New York ISO
Independent System Operator

Manual 7

Emergency Demand Response Program Manual

Issued: November 2022

New York ISO

Version: 7.6

Effective Date: 11/01/2022

Committee Acceptance: 10/12/2022 BIC

Prepared By: NYISO Distributed Resources Operations

New York Independent System Operator
10 Krey Boulevard
Rensselaer, NY 12144
(518) 356-6060
www.nyiso.com

Disclaimer: The information contained within this manual, along with other NYISO manuals, is intended to be used for information purposes only, and is subject to change. The NYISO is not responsible for the user's reliance on these publications, or for any erroneous or misleading material.

©Copyright 1999-2022 New York Independent System Operator

Table of Contents

TABLE OF FIGURES V

REVISION HISTORY VI

1. DEFINITIONS AND ACRONYMS 1

1.1. Tariff Definitions 1

1.2. Additional Terms Relevant to the Emergency Demand Response Program 2

2. ELIGIBILITY CRITERIA / QUALIFICATION 4

2.1. Who Can Participate? 4

2.2. Minimum Qualifications for CSPs 5

2.3. Restrictions 5

2.4. Requirements for Curtailment Customers with a Local Generator 6

2.5. Compatibility with Special Case Resources 6

2.6. Compatibility with other NYISO Demand Response Programs 7

2.7. Small Customer Aggregation 7

2.8. EDRP Program Evaluation 9

3. EDRP ENROLLMENT PROCEDURES 10

3.1. Requirements for CSP Enrollment 10

3.2. Procedures for Enrolling Demand Side Resources in EDRP 10

4. OPERATING MECHANISM / IMPLEMENTATION 11

4.1. When Will the Program be Deployed? 11

4.2. NYISO Protocol for Local Generator Participation 11

4.2.1. Compliance with Federal, State and Local Laws *11*

4.3. Notification Procedures 11

4.4. Notification Message Examples 13

4.4.1. EDRP Day-Ahead Advisory *13*

4.4.2. EDRP Activation (2 Hour Notice) *13*

5. METERING, VERIFICATION, BILLING, AND SETTLEMENT 14

5.1. Metering Requirements 14

5.1.1. Metering Device Requirements *14*

5.1.2. Metering Configuration Requirements *15*

5.1.3. Historical Operating Data *16*

5.2.Calculation of CBL 17

5.2.1. Select a CBL method *17*
5.2.2. CBL Calculation Method (Load Reduction or Both Local Generator and Load Reduction) Based on DRIS Metering Configuration *17*
5.2.3. Example CBL Calculation *26*
5.2.4. CBL Calculation Method when metering a Local Generator Only *28*

5.3.Performance Measurements for Energy Payments 29

5.4.Settlement Procedures 30

5.4.1. EDRP Reporting and Data Format *30*
5.4.2. Calculation and Payments *30*
5.4.3. Verification, Errors and Fraud *31*

5.5.Cost Allocation 32

6. TARGETED DEMAND RESPONSE PROGRAM 33

6.1.Program Overview 33

6.2.Conditions for Deploying TDRP 34

6.2.1. Transmission and Sub-Transmission System (69kV or higher) *34*
6.2.2. Lower Voltage Systems (33kV or Below) *34*

6.3.Verification, Billing and Settlement 35

Table of Figures

Figure 1: Examples of acceptable Meter Configurations 16
Figure 2: Example of Determining a Resource's Peak Load Hour that Occurred During Event Hours Over the Past 30 Days and the Calculation of the Initial Seed Value 20
Figure 3: Example of CBL Window Selection - Single Weekday Event 21
Figure 4: Example of CBL Window Selection – Multiple Weekday Events 22
Figure 5: Example of CBL Window Selection – Weekend Event 25

Revision History

Version	Date	Revisions
1.0	07/11/2001	Initial Release
2.0	03/20/2002	Section 3.8 ➢ Alternative Performance Measures for Small Customer Aggregations can be submitted for approval to the NYISO. Section 3.9 ➢ Curtailment Service Providers must participate in NYISO sponsored EDRP program evaluations. Section 5.2 ➢ On-site generators must supply evidence that they have applied for or received from the NYS Dept. of Environmental Conservation (DEC) one of the following permits (i) Title V, (ii) State Facility, or (iii) Registration. Section 5.3 ➢ Updated EDRP Notification Procedures to reflect the procedures put in place during the summer 2001. Section 6.1 ➢ Updated Metering Requirements. Section 6.2.1.1 ➢ Alternative weather-sensitive Customer Base Line (CBL) options. Section 6.7 ➢ Updated Settlement Payment timeline. Att. A, B Att. D ➢ Added .csv event data reporting format description.
3.0	02/28/2003	Section 2.0 ➢ Removed 25 MW cap on small customer aggregation program. Section 5.2.1 ➢ Notes that program participants are responsible for ensuring compliance with the ultra-low sulfur fuel requirements and for the emissions testing requirements for model 1994 and older generators. Section 5.2.2 ➢ Clarifies NYSERDA's rules for program expense reimbursement. Section 6.1 ➢ Clarifies meter installation and reading language. Section 6.1.1 ➢ Clarifies that meter certification data is required only for non-revenue grade meters. Section 6.2.1 ➢ Notes that the CSP is responsible for CBL calculation.

		Section 6.6.4 ➢ Clarifies that the NYISO provides hourly payment information by customer to CSPs separate from the consolidated invoice.
4.0	04/29/2003	Section 2.0 ➢ Removed 25 MW cap on small customer aggregation program Section 4.3 (#2), 4.4 (#2) ➢ Revise to say that these sections of the Registration Packet should be completed: A, B, G, H, I, L, N and O. Section 5.2.1 ➢ Notes that program participants are responsible for ensuring compliance with the ultra-low sulfur fuel requirements and for the emissions testing requirements for model 1994 and older generators. Section 5.2.2 ➢ Clarifies NYSERDA's rules for program expense reimbursement. Section 6.1 ➢ Clarifies meter installation and reading language. Section 6.1.1 ➢ Clarifies that meter certification data is required only for non-revenue grade meters. Section 6.2.1 ➢ Notes that the CSP is responsible for CBL calculation. Section 6.6.4 ➢ Clarifies that the NYISO provides hourly payment information by customer to CSPs separate from the consolidated invoice.
5.0	04/02/2004	Section 3.3 (2) ➢ Footnote removes host load size restriction on DG resources. Section 3.5 ➢ Removed host load size restriction on DG resources. Section 4.1.3 ➢ Remove 2-day notification requirement for LSE. Section 4.1.4 ➢ Change deemed approved time limit from 14 to 30 days. Section 4.3.5 ➢ Remove 2-day notification requirement for LSE. Section 4.3.6 ➢ Change deemed approved time limit from 14 to 30 days. Section 4.4.5 ➢ Remove 2-day notification requirement for LSE. Section 4.4.6 ➢ Change deemed approved time limit from 14 to 30 days. Section 5.2.1

		➢ Clarify that CSP, not NYISO, is responsible for 200 hour per year DG operating limit. Remove requirement that DG units submit permits to NYISO.
6.0	07/20/2008	Global ➢ Reformatted per new template to standardize presentation ➢ Corrected figure and table cross-references. ➢ Updated NYISO Website references Front Matter ➢ Removed What's New page. Revision History Table ➢ Changed column headings as follows: • "Revision" changed to "Version" • "Changes" changed to "Revisions" ➢ Standardized date format to mm/dd/yyyy. Section 1 ➢ Revised definitions to align with Market Services Tariff definitions. Included reference to Market Services Tariff, where applicable. Section 2 ➢ Removed Program Summary. Section 3.1 ➢ NEW 2.1: Removed effective period of the program; program is permanent. Section 3.3 ➢ NEW 2.3: Tariff reference to permit sharing of data with Transmission Owners for planning and system operation. Added statement about compliance with DEC rules and regulations. Section 3.7 ➢ NEW 2.7: Added statement restricting resources included in small customer aggregations to one NYISO reliability program. Other minor wording changes. Section 4.1 ➢ NEW 3.1: Removed automatic registration after 30 days – NYISO will notify the LSE of approved registration. Also added annual re-registration each spring. Section 4.2 ➢ NEW 3.2: Removed automatic registration after 30 days – NYISO will notify the entity that takes service directly from the ISO to supply its own Load in the NYCA of approved registration. Also added annual re-registration each spring. Section 4.3 ➢ NEW 3.3: Removed automatic registration after 30 days – NYISO will notify the Curtailment Customer Aggregator of approved registration. Also added annual re-registration each spring. Section 4.4

		➢ NEW 3.4: Removed automatic registration after 30 days – NYISO will notify the Curtailment Program End Use Customer of approved registration. Also added annual re-registration each spring. Sections 4.3 and 4.4 ➢ Modified Notification Procedures to update messages. Section 5.2.1 ➢ NEW 4.2.1: Revised program limitation language and removed references to NYSERDA's reimbursement of expenses. Section 5.2.2 ➢ Removed references to NYSERDA's reimbursement of expenses. ➢ NEW 4.4: Added new sub-section titled "Notification Message Examples" Section 5.2.3 ➢ Reformatted tables in Example Customer Baseline Calculation. Section 5.4 ➢ Corrected typographical error related to the time frame by which verification of load reduction must received by the NYISO in order for compensation to be provided, from 45 days to 75 days. Section 6.1 ➢ NEW 5.1: Added sentence: "Transmission Owner or MDSP certification is required to read the revenue grade meter on load." Section 6.1.2 ➢ NEW 5.1.2: Added descriptions of identifiers in Metering Configuration diagrams Section 6.2 ➢ NEW 5.2: CBL Section completely revised to make it easier to follow, including better examples: Single weekday event, Multiple weekday events, Weekend event. Section 6.3.1 ➢ NEW 5.3.1: "load" changed to "load reduction" in several places. Section 6.4.3 ➢ Removed section titled: Demand Side Resource Reduction Data. Specified requirements for billing data for entire bill period surrounding an event. Section 6.4.4 ➢ NEW 5.4.3: Added statement requiring one file per day with meter and CBL data for the event period. Updated contact information and Website links. Section 6.4.5 ➢ NEW 5.4.4: Revised statement to align with tariff language (Attachment G, article 10). Section 6.5.1

		➢ NEW 5.5.1: Changes to wording of subsection: Objectives of Cost Allocation. Section 6.5.2 ➢ NEW 5.5.2: Changes to wording of subsection: Causes for EDRP Being Invoked – now references section 4.4 of NYISO Emergency Operations manual. Section 6.5.3 ➢ NEW 5.5.3: Reworded reference to previous section and removed last line of table 6.5.3 regarding an external control condition. Section 6.6 ➢ NEW 5.6: Redrawing and relabeling of Timeline for Settlement. Section 7 ➢ NEW 6: Added Targeted Demand Response Program information from Technical Bulletin 164. Attachments ➢ Removed registration form attachments and file format attachments, which are available on Demand Response page of NYISO Website (https://www.nyiso.com/support).
6.1	05/05/2010	Global ➢ Updated links/instructions for accessing external documents secondary to NYISO Web site redesign. ➢ Updated internal references to EDRP Manual sections and figures. ➢ Incorporated changes to reflect terminology used in the Demand Response Information System (DRIS), including *enroll* instead of *register* and *deploy* instead of *activate*. ➢ Removed references to Attachments A, B, C, and D. Section 1 ➢ Revised definition titles to match Market Services Tariff. Section 2 ➢ Separated classifications of CSPs and eligibility for resource participation. ➢ Removed NYISO verification of restrictions for participation. Section 3 ➢ Clarified CSP enrollment procedures. ➢ Clarified Demand Resource enrollment procedures, which will be accomplished in DRIS. Section 4 ➢ Referenced Emergency Operations Manual for conditions indicating deployment. ➢ Clarified notification procedures. Section 5 ➢ Corrected references to PRL program. ➢ Clarified examples. ➢ Removed 45-day deadline for reporting event performance.

		➢ Removed payment and cost allocation details and referred to Attachment G of the NYISO Market Services Tariff for cost allocation rules.
6.2	12/02/2010	Global ➢ Updated tariff citations to reflect section renumbering secondary to e-Tariff implementation. ➢ Implemented various ministerial changes. Section 3.2 ➢ Specified that timing of EDRP Enrollment is per the Demand Response Information System (DRIS) event calendar. Section 5.2.2 ➢ Clarified means of calculating weekday Average Day CBLs. ➢ Replace screenshots for figures 5-2, 5-3, and 5-4. Section 5.4 ➢ Clarified means and timing of CSP reporting energy payment data, which will be accomplished in DRIS. Section 5.4.1 ➢ Clarified receipt requirements for Load reduction data. Section 5.4.2 ➢ Clarified format of reporting Load reduction data as being that outlined in the *NYISO Demand Response Information System User's Guide.* Section 5.4.3 ➢ Clarified calculations and payments for a resource that performs in either the DADRP or DSASP concurrent with an EDRP deployment. Section 5.6 ➢ Removed in total, including Figure 5-5, Timeline for Settlement.
7.0	07/17/2013	Global ➢ Updated format, punctuation, terminology and links. ➢ Capitalized defined terms. ➢ Replaced: • "Load Curtailment" with "Load Reduction" • "Emergency Generation" with "Emergency Generator" • "On-site generator" and "Local Generation" with "Local Generator" • "Subscribe" with "Enroll" • "Usage" with "Load" Section 1.1 ➢ Added Tariff definition "Day-Ahead Market" ➢ Added Tariff definition "Demand Side Ancillary Service Program Resource (DSASP Resource)" ➢ Added Tariff definition "Load" Section 1.2 ➢ Clarified definition of: • Curtailment Program End User Customer (EUC) • Load Reduction

		➢ Added term "Day Ahead Demand Side Response Program (DADRP)" ➢ Removed term "NYS DEC" Section 2. ➢ Changed title Section 2.1 ➢ Clarified description of "Who Can Participate" in the EDRP Section 2.2 ➢ Clarified minimum qualification for CSPs and removed footnote Section 2.3 ➢ Further defined qualifications of Local Generators in the EDRP Section 2.4 ➢ Clarified definition for CSPs with a Local Generator to participate in the EDRP ➢ Replaced "NYCA" with "NYISO" Section 2.5 ➢ Further defined "other program eligibility" requirements for SCRs in ICAP Market Section 2.6 ➢ Added language regarding Demand Side Resources participating in both the EDRP and the DSASP Section 3.1 ➢ Clarified enrollment requirements for CSPs Section 4.2 ➢ Clarified definition of CSP customer demand reduction and added "and RIPs" Section 4.2.1 ➢ Changed title ➢ Updated language for clarification, including removal of generator examples Section 4.3 ➢ Revised description of the notification communication media ➢ Updated reference to NYISO Stakeholder Services and removed email address ➢ Updated names of notification types Section 4.4 ➢ Updated Notification message examples Section 5. ➢ Added language to clarify that the CSP Metering and Data Requirements in Section 5.1, 5.2 and 5.3 also apply to RIPs with SCRs in the ICAP SCR Program Section 5.1 ➢ Clarified the CSP metering requirements Section 5.1.2 ➢ Clarified the CSP configuration requirements

		Section 5.1.3 ➢ Clarified requirements for providing historical metering and operation data for CSPs and RIPs ➢ Redefined minimum requirement of hourly interval data ➢ Redefined the retention period of interval meter readings to be three (3) years Section 5.2 ➢ Changed title Section 5.2.1. ➢ Clarified that the CSP selects CBL method when enrolling a resource in the EDRP Section 5.2.2 ➢ Changed the title ➢ Added clarification on what Load may be included in metered Load ➢ Added clarification on which CBL calculation is to be used when a resource is enrolled as a Response Type G ➢ Updated • I. The Average Day CBL for Weekdays • II. The Average Day CBL for Weekends • III. Elective Weather-Sensitive CBL Formulation Section 5.2.3 ➢ Changed title and clarified Steps 1 and 2 Section 5.2.4 ➢ Changed title Section 5.3 ➢ Changed title ➢ Clarified equations and metering configurations ➢ Added DRIS Response Type for each configuration Section 5.3.2 ➢ Removed Compliance" section Section 5.4.1 ➢ Removed duplicate Data Receipt language Section 5.4.2 ➢ Renumbered Section 5.4.3 ➢ Renumbered and added explanation of Settlement procedures 5.4.4 ➢ Renumbered and clarified that all data related to EDRP participation are subject to audit by the NYISO Section 5.5 ➢ Changed title ➢ Eliminated duplicate information ➢ Updated reference to Attachment G of the NYISO Services Tariff Section 6.1

		➢ Removed reference to cost allocation methodology
7.1	08/21/2013	Section 5.2.2 ➢ Corrected how the Average Daily Event Usage is used with the initial seed value to determine the exclusion of low usage days. ➢ Corrected language in Figure 5.2 to reflect the correction noted above.
7.2	06/03/2016	Section 2.6 ➢ Renamed the section to better reflect the content ➢ Removed unnecessary and unhelpful language not related to NYISO DR programs ➢ Replaced redundant language on calculations of payments for resources with reference to Section 5.4.2 Calculation and Payments of the EDRP Manual Section 3.1 ➢ Removed reference to the retired CSP enrollment form Section 5.1.2 ➢ Described in detail the determination of a SCR's "Response Type" that must be identified at enrollment Section 5.4.2 ➢ Clarified CBL data reporting process for a SCR that has fewer than five CBL days
7.3	12/17/2018	Global ➢ Administrative changes and recertification Section 1,2 ➢ Removed unreferenced definitions Section 2.4 ➢ Removed redundant requirement related to load bank operation during event Section 5.2.3 ➢ Corrected CBL example tables to show correct Average Event Period Usage values
7.3	05/01/2019	Updated links and references
7.4	04/23/2020	Branding Updates ➢ Updated with new logo and formatting Section 1.1 ➢ Added Member Systems to definitions ➢ Added Meter Services Entity to definitions Section 1.2 ➢ Removed Meter Service Provider and Meter Data Service Provider from definitions ➢ Added Meter Authority to definitions Section 5.1 ➢ Removed reference to MSP/MDSP ➢ CSPs will not be permitted to install meters as of May 1, 2020 ➢ Added requirement that meters installed by MSEs must meet requirements laid out in NYISO Meter Services Entity Manual

7.4	12/09/2020	Recertified
7.5	01/04/2022	Section 5.1 ➢ Added municipal electric utilities to the definition of Meter Authority
7.6	11/01/2022	Section 1.2 ➢ Revised "Shift Supervisor or assignee" to "control room Operators" Section 2 ➢ Added Critical Electric System Infrastructure Load to Eligibility Criteria/ Qualification section.
7.6	11/18/2022	Recertified without revisions

1. Definitions and Acronyms

1.1. Tariff Definitions

Definitions for terms used in this manual can be found in the *NYISO Market Administration and Control Area Services Tariff* (*Services Tariff*) available from the NYISO Web site at

https://nyisoviewer.etariff.biz/ViewerDocLibrary/MasterTariffs/9FullTariffNYISOMST.pdf as follows:

Section 2.3: Definitions – C

Capability Period

Curtailment Customer Aggregator

Curtailment Services Provider (CSP)

Section 2.4: Definitions – D

Day-Ahead LBMP

Day-Ahead Market

Demand Side Ancillary Service Program Resource (DSASP Resource)

Demand Side Resources

Section 2.5: Definitions – E

EDRP

Emergency State

Section 2.9: Definitions – I

Installed Capacity (ICAP)

Section 2.12: Definitions – L

Load

Load Serving Entity (LSE)

Load Zone

Local Generator

Locational Based Marginal Price (LBMP)

Section 2.13. Definitions – M

Member Systems

Meter Services Entity (MSE)

Section 2.14: Definitions – N

New York Control Area (NYCA)

NYISO Customer

NYISO Limited Customer

Section 2.18: Definitions – R

Real-Time LBMP

Section 2.19: Definitions – S

Special Case Resource

1.2. Additional Terms Relevant to the Emergency Demand Response Program

Curtailment Program End Use Customer (EUC) – A retail end-user that qualified as a CSP and can either interrupt Load or start up a Local Generator or both to reduce Load from the NYS Transmission System or the distribution system at the direction of the ISO under the EDRP.

Customer Baseline Load (CBL) – Average hourly energy consumption as calculated in Section 5, used to determine the level of Load Reduction provided.

Day-Ahead Demand Response Program (DADRP) - The DADRP program provides Demand Side Resources with an opportunity to offer their load curtailment capability into the Day-Ahead Market ("DAM") as an energy resource.

Direct Customer – An entity that takes or provides service directly from or to the NYISO, and is responsible for bidding, scheduling, and billing functions for their facilities. Also referred to as a type 2 LSE: an entity that takes service directly from the NYISO to supply its own Load in the NYCA.

EDRP Loads – Retail end-users that provide Load Reduction and have been enrolled through a CSP to participate in the Emergency Demand Response Program.

In-Day Peak Hour Forecast – Forecasted morning and evening peak Loads as determined by the NYISO control room Operators, used to evaluate total operating capacity.

Interval Meter – An approved metering device that records electricity usage for each fifteen-minute period during a billing period.

Load Reduction – A reduction in energy usage at a retail end user's facility that is the result of the retail end user either reducing the energy consumed or operating a Local Generator to cause a Load Reduction from the NYS Transmission System and/or local distribution system at the direction of the NYISO.

Meter Authority ("MA") — An entity that is responsible for the calibration, maintenance, operation, and reporting of metered data from an electric revenue meter used in the wholesale electricity markets administered by the NYISO (*i.e.*, a Member System, Meter Services Entity, or municipal electric utility).

NYISO Services Tariff – The FERC-approved document that sets forth the provisions applicable to the services provided by the NYISO related to its administration of markets for the sale and purchase of Energy, Ancillary Services, and Capacity.

Operating Reserve Shortage – Failure to maintain the Minimum Operating Reserve Requirement as defined in the *NYISO Emergency Operations Manual* (available from the NYISO Web site at: https://www.nyiso.com/manuals-tech-bulletins-user-guides by activating the **Manuals and Operations** option in the navigation pane and choosing the **Emergency Operations Manual** link in the display pane.)

2. Eligibility Criteria / Qualification

2.1. Who Can Participate?

The EDRP allows wholesale electricity market participants to subscribe retail end users able to provide Load Reduction (Demand Side Resources) by curtailing Load or by shifting Load onto a Local Generator when called upon by the NYISO during emergency conditions. Wholesale market participants are grouped into four broad classes of Curtailment Service Providers (CSPs):

- Load-Serving Entities (LSEs) as defined in the *NYISO Services Tariff* that currently serve retail end users capable of Load Reduction or an LSE that subscribes another LSE's Load solely for the purpose of participating in the NYISO EDRP.
- An individual retail customer taking service as an LSE and enrolled to take service directly from the NYISO to supply its own Load in the NYCA as defined in the *NYISO Services Tariff*.
- NYISO-approved Curtailment Customer Aggregators (Aggregators) of retail end users capable of Load Reduction. Aggregators may claim Load Reductions from Demand Side Resources with which they have a contractual arrangement. An Aggregator may join the NYISO as a NYISO Limited Customer.
- NYISO-approved Curtailment Program End Use Customers (EUC), end-use customers whose Load is normally served by an LSE but who wish to participate directly with the NYISO solely for purposes of the EDRP. Curtailment Program End Use Customers (EUCs) must be capable of reducing at least 100 kW of Load. An EUC is required to join the NYISO as a NYISO Limited Customer.

Participation in the EDRP is voluntary. The EDRP program imposes no penalties upon CSPs or Demand Side Resources for not responding to Load Reduction requests; other Load Reduction programs to which the EDRP customer may be simultaneously enrolled, may impose penalties for failure to reduce. Demand Side Resources participating in the NYISO Energy Market or the Ancillary Services Market may also participate in EDRP.

A Demand Side Resource may not curtail Critical Electric System Infrastructure Load (as that term is defined in Section 2.3 of the Market Services Tariff) in response to a NYISO-initiated demand response event or test as part of participation in the Emergency Demand Response Program. See Market Administration and Control Area Services Tariff Sections 2.3 and 2.4, and ICAP Manual Section 4.12 for further information.

2.2. Minimum Qualifications for CSPs

To serve as a CSP, an entity must:

1. Be a NYISO Customer (in the case of LSEs and individual retail customers enrolled as LSEs that take service directly from the NYISO to supply their own Load in the NYCA) or a NYISO Limited Customer (in the case of Aggregators and EUCs) and be able to pledge Load Reduction in the NYCA.
2. Be able to cause a Load Reduction from the NYS Transmission System and/or local distribution system at the direction of the NYISO.
    - Be capable of reducing at least 100 kW of Load per zone.
    - Be capable of responding within two hours of notice from the NYISO.
    - Follow the enrollment procedures defined in Section of this manual.
    - Provide hourly interval metering data to validate performance. Specific metering requirements are given in Section 5 of this manual.

2.3. Restrictions

An individual Demand Side Resource can subscribe to either EDRP or the SCR program, but not both. Special Case Resources (SCRs) that have enrolled with the NYISO but have not sold any of their Special Case Resource Capacity will be added to the list of EDRP resources for that period of time when all of their Special Case Resource Capacity is unsold, and will be called with EDRP resources if an EDRP event is deployed.

To participate in the Program, an individual Demand Side Resource cannot subscribe the same metered Load with more than one CSP.

Information provided by CSPs may be shared with their local Transmission Owner for planning or system operation. Retail end users under a contract that prevents them from curtailing energy are prohibited from participating in the program.

Local Generators that are operating to fully serve their Load do not qualify for the EDRP. 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.

Demand Side Resources using a Local Generator to provide load relief through EDRP are subject to all environmental rules and regulations. Demand Side Resources determined not to be complying with environmental requirements will not be permitted to participate in the EDRP.

2.4. Requirements for Curtailment Customers with a Local Generator

Owners of Local Generators including, but not limited to, hospitals, data centers, office buildings, warehouses, and industrial locations are eligible to participate in the EDRP. A Local Generator can serve all or part of the facility's Load being supplied from the NYS Transmission System and/or distribution system (i.e., the retail end user's specific Load delivered from their LSE), thereby reducing the total Load being supplied from the NYS Transmission System and/or distribution system during declared emergencies. The requirements for participation are as follow:

1. Be capable of responding within 2 hours of a request to cause a Load Reduction from the NYS Transmission System and/or local distribution system at the direction of the NYISO.
2. Have an integrated hourly or permanent recording meter as described in Section 5.1, Metering Requirements.
3. Be capable of receiving notification from a Curtailment Service Provider (CSP).

Nothing in the EDRP expands or reduces the rights, obligations, or restrictions a Local Generator may have to buy or sell energy in the NYISO's wholesale market.

2.5. Compatibility with Special Case Resources

The EDRP pays for energy during times of emergency, but does not pay for capacity. The NYISO has a separate program called Special Case Resource (SCR) program within the Installed Capacity (ICAP) market that pays for capacity and energy. The SCR program is available to Local Generators and resources that curtail the facility's Load to reduce Load supplied by the NYS Transmission System and/or distribution system during a NYISO initiated performance test or event. SCRs are required to meet testing, metering and other program eligibility requirements. While there are no penalties for non-performance as an EDRP provider, the SCR program will reduce future capacity payments if the NYISO calls for operation and the SCR does not perform. There may also be penalties imposed for non-performance by other programs in which the SCR resource is simultaneously enrolled. In the event that the NYISO deploys an SCR resource to reduce its consumption of energy in accordance with the criteria set forth in Section 4, the NYISO may deploy the EDRP. SCRs that have enrolled with the NYISO but not sold any of their Special Case Resource Capacity will be added to the list of EDRP resources for the period of time when all of their Special Case

Resource Capacity is unsold and will be called with EDRP resources if an EDRP event is deployed. For more details on SCR, see the ICAP Manual, available from

https://www.nyiso.com/manuals-tech-bulletins-user-guides

by activating the **Operations** option in the navigation pane and choosing the **Installed Capacity Manual** link in the display pane.

2.6. Compatibility with other NYISO Demand Response Programs

Demand Side Resources may participate in both the EDRP and the Day-Ahead Demand Response Program (DADRP) offered by the NYISO. If an EDRP event is called and a Demand Side Resource is participating in both programs, payments will be made in accordance with Section 5.4.2 of this EDRP Manual.

Demand Side Resources may participate in both the EDRP and the Demand Side Ancillary Services Program (DSASP) offered by the NYISO. If an EDRP event is called and a Demand Side Resource is participating in both programs, the Demand Side Resource's real-time dispatch schedule in the DSASP program will be terminated for the duration of the demand response event to permit the Demand Side Resource to participate as an EDRP resource. If an EDRP event is called and a Demand Side Resource is participating in both programs, payments will be made in accordance with Section 5.4.2 of this Manual.

2.7. Small Customer Aggregation

1. Aggregations must be at least 0.5 MW for EDRP. The NYISO will establish an up-front means of certifying that the aggregation has an expectation of meeting this requirement. This will be established as part of the approval of the verification methodology; the sampling plan or other measurement methodology will assign an initial (a priori deemed) estimate of the response per site in order to drive the sample size. Resources included in the aggregation may only participate in one NYISO reliability program. The NYISO may request confirmation that all resources are enrolled only for participation in the Emergency Demand Response Program. The aggregation can be comprised of two or more different sampling methods, provided that such a super aggregation was allowed by the NYISO.
    2. Aggregators will be held responsible and liable for payments to and penalties levied against the members of the aggregation.
    3. Proposals for measuring aggregation performance can involve one of several methods:

a. The deployment of approved whole-premise kW metering devices on a sample of resources
b. The deployment of approved end-use device or process kW metering devices on a sample of resources that elect to limit EDRP participation to specified end-use devices or processes
c. Provision for supplying verifiable behavioral actions, equipment operating logs, or other data that is deemed to be sufficient, indicating the load level the customer otherwise would have consumed, but for the EDRP event participation
d. Other measurement systems that indicate the load level the customer otherwise would have consumed, but for the EDRP event participation

4. Small Customer Aggregation: A process and procedures will be drawn to govern how applications are made, processed and ruled upon, and to set limits to aggregation projects by zone, provider, program, or any other category. The number of aggregations allowed needs to accommodate all of the utilities plus a reasonable number of CSPs and LSEs. Each initial proposal (or significant revision thereof) for small customer aggregation will be reviewed by the NYISO staff and the Price Responsive Load Working Group, and must be approved by a majority of the Chairs and Vice-Chairs of the Management Committee and Business Issues Committee and the Chairman of the Price Responsive Load Working Group.
5. The Small Customer Aggregator is responsible for all costs associated with developing and administering the alternative performance methodology. Applications for approval of alternative methodologies must include an explicit description of the methodology and how it would be tracked and administered, accompanied by the specific administration processes required. The NYISO, in approving an application, will specify the costs associated with administration that the applicant must bear. The aggregation applicant must agree to be responsible for all such costs, including costs incurred by the NYISO for developing and administrating the alternative methodology. The NYISO may, at its discretion, require that some or all of such costs be reimbursed by the applicant upon approval of the methodology, or deduct all costs from payments for curtailments by resources, or a combination of the two methods of cost recovery.
6. End-use electricity customers may subscribe Load at a given premise to EDRP only under a single performance methodology, either the standard method or an approved alternative methodology.

7. Failure to comply with aggregation procedures: The NYISO may, at any time, terminate its agreement with an aggregation broker if it determines that the broker is not fulfilling its obligation under the aggregation agreement. Customers belonging to such an aggregation may henceforth participate by signing up under any approved means of participation.

2.8. EDRP Program Evaluation

Curtailment Service Providers shall participate in all NYISO-sponsored EDRP program evaluations for which NYISO requires their participation.

3. EDRP Enrollment Procedures

3.1. Requirements for CSP Enrollment

To qualify as a Curtailment Service Provider (CSP), an organization must be one of the following*:*

1. An LSE serving retail Load,
2. An individual customer taking service from an LSE and registered to take service directly from the NYISO to supply its own Load in the NYCA,
3. A Curtailment Customer Aggregator (a NYISO Limited Customer that works with owners of Demand Side Resources to make it easier to participate in the NYISO Emergency Demand Response program), or
4. A Curtailment Program End Use Customer (a NYISO Limited Customer that is a retail end user capable of interrupting Load or using a Local Generator that can reduce at least 100kW in a load zone).

For information on becoming a NYISO Customer, see the NYISO web site at

https://www.nyiso.com/support

3.2. Procedures for Enrolling Demand Side Resources in EDRP

CSPs are required to obtain authorization from each EDRP resource allowing the CSP to enroll the resource in the EDRP. Upon request, the CSP shall provide such authorization to the NYISO. It is the responsibility of the CSP to ensure compatibility with other curtailment programs before enrolling resources in the EDRP.

Demand Side Resources must be enrolled for participation in the EDRP through the NYISO Demand Response Information System (DRIS) according to the DRIS Event Calendar. Information on the type of data that is required in DRIS is provided in the DRIS User's Guide, posted on the NYISO web site at

https://www.nyiso.com/manuals-tech-bulletins-user-guides

by activating the **Guides** option in the navigation pane and choosing the **Demand Response Information System User's Guide** link in the display pane.

Resources must be reenrolled each Capability Period for participation in the EDRP.

4. Operating Mechanism / Implementation

4.1. When Will the Program be Deployed?

The NYISO will deploy the EDRP as one of its emergency procedures in conjunction with the In-day Peak Hour Forecast response to an Operating Reserve Peak Forecast Shortage, as defined in, or in response to, the Major Emergency State as defined in the *NYISO Emergency Operations Manual* (available from the NYISO Web site at

https://www.nyiso.com/manuals-tech-bulletins-user-guides

by activating the **Manual and Operations** option in the navigation pane and choosing the **Emergency Operations Manual** link in the display pane). Day-ahead notice of a potential operating reserve shortage shall be provided to CSPs when possible. The program is intended to support the New York State power system during emergency periods and the NYISO reserves the right to use its discretion in deploying EDRP resources to relieve system or zonal emergencies. The EDRP may be deployed in conjunction with Special Case Resources.

4.2. NYISO Protocol for Local Generator Participation

This section describes the circumstances under which the NYISO and its market participants have agreed that CSPs and RIPs may contract with customers who agree to reduce demand on the electricity grid by offloading all or a portion of their own power needs through the operation of Local Generators to cause a Load Reduction from the NYS Transmission System and/or local distribution system at the direction of the NYISO.

4.2.1. Compliance with Federal, State and Local Laws

By enrolling a resource that is a Local Generator, CSPs and RIPs, which may participate in the EDRP program in accordance with Section 2.5 of this manual when capacity associated with its SCRs is unsold, certify that the resource complies with all federal, state, and local laws and regulatory requirements with respect to operation of the Local Generator used to reduce Load on the NYCA system during a demand response event. RIPs that participate in EDRP pursuant to Section 2.5 of this manual and CSPs will provide documentation of compliance with these requirements upon request of the NYISO.

4.3. Notification Procedures

When the NYISO deploys the Emergency Demand Response Program (EDRP), a specific set of messages will be sent to Curtailment Service Providers (CSPs). A CSP will be asked to take certain actions in response

to the NYISO notification. This section describes the contact procedures and actions that will be requested of CSPs.

The time frame for advisory and deployment notices will be a function of the degree of warning the NYISO has in identifying and responding to operating reserve shortages / major emergencies.

Notification from the NYISO will take place via two communications media:

- Burst e-mail messages to all CSP Event-Responder e-mail contacts specified in DRIS.
- Automated phone call to all CSP Event-Responder phone contacts specified in DRIS.

After receiving an EDRP notification, the CSP shall take the following steps:

1. Assess whether or not the CSP has resources that can respond, and the kW level of response by zone.
2. Provide the expected kW response by load zone in accordance with the instructions in the notification.
3. If for some reason, the CSP cannot follow the response instructions, the CSP is advised to contact NYISO Stakeholder Services at 518-356-6060.

If the NYISO does not receive the automated response in a reasonable amount of time, it may call additional CSP contact numbers in an attempt to make a connection. In this case, NYISO staff will identify themselves by name and indicate that the NYISO has deployed the EDRP program, followed by the specific requests below.

Several types of notifications may be distributed. The notification types include, but are not limited to: Day-Ahead Advisory, In-Day Advisory, Activation (2 Hour Notice), Immediate Activation, Extension of an Event, or Early Termination of an Event.

The email and phone messages specify the type of notification, hours of event or advisory, and zones called. The exact wording of the notices is subject to change and may include additional information.

Listed below are examples of the type of notices that may be received for a Day-Ahead Advisory and Activation (2-Hour Notice).

4.4. Notification Message Examples

4.4.1. EDRP Day-Ahead Advisory

This notice applies to Curtailment Services Providers (CSPs) participating in the NYISO Emergency Demand Response Program (EDRP).

EDRP resources may be needed tomorrow starting at hh:mm and ending at hh:mm. EDRP resources located in zones A,B,C,D,E,F,G,H,I,J,K are subject to this notice. Please respond within one hour by logging into the NYISO Demand Response Information System (DRIS) and entering the Load Reduction levels (kW) expected to be achieved on the system in each zone. This data is used for reliability purposes.

A confirmation and final request to perform will be distributed at least two hours prior to the specified starting time of this event.

This constitutes an official EDRP Event Day-Ahead Advisory. If any questions arise concerning this EDRP Event Day-Ahead Advisory notice please contact NYISO Stakeholder Services at 518-356-6060.

4.4.2. EDRP Activation (2 Hour Notice)

EDRP resources are needed today starting at hh:mm and ending at hh:mm. EDRP resources located in zones A,B,C,D,E,F,G,H,I,J,K are subject to this notice. Please respond within one hour by logging into the NYISO Demand Response Information System (DRIS) and entering the Load Reduction levels (kW) expected to be achieved on the system in each zone. This data is used for reliability purposes.

This constitutes an official EDRP Event Activation Two Hour notice. If any questions arise concerning this EDRP Event Day-Ahead Advisory notice please contact NYISO Stakeholder Services at 518-356-6060.

5. Metering, Verification, Billing, and Settlement

As provided in ICAP Manual Section 4.12.2, the CSP Metering and Meter Data Requirements provided in Sections 5.1, 5.2 and 5.3 also apply to Responsible Interface Parties (RIPs) with SCR resources in the SCR Program.

5.1. Metering Requirements

Beginning on May 1, 2020, CSPs must use a Meter Authority to install and to read revenue-grade interval meters. Installation of any devices directly connected to the revenue meter, such as totalizers, must be performed by a Meter Authority. CSPs may also use non-revenue-grade meters meeting the 2% accuracy requirement as defined in Section 5.1.1. Meters that were installed by CSPs must be certified by a Professional Engineer as meeting ANSI C12 standards prior to May 1, 2020, and periodically tested and calibrated in accordance with the standards applicable to MSEs. Meters installed by MSEs on or after May 1, 2020, must meet the requirements set forth in the NYISO's Meter Services Entity Manual. CSPs must use a Meter Authority to read such meters. Acceptable interval metering for Demand Side Resources participating in the EDRP, whether with Load Reduction, a Local Generator or a combination of both, is described below in Section 5.1.1.

5.1.1. Metering Device Requirements

Meters installed under the 2001 EDRP rules prior to March 20, 2002 may be used as the source of EDRP event reporting data.

Hourly interval metering data is required to validate performance. Demand Side Resources may use non-revenue interval metering devices with an overall accuracy of ±2% as the source of performance data. For each non-revenue interval meter design used, the CSP will submit certification from the meter manufacturer that the model in use meets the ±2% accuracy threshold, recognizing errors in:

- Current measurement
- Voltage measurement
- A/D conversion
- Calibration

Such meters shall be periodically tested and calibrated in accordance with the standards applicable to MSEs.

Where a revenue meter exists, losses in secondary/service circuits between the revenue meter and the non-revenue interval meter may be compensated for to bring the reading within ±2% of the revenue meter. The CSP must demonstrate compliance through comparison of the revenue and non-revenue meters, or show calculation of losses between the revenue and non-revenue meters.

5.1.2. Metering Configuration Requirements

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

An EDRP resource 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 event only by curtailing the facility's Load, and that submit the entire facility's net meter data as evidence of Load reduction.

An EDRP resource 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 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

An EDRP resource must enroll as Response Type B when:

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

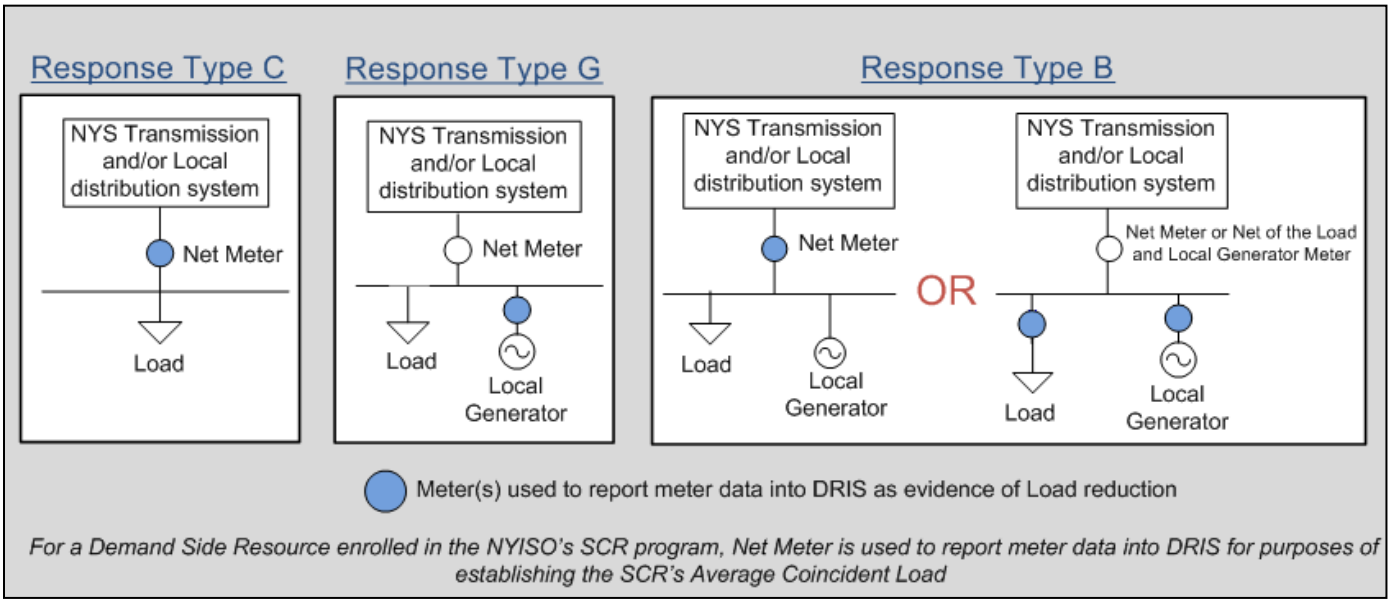
(ii) it uses only a Local Generator to reduce the Load supplied by the NYS Transmission System and/or distribution system during a NYISO initiated event, and submits

(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.

Figure 1Figure 1 illustrates examples of acceptable EDRP resource meter configurations. The Local Generator represented in the illustrations is used to facilitate Load reduction. For use of any meter configuration not represented by one of these diagrams, please contact NYISO Stakeholder Services at 518-356-6060.

Figure 1: Examples of acceptable Meter Configurations



5.1.3. Historical Operating Data

Upon request of the NYISO, CSPs and RIPs shall provide historical metering and operating data for each resource enrolled that is consistent with the enrolled meter configuration. These requirements may be met by, but not limited to, the following types of data requests:

1. For a resource that is participating in the EDRP, the meter ID and MSE ID certifying meter installation;
2. For resources with existing interval meters, a minimum of 30 days of hourly interval data immediately preceding the first month of the Capability Period the resource will participate in;
3. For resources that are eligible to report totalized Loads with existing interval meters, hourly interval data for a minimum of 30 days of hourly interval data for all participating Loads at the premise.

Consistent with Section 4.12.7 of the ICAP Manual, RIPs and CSPs shall retain all interval meter readings upon which it bases its certification of compliance for a period of three (3) years.

5.2. Calculation of CBL

5.2.1. Select a CBL method

1. The CSP selects the CBL formula when it enrolls a resource with the NYISO in the EDRP. The choice of CBL becomes effective when the NYISO accepts the enrollment.
2. At the initial enrollment in the EDRP, the CSP may elect either the Average Day CBL or the Adjusted CBL formula.
3. A change in the CBL formula can be made when the CSP reenrolls the resource in the EDRP in the next Capability Period.

5.2.2. CBL Calculation Method (Load Reduction or Both Local Generator and Load Reduction) Based on DRIS Metering Configuration

It is the responsibility of the CSP to provide the CBL calculation to the NYISO and ensure that calculations are complete and accurate.

Section 5.2.3 provides a complete example of the CBL calculation process including the weather adjustment.

Any Load supported by generation produced from a Local Generator, other behind-the-meter generator, or other supply source located behind the resource's meter may not be included in the metered Load used to calculate the resource's CBL when the resource is enrolled in DRIS with a Response Type B or C. Resources enrolled in DRIS with a Response Type G are required to use the CBL Calculation Method in Section 5.2.4 for calculation of the CBL of the Local Generator to calculate energy response during a demand response event.

I. The Average Day CBL for Weekdays

I.A. Establish the CBL Window for Weekdays.

I.A.1. Determine the resource's peak load hour within, but not to exceed, the last 30 days that corresponds to the hours that cover the event for which the CBL is being developed. Multiply the peak load hour value by 25% to calculate the initial seed value. (

I.A.2. Figure 2)

I.A.3. Beginning with the day prior to the event for which the CBL is being calculated, exclude the following:

I.A.3.a Any holidays within the last 30 days, as specified by the NYISO.

I.A.3.b Any days within the last 30 days when the NYISO declared an SCR, EDRP or TDRP event for which the resource was eligible for payment for a curtailment. The day prior to any other weekday when the NYISO declared an SCR, EDRP or TDRP event within the last 30 days for which the resource was eligible for payment for a curtailment.

I.A.3.c Any days within the last 30 days in which the resource's DADRP curtailment bid was accepted in the DAM, whether or not the resource actually curtailed. Any day prior to the day in which the resource's DADRP curtailment bid was accepted in the DAM, whether or not the resource actually curtailed.

I.A.4. For each remaining weekday within the last 30 days, create the Average Daily Event Period Usage for that day, defined as the simple average of the resource's actual usage over the hours that define the event for which the CBL is being developed. Eliminate low usage days. For each day that has not been excluded within the last 30 days, compare the resulting Average Daily Event Period Usage to the initial seed value. If the Average Daily Event Period Usage is less than the initial seed value, exclude that day. If, after all exclusions, fewer than 10 days, but no less than 5 days, remain within the 30 day period, continue the calculation of the CBL using the number of days remaining. If fewer than five days remain, please contact NYISO Stakeholder Services at 518-356-6060.

I.A.5. Move back one day to step I.A.2.a and repeat for all remaining weekdays within the 30 days prior to the event for which the CBL is being calculated.

I.A.6. Continue with I.B. the calculation of CBL Basis for Weekdays.

Figure 2 shows the determination and calculation of the initial seed value.

Figure 2: Example of Determining a Resource's Peak Load Hour that Occurred During Event Hours Over the Past 30 Days and the Calculation of the Initial Seed Value

SUN	MON	TUE	WED	THU	FRI	SAT
JUN 8	JUN 9 ***Day 30 Maximum Load Value during Event Hours: 9***	JUN 10 ***Day 29 Maximum Load Value during Event Hours: 9***	JUN 11 ***Day 28 Maximum Load Value during Event Hours: 8***	JUN 12 ***Day 27 Maximum Load Value during Event Hours: 8***	JUN 13 ***Day 26 Maximum Load Value during Event Hours: 10***	JUN 14 ***Day 25 Maximum Load Value during Event Hours: 7***
JUN 15 ***Day 24 Maximum Load Value during Event Hours: 5***	JUN 16 ***Day 23 Maximum Load Value during Event Hours: 8***	JUN 17 ***Day 22 Maximum Load Value during Event Hours: 9***	JUN 18 ***Day 21 Maximum Load Value during Event Hours: 10***	JUN 19 ***Day 20 Maximum Load Value during Event Hours: 13***	JUN 20 ***Day 19 Maximum Load Value during Event Hours: 11***	JUN 21 ***Day 18 Maximum Load Value during Event Hours: 6***
JUN 22 ***Day 17 Maximum Load Value during Event Hours: 5***	JUN 23 ***Day 16 Maximum Load Value during Event Hours: 10***	JUN 24 ***Day 15 Maximum Load Value during Event Hours: 7***	JUN 25 ***Day 14 Maximum Load Value during Event Hours: 8***	JUN 26 ***Day 13 Maximum Load Value during Event Hours: 8***	JUN 27 ***Day 12 Maximum Load Value during Event Hours: 12***	JUN 28 ***Day 11 Maximum Load Value during Event Hours: 7***
JUN 29 ***Day 10 Maximum Load Value during Event Hours: 5***	JUN 30 ***Day 9 Maximum Load Value during Event Hours: 11***	JUL 1 ***Day 8 Maximum Load Value during Event Hours: 8***	JUL 2 ***Day 7 Maximum Load Value during Event Hours: 12***	JUL 3 ***Day 6 Maximum Load Value during Event Hours: 9***	JUL 4 HOLIDAY ***Day 5 Maximum Load Value during Event Hours: 5***	JUL 5 ***Day 4 Maximum Load Value during Event Hours: 6***
JUL 6 ***Day 3 Maximum Load Value during Event Hours: 5***	JUL 7 ***Day 2 Maximum Load Value during Event Hours: 11***	JUL 8 INELIGIBLE DAY (DAY BEFORE) ***Day 1 Maximum Load Value during Event Hours: 11***	JUL 9 SCR/EDRP EVENT	JUL 10	JUL 11	JUL 12
KEY:	**NON-EVENT DAY**	**SCR/EDRP EVENT**	**DADRP SCHEDULE**	**INELIGIBLE DAY (DAY BEFORE)**	**HOLIDAY**	**Maximum Load Value During Event Hours - over past 30 days**

Maximum Load Value During Event Hours - over past 30 days	***Exclude the CBL Day if Average Event Period Usage is lower than the Initial Seed Value (Maximum Load * 0.25):***
13	3.25

1. Establish the CBL Basis for Weekdays.

I.A.7. Identify the five days from the CBL Window (up to 10 days) to be used to develop CBL values for each hour of the event. (Figure 3)

I.A.8. Rank the days from the CBL Window according to their Average Daily Event Period Usage level, and eliminate the days with the lowest Average Daily Event Period Usage, so that a maximum of five weekdays remain.

I.B. Calculate hourly Average Day CBL values for the event.

I.B.1. For each hour of the event, compute the CBL as the simple average of the corresponding hourly Loads from the CBL Basis for Weekdays.

Figure 3Figure 3 below shows CBL Window selection for a single weekday event. The calendar view illustrates the reverse order selection of the 10 days of the CBL Window. The calendar view shows the dates of the CBL Window for the event.

Figure 3: Example of CBL Window Selection - Single Weekday Event

SUN	MON	TUE	WED	THU	FRI	SAT
JUN 15	JUN 16	JUN 17	JUN 18	JUN 19	JUN 20	JUN 21
JUN 22	JUN 12 ***CBL DAY 10 FOR 7/9***	JUN 24 ***CBL DAY 9 FOR 7/9***	JUN 25 ***CBL DAY 8 FOR 7/9***	JUN 26 ***CBL DAY 7 FOR 7/9***	JUN 27 ***CBL DAY 6 FOR 7/9***	JUN 28
JUN 29	JUN 30 ***CBL DAY 5 FOR 7/9***	JUL 1 ***CBL DAY 4 FOR 7/9***	JUL 2 ***CBL DAY 3 FOR 7/9***	JUL 3 **CBL DAY 2 FOR 7/9**	JUL 4 HOLIDAY	JUL 5
JUL 6	JUL 7 ***CBL DAY 1 FOR 7/9***	JUL 8 INELIGIBLE DAY (DAY BEFORE)	JUL 9 SCR/EDRP EVENT	JUL 10	JUL 11	JUL 12

KEY:				
	NON-EVENT DAY	**SCR/EDRP EVENT**	**DADRP SCHEDULE**	**INELIGIBLE DAY (DAY BEFORE)**	**HOLIDAY**

CBL WINDOW FOR SINGLE WEEKDAY EVENT EXAMPLE											
EVENT DATE	**PROGRAM**	**DAY 1**	**DAY 2**	**DAY 3**	**DAY 4**	**DAY 5**	**DAY 6**	**DAY 7**	**DAY 8**	**DAY 9**	**DAY 10**
9-Jul	SCR/EDRP	7-Jul	3-Jul	2-Jul	1-Jul	30-Jun	27-Jun	26-Jun	25-Jun	24-Jun	23-Jun

Figure 4Figure 4 below shows the CBL Windows when multiple weekday events occur, including DADRP schedules. The calendar view illustrates the reverse order selection of the 10 days of the CBL Window for each event. For example, June 27 will be used as

- Day 1 for the June 30th event
- Day 2 for the July 3rd event, and
- Day 4 for both the July 10th and July 11th events.

The table view shows the dates of the CBL Window for each event.

Figure 4: Example of CBL Window Selection – Multiple Weekday Events

SUN	MON	TUE	WED	THU	FRI	SAT
JUN 15	JUN 16 *CBL DAY 10 FOR 6/30*	JUN 17 *CBL DAY 9 FOR 6/30* *CBL DAY 10 FOR 7/3*	JUN 18 *CBL DAY 8 FOR 6/30* *CBL DAY 9 FOR 7/3*	JUN 19 *CBL DAY 7 FOR 6/30* *CBL DAY 8 FOR 7/3* *CBL DAY 10 FOR 7/10* *CBL DAY 10 FOR 7/11*	JUN 20 *CBL DAY 6 FOR 6/30* *CBL DAY 7 FOR 7/3* *CBL DAY 9 FOR 7/10* *CBL DAY 9 FOR 7/11*	JUN 21
JUN 22	JUN 12 *CBL DAY 5 FOR 6/30* *CBL DAY 6 FOR 7/3* *CBL DAY 8 FOR 7/10* *CBL DAY 8 FOR 7/11*	JUN 24 *CBL DAY 4 FOR 6/30* *CBL DAY 5 FOR 7/3* *CBL DAY 7 FOR 7/10* *CBL DAY 7 FOR 7/11*	JUN 25 *CBL DAY 3 FOR 6/30* *CBL DAY 4 FOR 7/3* *CBL DAY 6 FOR 7/10* *CBL DAY 6 FOR 7/11*	JUN 26 *CBL DAY 2 FOR 6/30* *CBL DAY 3 FOR 7/3* *CBL DAY 5 FOR 7/10* *CBL DAY 5 FOR 7/11*	JUN 27 *CBL DAY 1 FOR 6/30* *CBL DAY 2 FOR 7/3* *CBL DAY 4 FOR 7/10* *CBL DAY 4 FOR 7/11*	JUN 28
JUN 29	JUN 30 DADRP SCHEDULE	JUL 1 *CBL DAY 1 FOR 7/3* *CBL DAY 3 FOR 7/10* *CBL DAY 3 FOR 7/11*	JUL 2 INELIGIBLE DAY (DAY BEFORE)	JUL 3 DADRP SCHEDULE	JUL 4 HOLIDAY	JUL 5
JUL 6	JUL 7 *CBL DAY 2 FOR 7/10* *CBL DAY 2 FOR 7/11*	JUL 8 *CBL DAY 1 FOR 7/10* *CBL DAY 1 FOR 7/11*	JUL 9 INELIGIBLE DAY (DAY BEFORE)	JUL 10 SCR/EDRP EVENT	JUL 11 DADRP SCHEDULE	JUL 12

KEY:	NON-EVENT DAY	SCR/EDRP EVENT	DADRP SCHEDULE	INELIGIBLE DAY (DAY BEFORE)	HOLIDAY

CBL WINDOW FOR MULTIPLE WEEKDAY EVENT EXAMPLE											
EVENT DATE	PROGRAM	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7	DAY 8	DAY 9	DAY 10
30-Jun	DADRP	27-Jun	26-Jun	25-Jun	24-Jun	23-Jun	20-Jun	19-Jun	18-Jun	17-Jun	16-Jun
3-Jul	DADRP	1-Jul	27-Jun	26-Jun	25-Jun	24-Jun	23-Jun	20-Jun	19-Jun	18-Jun	17-Jun
10-Jul	SCR/EDRP	8-Jul	7-Jul	1-Jul	27-Jun	26-Jun	25-Jun	24-Jun	23-Jun	20-Jun	19-Jun
11-Jul	DADRP	8-Jul	7-Jul	1-Jul	27-Jun	26-Jun	25-Jun	24-Jun	23-Jun	20-Jun	19-Jun

II. The Average Day CBL for Weekends

II.A. Establish the CBL Window for Weekends

II.A.1. The CBL Window is comprised of the most recent three like (Saturday or Sunday) weekend days. There are no exclusions for Holidays or event days.

II.A.2. Establish the CBL Basis.

II.A.2.a Calculate the Average Daily Event Period Usage value for each of the three days in the CBL Window. (Figure 5)

II.A.2.b Order the three days according to their Average Daily Event Period Usage level.

II.A.2.c Eliminate the day with the lowest average value.

II.A.2.d The Weekend CBL Basis contains 2 days.

II.A.3. Calculate Weekend Average Day CBL values for the event.

II.A.3.a For each hour of the event, the CBL value is average of Load in that hour in the two days that comprise the CBL basis.

Figure 5Figure 5 below shows the CBL Window when a weekend event occurs, including DADRP schedule. The calendar view illustrates the reverse order selection of the 3 days of the CBL Window for the weekend event. The table view shows the dates of the CBL Window for the weekend event.

Figure 5: Example of CBL Window Selection – Weekend Event

SUN	MON	TUE	WED	THU	FRI	SAT
JUN 29	JUN 30	JUL 1	JUL 2	JUL 3	JUL 4 HOLIDAY	JUL 5 ***CBL DAY 3 FOR 7/26***
JUL 6	JUL 7	JUL 8	JUL 9	JUL 10	JUL 11	JUL 12 ***CBL DAY 2 FOR 7/26***
JUL 13	JUL 14	JUL 15	JUL 16	JUL 17	JUL 18	JUL 19 ***CBL DAY 1 FOR 7/26***
JUL 20	JUL 21	JUL 22	JUL 23	JUL 24	JUL 25	JUL 26 DADRP SCHEDULE

KEY:					
	NON-EVENT DAY	SCR/EDRP EVENT	DADRP SCHEDULE	INELIGIBLE DAY (DAY BEFORE)	HOLIDAY

CBL WINDOW FOR WEEKEND EVENT EXAMPLE											
EVENT DATE	PROGRAM	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7	DAY 8	DAY 9	DAY 10
26-Jul	DADRP	19-Jul	12-Jul	5-Jul	*Weekend CBL Window uses only 3 weekend days of same day type*						

III. Elective Weather-Sensitive CBL Formulation

III.A. Calculate the Average Day CBL values for each hour of the event period described in (I) above.

III.B. Calculate the Event Final Adjustment Factor. This factor is applied to each of the individual hourly values of the Average Day CBL.

III.B.1. Calculate the Adjustment Basis Average CBL

III.B.1.a Establish the adjustment period, the two-hour period beginning with the start of the hour that is four hours prior to the commencement of the event through the end of the hour three hours prior to the event.

III.B.1.b Calculate the Adjustment Basis Average CBL.

III.B.1.c Apply the Average Day CBL formula as described in I for Weekdays to the adjustment period hours as though it were an event period two hours in duration, but using the five days selected for use in the Average CBL Basis (i.e., average the Loads of all ten hours).

III.B.1.d Calculate the average of the two load values derived in III.B.1.c, which is the Adjustment Basis Average CBL.

III.B.2. Calculate the Adjustment Basis Average Load

III.B.2.a The Adjustment Basis Average Load is the simple average of the resource's Load over the two-hour adjustment period on the event day.

III.B.3. Calculate the Gross Adjustment Factor

III.B.3.a The Gross Adjustment Factor is equal to the Adjustment Basis Average Load divided by the Adjustment Basis Average CBL

III.B.4. Determine the Final Adjustment Factor. The Final Adjustment Factor is as follows:

III.B.4.a If the Gross Adjustment Factor is greater than 1.00, then the Final Adjustment Factor is the lesser of the Gross Adjustment Factor or 1.20

III.B.4.b If the Gross Adjustment Factor is less than 1.00, the Final Adjustment Factors is the greater of the Gross Adjustment Factor or .80.

III.B.4.c If the Gross Adjustment Factor is equal to 1.00, the Final Adjustment Factor is equal to the Gross Adjustment Factor.

III.C. Calculate the Adjusted CBL values.

III.C.1. The Event Adjusted CBL value for each hour of an event is the product of the Final Adjustment Factor and the Average CBL value for that hour.

5.2.3. Example CBL Calculation

As an example, assume a 4-hour EDRP event was called from 12 noon to 4 pm; notice was sent out at 10 a.m. The past 10 days MWh consumption for similar hours, along with the four hours prior to event initiation, was:

Time	HB 8	HB 9	HB 10	HB 11	HB 12	HB 13	HB 14	HB 15	Avg Event Period Usage	Total Event Period Usage	Rank
CBL DAY 1	5	5	7	8	10	11	8	5	8.50	34	4
CBL DAY 2	4	3	5	6	8	6	9	6	7.25	29	7
CBL DAY 3	4	5	6	8	9	12	10	7	9.50	38	1
CBL DAY 4	4	4	5	6	7	8	7	6	7.00	28	8
CBL DAY 5	3	4	5	7	10	11	9	7	9.25	37	2
CBL DAY 6	6	2	5	8	12	8	9	7	9.00	36	3
CBL DAY 7	2	3	4	5	5	8	8	6	6.75	27	9
CBL DAY 8	3	3	4	6	7	8	8	7	7.50	30	6
CBL DAY 9	3	2	4	6	7	6	6	5	6.00	24	10
CBL DAY 10	4	4	5	7	8	10	9	6	8.25	33	5

Steps 1 and 2: sum the MWh for the hours 12-4 each day and select the 5 highest total average event period usage days.

Time	HB 8	HB 9	HB 10	HB 11	HB 12	HB 13	HB 14	HB 15	Avg Event Period Usage	Total Event Period Usage	Rank
CBL DAY 1	5	5	7	8	10	11	8	5	8.50	34	4
CBL DAY 3	4	5	6	8	9	12	10	7	9.50	38	1
CBL DAY 5	3	4	5	7	10	11	9	7	9.25	37	2
CBL DAY 6	6	2	5	8	12	8	9	7	9.00	36	3
CBL DAY 10	4	4	5	7	8	10	9	6	8.25	33	5

Step 3: Calculate the CBL for each hour using the five highest days selected:

Time	HB 12	HB 13	HB 14	HB 15
Avg Day CBL	9.8	10.4	9	6.4

To calculate the hourly Load Reduction, for each hour, subtract the actual Load from the CBL.

Time	HB 12	HB 13	HB 14	HB 15
Avg Day CBL	9.8	10.4	9	6.4
EVENT DAY - Actual Load	2	3	3	4
Load Reduction Using Average Day CBL	7.8	7.4	6	2.4

The CBL shown in Step 3 above is the non-weather-adjusted value. If this customer signed up with the weather-sensitive calculation option, the CBL would be adjusted upward or downward based on the actual usage in the two hours prior to event notification. In this example, the Adjustment Basis Average CBL will be the average of the MWh for hours beginning 8 and 9 over the five days chosen for the CBL:

Time	HB 8	HB 9	Adjustment Basis Average CBL
Avg Day CBL - Adjustment Hours	4.4	4.0	4.2

On the day of the event (day N), assume the actual metered Load Reduction is as shown in the following table:

Time	HB 8	HB 9	HB 10	HB 11	HB 12	HB 13	HB 14	HB 15	Adjustment Basis Average Usage
EVENT DAY - Actual Load	4	5	4	3	2	3	3	4	4.50

In this case, the Adjustment Basis Average Usage is the average of the MWh in hours 8 and 9, or 4.5 MWh.

The Gross Adjustment Factor is the ratio of the Adjustment Basis Average Usage to the Adjustment Basis Average CBL, 4.5/4.2 or 1.07.

Adjustment Basis Average Usage	Adjustment Basis Average CBL	Gross Adjustment Factor
4.50	4.2	1.07

The CBL will therefore be adjusted upward by seven percent. The following table shows the resulting weather-adjusted CBL and the computed Load Reduction for the four-hour event period.

Time	HB 12	HB 13	HB 14	HB 15
Weather-Adjusted CBL	10.5	11.1	9.6	6.8
EVENT DAY - Actual Load	2	3	3	4
Load Reduction Using Weather-Adjusted CBL	7.8	7.4	6.0	2.4

It is important to note that if the actual usage in the two hours prior to notification was *lower* than the Adjustment Basis Average CBL, the CBL curve would have been shifted *downward* and would result in Load Reduction performance that was lower than would have been determined using the Average Day CBL (without weather adjustment).

5.2.4. CBL Calculation Method when metering a Local Generator Only

For a resource providing Load Reduction with a Local Generator metered separately, a similar CBL calculation is used to eliminate any base-load portion of generation from the actual performance during the event.

1. Calculate the Local Generator's output during similar hours over the past 10 weekdays, beginning two days prior to the curtailment event and excluding days where curtailment due to participation in the EDRP occurred.

2. MWh(k) = sum(h(i)...h(j)) for each day k = d(n-2)...d(n-11)
3. Select the 5 lowest values of MWh(k) and use those days d(l), l = 1...5 to calculate the CBL.
4. Calculate the CBL for each hour h(i) as the average of the five h(i) values for days d(l), l = 1...5.

5.3. Performance Measurements for Energy Payments

The equations are given for the various metering configurations shown below. The CBL type used for computing performance shall be the same day-type as the day-type of the EDRP event. For a Local Generator metering configuration, the generator output as metered will be used for performance as defined below. The equations are given for the alternative metering configurations shown in Figure 1, Eligible Metering Configurations.

Load Reduction Only Configuration (DRIS Response Type C)

For facilities subscribing only the Load Reduction, performance for each hour shall be calculated as:

$$\mathbf{P_h = (CB\text{-}xx)_h - AN_h}$$

P_h = performance for the hour
$(CB\text{-}xx)_h$ = Customer Baseline day-type (weekday – CB-WD, Saturday CB-SA, or Sunday-CB-SU) for the hour as calculated using the simple average method described above in Section 5.2.2
AN_h = actual net Load for the hour using net meter

Local Generator Only Configuration (DRIS Response Type G)

For facilities subscribing with a Local Generator only, performance for each hour shall be calculated as:

$$\mathbf{P_h = OG_h - (GCB\text{-}xx)_h}$$

P_h = performance for the hour
OG_h = Metered Local Generator output for the hour
$(GCB\text{-}xx)_h$ = Customer Baseline day-type (weekday – GCB-WD, Saturday – GCB-SA or Sunday GCB-SU) for the hour h as determined for Local Generator output described in Section 5.2.4

Load and Local Generator Configuration (DRIS Response Type B)

For facilities subscribing both with Local Generator and Load Reduction participating in the same EDRP event, performance for each hour shall be the net of Local Generator output and Load as defined below:

$$P_h = [OG_h\text{-}(GCB\text{-}xx)_h] + [(CB\text{-}xx)_h - AL_h]$$

or

$$P_h = (CB\text{-}xx)_h - AN_h$$

P_h = performance for the hour
OG_h = Metered Local Generator output for the hour
$(GCB\text{-}xx)_h$ = Customer Baseline day-type (weekday – GCB-WD, Saturday – GCB-SA or Sunday GCB-SU) for the hour h as determined for Local Generator output described in Section 5.2.4.
$(CB\text{-}xx)_h$ = Customer Baseline day-type (weekday – CB-WD, Saturday CB-SA, or Sunday-CB-SU) for the hour as calculated using the simple average method described above in Section 5.2.2
AL_h = actual Load for the hour using Load meter
AN_h = actual Load for the hour using net meter

5.4. Settlement Procedures

Load Reductions for which all required settlement and performance data are not uploaded into the Demand Response Information System (DRIS) by 5:00:00 P.M. on the date that is 75 days after (but not including) the date of deployment shall not be compensated pursuant to this program. Load Reduction settlement and performance data is subject to NYISO audit and Market Mitigation and Analysis review and verification. The NYISO is responsible for calculating settlement payment.

5.4.1. EDRP Reporting and Data Format

CSPs shall upload data directly into DRIS, adhering to the format specified in the *NYISO Demand Response Information System User's Guide* available from the NYISO Web site at

https://www.nyiso.com/manuals-tech-bulletins-user-guides

by activating the **Guides** option in the navigation pane and choosing the **Demand Response Information System User's Guide** link in the display pane.

Deployment response and Energy Payment data will be accepted into the DRIS until but not after 5:00:00 P.M. on the date that is 75 days after the deployment.

5.4.2. Calculation and Payments

The NYISO shall pay CSPs that cause a verified Load Reduction in response to the deployment of the EDRP program in accordance with Section 22.10 of Attachment G of the *NYISO Services Tariff*.

The Settlement procedures below also apply to Responsible Interface Parties (RIPs) with SCR resources in the SCR Program that submit the required settlement and performance data.

EDRP resources and SCRs that are scheduled to perform in either the Day-Ahead Demand Response Program (DADRP) or Demand Side Ancillary Services Program (DSASP) during an EDRP or SCR event will have their EDRP or SCR energy payments adjusted to reflect the payments made for performance under the DADRP or DSASP.

If a Demand Side Resource in EDRP or an SCR provides required evidence of a verified Load Reduction in response to an event or test and is concurrently scheduled in the Day-Ahead Market as a DADRP resource, or as part of a DADRP aggregation, or as a DSASP Resource, the Demand Side Resource in EDRP or SCR will be paid for response to such program only if and to the extent that the resource performed above its commitment to the DADRP schedule or DSASP DAM schedule. The resource shall be paid for its contribution to the performance required by the scheduled Load Reduction in the DAM in accordance with the DADRP program. The resource shall be paid for its Load Reduction up to its DAM schedule in accordance with the DSASP program. Any verified Load Reduction in excess of its contribution in the DADRP or in excess of its DSASP DAM schedule shall be eligible for payment in the EDRP or SCR programs.

In order to determine the contribution of a specific resource in a DADRP aggregation or DSASP aggregation, the NYISO will first calculate a value for each resource's contribution to the aggregation, expressed as the ratio of each resource's Load Reduction potential (kWh) to the total modeled value of the Load Reduction potential attributed to the DADRP aggregation (kWh) or DSASP aggregation (kWh) ("Contribution Fraction"). For a single EDRP or SCR resource enrolled as a single DADRP resource or DSASP Resource, the Contribution Fraction is 100%. Second, the NYISO will multiply each resource's Contribution Fraction by the DADRP schedule or DSASP DAM schedule for each hour of concurrence to determine the resource's contribution to the DADRP schedule or DSASP DAM schedule. Third, the NYISO will deduct from the verified Load Reduction performance data reported by that resource its DADRP or DSASP contribution, using the Contribution Fraction, and calculated by the NYISO for the same hour to determine the performance of that resource that is eligible for payment in the EDRP and SCR programs . The Bid Production Cost Guarantee for resources in the SCR program will be based on the net verified Load Reduction after adjustment for any DADRP schedule or DSASP DAM schedule.

If the Demand Side Resource is an EDRP resource, has fewer than five (5) CBL days for a NYISO initiated event, and the CSP wishes to receive energy payments, the CSP must contact NYISO Stakeholder Services ***at least five (5) business days prior to the deadline for importing event performance data into DRIS***.

5.4.3. Verification, Errors and Fraud

All data related to EDRP participation are subject to audit by the NYISO and its Market Mitigation & Analysis department.

5.5. Cost Allocation

The cost of EDRP payments will be recovered from all Transmission Customers in accordance with Section 22.11 of Attachment G of the *NYISO Services Tariff*.

LSEs shall also be required to pay the monthly charges calculated above for Transmission Customers, which the LSE serves as retail access customers.

This charge will appear as a distinct line item labeled as Demand Response Statement on the Consolidated Invoice. A breakout of payment by hour by resource will also be separately provided outside the settlement and invoice process.

6. Targeted Demand Response Program

6.1. Program Overview

The NYISO will deploy the EDRP resources in targeted areas within load zone J under certain specific conditions and in response to a request for Targeted Demand Response Program (TDRP) assistance from the Transmission Owner.

Details

The NYISO will respond to requests for assistance from the Transmission Owner in load zone J (New York City) by deploying EDRP resources in one or more of eight sub-load pockets in load zone J. Notifications will be made through the NYISO's EDRP/SCR notification system; events will clearly be identified as TDRP advisories or deployments.

The sub-load pockets correspond to the following Transmission Owner network area substation groupings:

Sub-load Pocket Identification	Area Substation Grouping
J1	Sherman Creek/Parkchester/E 179th
J2	Astoria West/Queensbridge
J3	Vernon/Greenwood
J4	Staten Island
J5	Astoria East/Corona/Jamaica
J6	W 49th
J7	E13th/East River
J8	Farragut/Rainey
J9	Shared Subzone

6.2. Conditions for Deploying TDRP

6.2.1. Transmission and Sub-Transmission System (69kV or higher)

CSPs with resources in sub-load pockets will be notified of the possibility of program deployment. The notification process is the same used for an EDRP advisory and will specify that the advisory is part of the TDRP.

6.2.1.1. Day-Ahead Advisory Conditions

Transmission Owner may request the NYISO to send an advisory notice day ahead if the following conditions exist in load zone J:

- After all other available resources are committed; a shortfall is identified whereby normal feeder ratings or Transmission Owner 300-hour bank ratings will be exceeded following a contingency in a sub-load pocket, unless load relief measures are enacted.
- After all other available resources are committed; a reactive power shortfall is identified whereby post-contingency low voltage will exist in a sub-load pocket unless load relief measures are enacted.

6.2.1.2. In-Day Advisory/Deployment Conditions

Transmission Owner may request the NYISO to deploy the TDRP if the following conditions exist in load zone J:

- If, after the next contingency, a Transmission Owner Long-Term Emergency (LTE) or 3-hour bank rating violation will exist that cannot be cleared with available resources and without Load relief measures.
- If an anticipated or real-time violation of Normal feeder ratings or 300-hour bank ratings exists and cannot be cleared through available resources and without Load relief measures.
- If an anticipated, real-time or post- contingency low voltage condition exists and cannot be cleared through available resources and without Load relief measures.

6.2.2. Lower Voltage Systems (33kV or Below)

- The TDRP will be deployed if it is anticipated that a network or load area could experience significant service interruptions following the loss of two additional feeders and secondary problems exist, such as low voltage and localized service interruptions.

6.3. Verification, Billing and Settlement

All phases of meter verification, billing, and settlement will be handled in the same manner as an EDRP event. Section 5 of this manual has further details.