and Y49/Y50 interfaces are constraining

$cost_{A...K}$ = revenue deficiencies due to DADRP Demand Reductions in Load Zones A…K, calculated on a daily basis
$load_m$ = real-time Load for Transmission Customer m, calculated on a daily basis
$load_{A...K}$ = real-time Loads for all Transmission Customers in Load Zones A…K, calculated on a daily basis

24.2 Measurement of Actual Demand Reduction Scheduled in the Program

The measured amount of Demand Reduction supplied by a Demand Reduction Provider under the Program shall be calculated as the difference between the applicable (Weekday or Weekend) Adjusted Economic Baseline Load for each scheduled hour, calculated in accordance with section 24.2.1 and ISO Procedures and the actual metered hourly load for each scheduled hour.

24.2.1 Methodology for the Calculating the Economic Customer Baseline Load for a Resource Scheduled to Reduce Load Under the Program

The ISO shall employ two different calculation methodologies of the Economic Customer Baseline Load (“ECBL”) for scheduled Demand Reductions, depending on whether the Demand Reduction is scheduled on a weekend or a weekday.

24.2.1.1 Methodology for the Calculating the Economic Customer Baseline Load for Demand Reductions Scheduled on a Weekday

1. ECBL Weekday Window: The ECBL Weekday Window shall be the loads and ECBL Weekday Basis values from the previous ten weekdays that correspond to each hourly interval during the scheduled Demand Reduction period. Treatment of NERC holidays that occur on weekdays shall be equivalent to all hours scheduled on the NERC holiday.

For each hour of the scheduled Demand Reduction:

a. Select the hours that correspond to the scheduled Demand Reduction period from each of the previous ten (10) weekdays.

b. Select the metered load value for each hour from the previous ten (10) weekdays where no scheduled Demand Reduction occurred pursuant to this Program.

c. Calculate the ECBL Weekday Basis for each hour from the previous ten (10) weekdays where a schedule occurred and use the ECBL Weekday Basis for that hour and day in place of the actual metered load from each scheduled hour.

2. ECBL Weekday Basis: The ECBL Weekday Basis shall be the ranked order of the loads and ECBL Weekday Basis values as determined in the selection of the ECBL Weekday Window for each hour from the previous ten weekdays that correspond to the scheduled Demand Reduction period.

For each corresponding hour of the scheduled Demand Reduction period:

a. Rank in descending order the metered load and ECBL values determined in steps b and c of the ECBL Weekday Window.

b. Calculate the average of the fifth and sixth ranked values.

3. ECBL In-Day Adjustment Period: The ECBL Adjustment Period is the time prior to the scheduled Demand Reduction period that is used to determine the ECBL In-Day Adjustment. The hours to be used in the ECBL Adjustment Period shall be the two consecutive hours that occur four hours prior to the first hour of the scheduled Demand Reduction period, provided that the hours are part of the same calendar day.

To determine the two hours of the ECBL In-Day Adjustment Period:

a. The fourth hour before the first hour of the scheduled Demand Reduction period shall be the first hour of the ECBL In-Day Adjustment Period, except when the fourth hour before first hour of the scheduled Demand Reduction period occurs on the previous day.

b. The third hour before the first hour of the scheduled Demand Reduction period shall be the second hour of the ECBL In-Day Adjustment Period, except when the third hour before the first hour of the scheduled Demand Reduction period occurs on the previous day.

c. When the third and/or fourth hour of the ECBL In-Day Adjustment Period occurs on the previous day, the ISO shall use as a substitute the hour beginning midnight on the day of the scheduled Demand Reduction. Both hours of the ECBL In-Day Adjustment Period may equal the hour beginning midnight on the day of the scheduled Demand Reduction.

4. ECBL In-Day Adjustment Factor: The ECBL In-Day Adjustment shall be an adjustment factor that is applied to the hourly ECBL for the scheduled Demand Reduction period.

a. Calculate the ECBL In-Day Adjustment Period by dividing the average of the metered load for the two hours of the ECBL In-Day Adjustment Period on the day of the scheduled Demand Reduction by the average of the ECBL for the same two hours.

b. The ECBL In-Day Adjustment Factor shall be limited to a minimum of 0.8 and a maximum of 1.2.

5. Adjusted Weekday ECBL: For each hour of the scheduled Demand Reduction, the Adjusted Weekday ECBL shall be equal to the hourly ECBL Weekday Basis multiplied by the ECBL In-Day Adjustment Factor calculated for the scheduled Demand Reduction period.

24.2.1.2 Methodology for the Calculating the Economic Customer Baseline Load for a Resource's Demand Reduction Scheduled Under the Program on a Weekend

1. ECBL Weekend Window: The ECBL Weekend Window shall be the loads and ECBL Weekend Basis values from the previous three weekend days of the same type (Saturday or Sunday) that correspond to each hourly interval during the scheduled

Demand Reduction period. Treatment of NERC holidays that occur on weekend days shall be equivalent to all hours scheduled on the NERC holiday.

For each hour of the scheduled Demand Reduction period:

a. Select the hours that correspond to the scheduled Demand Reduction period from each of the previous three (3) weekend days of the same day type (Saturday or Sunday).

b. Select the metered load value for each hour from the previous three (3) weekend days of the same day type (Saturday or Sunday) where no scheduled Demand Reduction occurred pursuant to this Program.

c. Calculate the ECBL Weekend Basis for each hour from the previous three (3) days where a schedule occurred and use the ECBL Weekend Basis for that hour and day in place of the metered load from the scheduled hour.

2. ECBL Weekend Basis: The ECBL Weekend Basis shall be the ranked order of the loads and ECBL Weekend Basis values as determined in the selection of the ECBL Weekend Window for each hour from the previous three weekend days that correspond to the scheduled Demand Reduction period.

For each corresponding hour of the scheduled Demand Reduction period:

a. Rank in descending order the metered load and ECBL Weekend Basis values determined in steps b and c of the ECBL Weekend Window.

b. Calculate the average of the three ECBL Weekend Basis values.

3. ECBL In-Day Adjustment Period: The ECBL Adjustment Period for the weekend days shall be determined in the same manner as for weekdays as defined in Section 24.2.1.

4. ECBL In-Day Adjustment Factor: The ECBL In-Day Adjustment shall be calculated in the same manner as for weekdays as defined in Section 24.2.1.

5. Adjusted Weekend ECBL: For each hour of the scheduled Demand Reduction, the Adjusted Weekend ECBL shall be equal to the hourly ECBL Weekend Basis multiplied by the ECBL In-Day Adjustment Factor calculated for the scheduled Demand Reduction period.

24.3 Verification of Actual Demand Reduction Scheduled in the Program

Demand Reduction calculated using the Economic Customer Baseline Load methodology is subject to verification in accordance with ISO Procedures. If a Demand Reduction Provider fails to report the required data to the ISO in accordance with ISO Procedures, including but not limited to hourly interval metered data, that the ISO requires to conduct the calculations described in Section 24.2 by the deadline and in the manner established in ISO Procedures, the Demand Reduction Provider will be subject to penalties associated with a failure to supply the scheduled Demand Reductions and may lose its eligibility to participate in the Program. All Demand Reduction data are subject to audit by the ISO. If the ISO determines that it has made an erroneous payment to a Demand Reduction Provider, it shall have the right to recover it either by reducing other payments to that Demand Reduction Provider or by any other lawful means.