

Emergency Demand Response Program Manual

December 2010

DRAFT - For Discussion Purposes Only

DRAFT - For Discussion Purposes Only

Version:

6.2

Revision Date:

12/02/2010

Committee Acceptance:

mm/dd/2010

Recertification Date:

05/05/2010

This document was prepared by:

NYISO Auxiliary Market Operations

New York Independent System Operator
3890 Carman Road
Schenectady, NY 12303
(518) 356-6060
www.nyiso.com

Disclaimer

The information contained within this manual, along with the other NYISO manuals, is intended to be used for informational purposes 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.

Table of Contents

<i>Table of Figures</i>	v
<i>Table of Tables</i>	v
<i>Revision History</i>	vii
1. Definitions and Acronyms	1-1
1.1 Tariff Definitions	1-1
1.2 Additional Terms Relevant to the Emergency Demand Response Program.....	1-2
2. Eligibility Criteria / Participant Qualification	2-1
2.1 Who Can Participate?	2-1
2.2 Minimum Qualifications for CSPs.....	2-1
2.3 Restrictions.....	2-2
2.4 Requirements for Curtailment Customers with Local Generation.....	2-2
2.5 Compatibility with ICAP Special Case Resources	2-3
2.6 Compatibility with LSE-Sponsored Curtailment Programs	2-3
2.7 Small Customer Aggregation	2-3
2.8 EDRP Program Evaluation.....	2-5
3. EDRP Enrollment Procedures	3-1
3.1 Requirements for CSP Enrollment.....	3-1
3.2 Procedures for Enrolling Demand Side Resources in EDRP	3-1
4. Operating Mechanism / Implementation	4-1
4.1 When Will the Program be Deployed?	4-1
4.2 NYISO Protocol for Local Generator Participation.....	4-1
4.2.1 Program Limitations	4-1
4.3 Notification Procedures	4-2
4.4 Notification Message Examples	4-3
4.4.1 Day-Ahead Advisory	4-3
4.4.2 Deploying EDRP – 2-Hour Notification	4-3
5. Metering, Verification, Billing, and Settlement	5-1
5.1 Metering Requirements	5-1
5.1.1 Metering Device Requirements	5-1
5.1.2 Metering Configuration Requirements	5-1
5.1.3 Historical Operating Data.....	5-2
5.2 Calculation of Customer Baseline Load (CBL)	5-3
5.2.1 Select a CBL method	5-3
5.2.2 Baseline Calculation Method (Interruptible Load or Both Local Generation and Interruptible Load).....	5-3
5.2.3 Example Customer Baseline Calculation	5-7
5.2.4 Baseline Calculation Method (Local Generation Only).....	5-9
5.3 Performance Measurements and Compliance.....	5-10
5.3.1 Performance	5-10
5.3.2 Compliance	5-11
5.4 Settlement Procedures.....	5-12
5.4.1 Data Receipt	5-12
5.4.2 EDRP Reporting and Data Format	5-12
5.4.3 Calculation and Payments	5-12
5.4.4 Verification, Errors, and Fraud.....	5-13

5.5 Assessment of Program Charges to Load5-13

5.5.1 Objectives of Cost Allocation5-13

5.5.2 Conditions under Which EDRP Will Be Deployed5-13

5.5.3 Cost Allocation Formula.....5-13

6. Targeted Demand Response Program 6-1

6.1 Program Overview6-1

6.2 Conditions for Deploying Targeted Demand Response6-2

6.2.1 Day-Ahead Advisory Conditions6-2

6.2.2 In-Day Advisory/Deployment Conditions6-2

6.3 Verification, Billing and Settlement6-2

Table of Figures

Figure 5-1	Metering Configuration	5-2
Figure 5-2	Example of CBL Window Selection - Single Weekday Event	5-4
Figure 5-3	Example of CBL Window Selection – Multiple Weekday Events	5-5
Figure 5-4	Example of CBL Window Selection – Weekend Event.....	5-6

Table of Tables

Table 5.1	Examples of Performance during an EDRP event.....	5-11
-----------	---	------

This page intentionally blank.

Revision History

Version	Date	Revisions
6.2	12/02/2010	<p>Global</p> <ul style="list-style-type: none"> ➤ Updated tariff citations to reflect section renumbering secondary to e-Tariff implementation. ➤ Implemented various ministerial changes. <p>Section 3.2</p> <ul style="list-style-type: none"> ➤ Specified that timing of EDRP Enrollment is per the Demand Response Information System (DRIS) event calendar. <p>Section 5.2.2</p> <ul style="list-style-type: none"> ➤ Clarified means of calculating weekday Average Day CBLs. ➤ Replace screenshots for figures 5-2, 5-3, and 5-4. <p>Section 5.4</p> <ul style="list-style-type: none"> ➤ Clarified means and timing of CSP reporting energy payment data, which will be accomplished in DRIS. <p>Section 5.4.1</p> <ul style="list-style-type: none"> ➤ Clarified receipt requirements for Load reduction data. <p>Section 5.4.2</p> <ul style="list-style-type: none"> ➤ Clarified format of reporting Load reduction data as being that outlined in the <i>NYISO Demand Response Information System User's Guide</i>. <p>Section 5.4.3</p> <ul style="list-style-type: none"> ➤ Clarified calculations and payments for a resource that performs in either the DADRP or DSASP concurrent with an EDRP deployment. <p>Section 5.6</p> <ul style="list-style-type: none"> ➤ Removed in total, including Figure 5-5, Timeline for Settlement.
6.1	05/05/2010	<p>Global</p> <ul style="list-style-type: none"> ➤ 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 <i>enroll</i> instead of <i>register</i> and <i>deploy</i> instead of <i>activate</i>. ➤ Removed references to Attachments A, B, C, and D. <p>Section 1</p> <ul style="list-style-type: none"> ➤ Revised definition titles to match Market Services Tariff. <p>Section 2</p> <ul style="list-style-type: none"> ➤ Separated classifications of CSPs and eligibility for resource participation. ➤ Removed NYISO verification of restrictions for participation. <p>Section 3</p> <ul style="list-style-type: none"> ➤ Clarified CSP enrollment procedures. ➤ Clarified Demand Resource enrollment procedures, which will be accomplished in DRIS.

		<p>Section 4</p> <ul style="list-style-type: none"> ➤ Referenced Emergency Operations Manual for conditions indicating deployment. ➤ Clarified notification procedures. <p>Section 5</p> <ul style="list-style-type: none"> ➤ 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.
<p>6.0</p>	<p>07/20/2008</p>	<p>Global</p> <ul style="list-style-type: none"> ➤ Reformatted per new template to standardize presentation ➤ Corrected figure and table cross-references. ➤ Updated NYISO Website references <p>Front Matter</p> <ul style="list-style-type: none"> ➤ Removed What's New page. <p>Revision History Table</p> <ul style="list-style-type: none"> ➤ Changed column headings as follows: <ul style="list-style-type: none"> • "Revision" changed to "Version" • "Changes" changed to "Revisions" ➤ Standardized date format to mm/dd/yyyy. <p>Section 1</p> <ul style="list-style-type: none"> ➤ Revised definitions to align with Market Services Tariff definitions. Included reference to Market Services Tariff, where applicable. <p>Section 2</p> <ul style="list-style-type: none"> ➤ Removed Program Summary. <p>Section 3.1</p> <ul style="list-style-type: none"> ➤ NEW 2.1: Removed effective period of the program; program is permanent. <p>Section 3.3</p> <ul style="list-style-type: none"> ➤ 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. <p>Section 3.7</p> <ul style="list-style-type: none"> ➤ NEW 2.7: Added statement restricting resources included in small customer aggregations to one NYISO reliability program. Other minor wording changes. <p>Section 4.1</p> <ul style="list-style-type: none"> ➤ NEW 3.1: Removed automatic registration after 30 days – NYISO will notify the LSE of approved registration. Also added annual re-registration each spring. <p>Section 4.2</p> <ul style="list-style-type: none"> ➤ 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.

		<p>Section 4.3</p> <ul style="list-style-type: none">➤ 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. <p>Section 4.4</p> <ul style="list-style-type: none">➤ 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. <p>Sections 4.3 and 4.4</p> <ul style="list-style-type: none">➤ Modified Notification Procedures to update messages. <p>Section 5.2.1</p> <ul style="list-style-type: none">➤ NEW 4.2.1: Revised program limitation language and removed references to NYSERDA’s reimbursement of expenses. <p>Section 5.2.2</p> <ul style="list-style-type: none">➤ Removed references to NYSERDA’s reimbursement of expenses.➤ NEW 4.4: Added new sub-section titled “Notification Message Examples” <p>Section 5.2.3</p> <ul style="list-style-type: none">➤ Reformatted tables in Example Customer Baseline Calculation. <p>Section 5.4</p> <ul style="list-style-type: none">➤ 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. <p>Section 6.1</p> <ul style="list-style-type: none">➤ NEW 5.1: Added sentence: “Transmission Owner or MDSP certification is required to read the revenue grade meter on load.” <p>Section 6.1.2</p> <ul style="list-style-type: none">➤ NEW 5.1.2: Added descriptions of identifiers in Metering Configuration diagrams <p>Section 6.2</p> <ul style="list-style-type: none">➤ NEW 5.2: CBL Section completely revised to make it easier to follow, including better examples: Single weekday event, Multiple weekday events, Weekend event. <p>Section 6.3.1</p> <ul style="list-style-type: none">➤ NEW 5.3.1: “load” changed to “load reduction” in several places. <p>Section 6.4.3</p> <ul style="list-style-type: none">➤ Removed section titled: Demand Side Resource Reduction Data. Specified requirements for billing data for entire bill period surrounding an event. <p>Section 6.4.4</p> <ul style="list-style-type: none">➤ 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. <p>Section 6.4.5</p> <ul style="list-style-type: none">➤ NEW 5.4.4: Revised statement to align with tariff language (Attachment G, article 10). <p>Section 6.5.1</p> <ul style="list-style-type: none">➤ NEW 5.5.1: Changes to wording of subsection: Objectives of Cost Allocation.
--	--	--

		<p>Section 6.5.2</p> <ul style="list-style-type: none"> ➤ NEW 5.5.2: Changes to wording of subsection: Causes for EDRP Being Invoked – now references section 4.4 of NYISO Emergency Operations manual. <p>Section 6.5.3</p> <ul style="list-style-type: none"> ➤ NEW 5.5.3: Reworded reference to previous section and removed last line of table 6.5.3 regarding an external control condition. <p>Section 6.6</p> <ul style="list-style-type: none"> ➤ NEW 5.6: Redrawing and relabeling of Timeline for Settlement. <p>Section 7</p> <ul style="list-style-type: none"> ➤ NEW 6: Added Targeted Demand Response Program information from Technical Bulletin 164. <p>Attachments</p> <ul style="list-style-type: none"> ➤ Removed registration form attachments and file format attachments, which are available on Demand Response page of NYISO Website (http://www.nyiso.com/public/products/demand_response/edrp.jsp).
5.0	04/02/2004	<p>Section 3.3 (2)</p> <ul style="list-style-type: none"> ➤ Footnote removes host load size restriction on DG resources. <p>Section 3.5</p> <ul style="list-style-type: none"> ➤ Removed host load size restriction on DG resources. <p>Section 4.1.3</p> <ul style="list-style-type: none"> ➤ Remove 2-day notification requirement for LSE. <p>Section 4.1.4</p> <ul style="list-style-type: none"> ➤ Change deemed approved time limit from 14 to 30 days. <p>Section 4.3.5</p> <ul style="list-style-type: none"> ➤ Remove 2-day notification requirement for LSE. <p>Section 4.3.6</p> <ul style="list-style-type: none"> ➤ Change deemed approved time limit from 14 to 30 days. <p>Section 4.4.5</p> <ul style="list-style-type: none"> ➤ Remove 2-day notification requirement for LSE. <p>Section 4.4.6</p> <ul style="list-style-type: none"> ➤ Change deemed approved time limit from 14 to 30 days. <p>Section 5.2.1</p> <ul style="list-style-type: none"> ➤ Clarify that CSP, not NYISO, is responsible for 200 hour per year DG operating limit. Remove requirement that DG units submit permits to NYISO.
4.0	04/29/2003	<p>Section 2.0</p> <ul style="list-style-type: none"> ➤ Removed 25 MW cap on small customer aggregation program <p>Section 4.3 (#2), 4.4 (#2)</p> <ul style="list-style-type: none"> ➤ Revise to say that these sections of the Registration Packet should be completed: A, B, G, H, I, L, N and O. <p>Section 5.2.1</p> <ul style="list-style-type: none"> ➤ 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. <p>Section 5.2.2</p> <ul style="list-style-type: none"> ➤ Clarifies NYSERDA's rules for program expense reimbursement.

		<p>Section 6.1</p> <ul style="list-style-type: none"> ➤ Clarifies meter installation and reading language. <p>Section 6.1.1</p> <ul style="list-style-type: none"> ➤ Clarifies that meter certification data is required only for non-revenue grade meters. <p>Section 6.2.1</p> <ul style="list-style-type: none"> ➤ Notes that the CSP is responsible for CBL calculation. <p>Section 6.6.4</p> <ul style="list-style-type: none"> ➤ Clarifies that the NYISO provides hourly payment information by customer to CSPs separate from the consolidated invoice.
3.0	02/28/2003	<p>Section 2.0</p> <ul style="list-style-type: none"> ➤ Removed 25 MW cap on small customer aggregation program. <p>Section 5.2.1</p> <ul style="list-style-type: none"> ➤ 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. <p>Section 5.2.2</p> <ul style="list-style-type: none"> ➤ Clarifies NYSERDA's rules for program expense reimbursement. <p>Section 6.1</p> <ul style="list-style-type: none"> ➤ Clarifies meter installation and reading language. <p>Section 6.1.1</p> <ul style="list-style-type: none"> ➤ Clarifies that meter certification data is required only for non-revenue grade meters. <p>Section 6.2.1</p> <ul style="list-style-type: none"> ➤ Notes that the CSP is responsible for CBL calculation. <p>Section 6.6.4</p> <ul style="list-style-type: none"> ➤ Clarifies that the NYISO provides hourly payment information by customer to CSPs separate from the consolidated invoice.
2.0	03/20/2002	<p>Section 3.8</p> <ul style="list-style-type: none"> ➤ Alternative Performance Measures for Small Customer Aggregations can be submitted for approval to the NYISO. <p>Section 3.9</p> <ul style="list-style-type: none"> ➤ Curtailment Service Providers must participate in NYISO sponsored EDRP program evaluations. <p>Section 5.2</p> <ul style="list-style-type: none"> ➤ 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. <p>Section 5.3</p> <ul style="list-style-type: none"> ➤ Updated EDRP Notification Procedures to reflect the procedures put in place during the summer 2001. <p>Section 6.1</p> <ul style="list-style-type: none"> ➤ Updated Metering Requirements. <p>Section 6.2.1.1</p> <ul style="list-style-type: none"> ➤ Alternative weather-sensitive Customer Base Line (CBL) options. <p>Section 6.7</p> <ul style="list-style-type: none"> ➤ Updated Settlement Payment timeline.

NYISO EMERGENCY DEMAND RESPONSE PROGRAM MANUAL
DRAFT - For Discussion Purposes Only

		Att. A, B Att. D ➤ Added .csv event data reporting format description.
1.0	07/11/2001	Initial Release

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 http://www.nyiso.com/public/markets_operations/documents/tariffs/index.jsp), as follows:

Section 2.3: Definitions – C

- Capability Period
- Curtailed Customer Aggregator
- Curtailed Services Provider (CSP)

Section 2.4: Definitions – D

- Day-Ahead LBMP
- 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 Serving Entity (LSE)
- Load Zone
- Local Generator
- Locational Based Marginal Price (LBMP)

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 Local Generation under the EDRP.

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

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.

Emergency Generation – An electrical generator installed to handle emergency outages at a facility for short periods of time.

In-Day Peak Hour Forecast – Forecasted morning and evening peak loads as determined by the NYISO Shift Supervisor or assignee, 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 Bank – An electric resistance coil or similar device that creates an electric load which is used for testing generators under load.

Load Curtailment (or 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 an on-site generator.

Meter Service Provider (MSP) – An entity that provides meter services, consisting of the installation, maintenance, testing, and removal of meters and related equipment.

Meter Data Service Provider (MDSP) – An entity providing meter data services, consisting of meter reading, meter data translation and customer association, validation, editing, and estimation.

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.

NYS DEC – New York State Department of Environmental Conservation

Operating Reserve Shortage – Failure to maintain the Minimum Operating Reserve Requirement as defined in the *NYISO Emergency Operations Manual* (available from http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp by activating the **Operations** option in the navigation pane and choosing the **Emergency Operations** link in the display pane).

Remote Metering – Metering equipment that allows for remote collection of metering data.

2. ELIGIBILITY CRITERIA / PARTICIPANT 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) when called upon 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.

2.2 Minimum Qualifications for CSPs

To serve as a CSP, you 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 completely disconnect from the local distribution system and supply required load via local generators¹ or to reduce a measurable and verifiable portion of the load.
3. Be capable of reducing at least 100 kW of load per zone.

¹ These generators can be either non-synchronized to the grid or synchronized to the grid.

4. Be capable of responding within two hours of notice from the NYISO.
5. Follow the enrollment procedures defined in Section 3 of this manual.
6. 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 ICAP SCR program, but not both. Special Case Resources (SCRs) that have enrolled with the NYISO but have not sold their capacity will be added to the list of EDRP participants for that period of time when their capacity is unsold, and will be called with EDRP participants 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 base-loaded do not qualify for the EDRP.

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

2.4 Requirements for Curtailment Customers with Local Generation

Owners of on-site and emergency generators including, but not limited to, hospitals, data centers, office buildings, warehouses, and industrial locations are eligible to participate in the EDRP. Local Generation will serve all or part of what otherwise would be NYISO load (i.e., the retail end user's specific load delivered from their LSE), thereby reducing the total NYISO load during declared emergencies. The requirements for participation are as follow:

1. Be capable of responding within 2 hours of a request to reduce load.
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).
4. Demand Side Resources that will use on-site generators to reduce load and that have Load Banks for testing purposes must ensure that the Load Bank is not operating during the hours required by the EDRP.

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

2.5 Compatibility with ICAP 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 Resources (SCR) within the Installed Capacity (ICAP) market that pays for capacity and energy. SCR is available to generators and load reduction providers that meet testing, metering and other 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 their capacity will be added to the list of EDRP participants for that period of time when their capacity is unsold and will be called with EDRP participants if an EDRP event is deployed. For more details on SCR, see the ICAP Manual, available from http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp by activating the **Operations** option in the navigation pane and choosing the **Installed Capacity Manual** link in the display pane.

2.6 Compatibility with LSE-Sponsored Curtailment Programs

There are curtailment programs in New York State both currently in place and under development that are designed to help the local utility with distribution load management. Each program is aimed at enhancing the reliability of the local electric system during times of high usage or outages.

Demand Side Resources may participate in both the EDRP and the Day-Ahead Demand Reduction 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 as follows:

1. If the Demand Side Resource has not had a demand reduction bid accepted in the Day-Ahead Market for the day of the EDRP event, demand reduction provided as a result of the EDRP event call will be paid in accordance with the rules set forth in this manual.
2. If the Demand Side Resource is responding to the schedule determined from the bid accepted in the Day-Ahead Market, payments will be made in accordance with the DADRP rules up to the demand reduction scheduled in the Day-Ahead Market. Additional verified demand reduction above that scheduled in the Day-Ahead Market will be paid in accordance with the rules set forth in 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 participants
 - b. The deployment of approved end-use device or process kW metering devices on a sample of participants 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 administering 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 participants, 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

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

This page intentionally blank.

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 generation and load reduction 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 local generation that can reduce at least 100kW in a load zone).

In order to become a CSP, an organization must complete the CSP enrollment form, which can be accessed from the NYISO web site at

http://www.nyiso.com/public/markets_operations/market_data/demand_response/index.jsp by activating the **Emergency Demand Response Program** option in the navigation pane and choosing the **EDRP CSP Enrollment Form** link in the display pane.

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

http://www.nyiso.com/public/markets_operations/services/nyiso_registration/index.jsp.

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 <http://www.nyiso.com>. Resources must be reenrolled each capability period for participation in the EDRP.

This page intentionally blank.

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 http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp by activating the **Operations** option in the navigation pane and choosing the **Emergency Operations** 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 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 emergency generators (“self generation”).

4.2.1 Program Limitations

Program participants informed by state or local rule, regulation, or policy that annual hours of operation for generation facilities they intend to offer as EDRP resources are limited or that they are required to use specified diesel fuel in their emergency generators, for instance ultra-low sulfur fuel, shall limit their hours of generation operation accordingly or use such fuel in deployments in response to a call as well as for testing purposes. Program participants are responsible for ensuring compliance with the operating requirements of their units and will report to the NYISO all instances where these requirements exist.

In addition to the above limitations, program participants informed by state or local rule, regulation, or policy that operation of generation facilities they intend to offer to the EDRP is limited to certain vintages, such as:

- a. Model year 1995 or newer generators; or
- b. Model 1994 and older generators that demonstrate, either by generator-specific manufacturer’s data or through emissions testing, their NO_x emissions do not exceed 35 pounds per megawatt-hour (lb/MWh);

shall comply with such rule, regulation, or policy.

Participants with generation that requires emissions testing shall use emissions testing methods for “test and tune” purposes and should be conducted consistent with industry-established protocols (such as the American Society of Testing and Materials [ASTM] D6522-00) and applicable DEC regulations.

Program participants are responsible for ensuring compliance with the emissions testing requirements for their units.

Participants shall not offer to the EDRP generation units that do not comply with any limitation or requirement established for their respective generation units.

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 listed CSP email addresses.
- Automated phone call to each CSP’s main contact phone number.

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

1. The CSP should assess whether or not he/she has resources that can respond, and the MW level of response by zone.
2. Provide the expected MW response by load zone in accordance with the instructions in the notification.
3. If for some reason the CSP cannot follow the response instructions, he/she should contact NYISO Market Services at 518-356-6060 or edrp-scr@nyiso.com with the information.

If the NYISO does not receive the automated response in a reasonable amount of time, it may call additional CSP cell phone and pager 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: Day-Ahead Advisory, In-Day Advisory, 2-Hour Deployment Notification, Immediate Deployment, Extending an Event, Termination of an Event, or Test.

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 2-Hour Deployment Notification.

4.4 Notification Message Examples

4.4.1 Day-Ahead Advisory

EDRP resources may be needed tomorrow between the hours hh:mm and hh:mm. Zones included in this notification are: A,B,C,D,E,F,G,H,I,J,K. Please reply within one hour indicating:

- If you expect to have resources participating,
- and MWs expected.

Day-ahead notice does not constitute deployment of the EDRP program, and is only meant to be advisory.

4.4.2 Deploying EDRP – 2-Hour Notification

EDRP resources are needed from hh:mm to hh:mm. Zones included in this notification are: A,B,C,D,E,F,G,H,I,J,K

This page intentionally blank.

5. METERING, VERIFICATION, BILLING, AND SETTLEMENT

5.1 Metering Requirements

CSPs must use PSC-certified Meter Service Providers (MSP) or Transmission Owners (TOs) to install, and PSC-certified Meter Data Service Providers (MDSP) to read, revenue-grade interval meters. Installation of any devices directly connected to the revenue meter, such as totalizers, must be performed by PSC-certified MSPs or TOs. Non-revenue-grade meters meeting the 2% accuracy requirement as defined in Section 5.1.1 may be installed by CSPs as long as they are certified by a Professional Engineer as meeting ANSI C12 standards and are periodically tested and calibrated in accordance with the standards applicable to MSPs. Transmission Owner or MDSP certification is required to read the meter on load. CSPs must use a PSC-certified MDSP to read such meters. Acceptable interval metering for Demand Side Resources for load reduction or local generation 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 can 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 $\pm 2\%$ 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 $\pm 2\%$ 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 MSPs and MDSPs.

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 $\pm 2\%$ 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

Premises participating in the EDRP shall subscribe under one of three configurations: Local Generation only, load only, or local generation and load. Integrated hourly metering devices shall be required as follows:

1. When a premises subscribes only Local Generation, either an hourly interval meter shall be installed to measure the generator's output, or interval metering of the total net load shall be used (configuration a or b, below).
2. When a premises subscribes only load reduction, the hourly interval meter shall be installed to meter the entire facility or, in the case of totalized load, an hourly interval meter is required for each participating load (configuration b or c, below).
3. When a premises subscribes both Local Generation and load reduction, metering shall be configured to measure only the load or combined load and generation (configuration a or b, below).

Figure 5-1 illustrates examples of acceptable configurations.

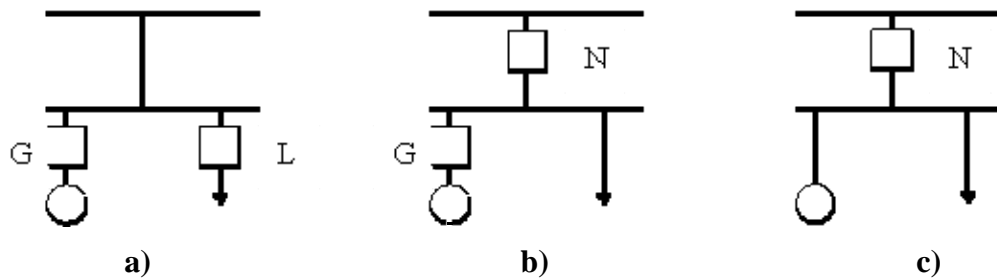


Figure 5-1 Metering Configuration

G = Generator Meter, L = Load Meter, N = Net Meter

5.1.3 Historical Operating Data

Upon request of the NYISO, CSPs shall provide historical operating data for each load or on-site generator upon enrollment for participation in the EDRP. These requirements may be met by:

1. For a resource with Local Generation that is participating in the EDRP, the generator meter ID and MSP ID certifying meter installation;
2. For loads with existing interval meters, a minimum of one complete billing period of hourly interval data immediately preceding the first Capability Period the load will participate in;
3. For totalized loads with existing interval meters, hourly interval data for a minimum of one complete billing period of hourly interval data for all participating loads at the premise;
4. For newly installed load interval meters, provide the prior three months summary of monthly MWh consumption and demand values, if available. If less than three months of data are available, a minimum of one month is required.

5.2 Calculation of Customer Baseline Load (CBL)

5.2.1 Select a CBL method

1. The participant selects the CBL formula when it enrolls, or is enrolled by its LSE or CSP, with the NYISO for program participation. The choice of CBL becomes effective when the NYISO accepts the enrollment.
2. At the initial enrollment in the EDRP participants may elect either the Average Day CBL or the Adjusted CBL formula.
3. A change in the CBL formula can be made when resources reenroll in the EDRP each capability period.

5.2.2 Baseline Calculation Method (Interruptible Load or Both Local Generation and Interruptible Load)

It is the responsibility of the CSP to provide the Customer Baseline Load (CBL) calculation to the NYISO and ensure that calculations are complete and accurate.

I. The Average Day CBL

I.A. Average Day CBLs for Weekdays

I.A.1. Step 1. Establish the CBL Window. Establish a set of days that will serve as representative of participant's typical usage.

I.A.1.a Determine the participant's peak hourly load over the past 30 days or the period covered by the load data file, whichever is lower. This value becomes the initial seed value for the average event period usage level.

I.A.1.b Beginning with the weekday that is two days prior to the event:

I.A.1.b.(1) Eliminate any holidays as specified by the NYISO.

I.A.1.b.(2) Eliminate any days when the NYISO declared an EDRP event for which the participant was eligible for payment for a curtailment.

I.A.1.b.(3) Eliminate any days in which the participant's DADRP curtailment bid was accepted in the DAM, whether or not the participant actually curtailed.

I.A.1.b.(4) Eliminate the day prior to any day when the NYISO declared an EDRP event for which the participant was eligible for payment for a curtailment.

I.A.1.b.(5) Eliminate any day prior to the day in which the participant's DADRP curtailment bid was accepted in the DAM, whether or not the participant actually curtailed.

I.A.1.b.(6) Create the average daily event period usage for that day, defined as the simple average of the participant's actual usage over the hours that define the event for which the CBL is being developed.

- I.A.1.b.(7) Eliminate low usage days. If the average daily event period usage is less than 25% of the average event period usage level, eliminate that day.
- I.A.1.b.(8) If the day has not been eliminated, update the average event period usage level by including the average daily event period usage for this day. If this is the first day added to the CBL Window, replace the average event period usage level (which was the initial seed value) with the average daily event period usage. Add this day to the CBL Window.

I.A.1.c Move back one day and loop to step I.A.1.b.(1).

I.A.1.d Final Weekday CBL Window must contain 10 weekdays days.

Figure 5-2 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 table view shows the dates of the CBL window for the 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 23 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
---------------	----------------	----------------	-----------------------------	---------

* indicates CBL window days that exceed the 30-day limit

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 5-2 Example of CBL Window Selection - Single Weekday Event

Figure 5-3 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.

NYISO EMERGENCY DEMAND RESPONSE PROGRAM MANUAL
DRAFT - For Discussion Purposes Only

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 23 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
---------------	----------------	----------------	--------------------------------	---------

* indicates CBL window days that exceed the 30-day limit

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

Figure 5-3 Example of CBL Window Selection – Multiple Weekday Events

- I.A.2. Step 2.** Establish the CBL Basis. Identify the five days from the 10-day CBL Window to be used to develop CBL values for each hour of the event.
 - I.A.2.a** Order the 10 days in the CBL Window according to their average daily event period usage level, and eliminate the five days with the lowest average daily event period usage.
 - I.A.2.b** The remaining five days constitute the CBL Basis.
- I.A.3. Step 3.** Calculate Average Day CBL values for the event.
 - I.A.3.a** For each hour of the event, the CBL is the average of the usage in that hour in the five days that comprise the CBL basis.

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
---------------	----------------	----------------	-----------------------------	---------

* indicates CBL window days that exceed the 30-day limit

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						

Figure 5-4 Example of CBL Window Selection – Weekend Event

I.B. Average Day CBL for Weekends

I.B.1. Step 1. Establish the CBL Window

I.B.1.a 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.

I.B.2. Step 2. Establish the CBL Basis.

I.B.2.a Calculate the average daily event period usage value for each of the three days in the CBL Window.

I.B.2.b Order the three days according to their average daily event period usage level.

I.B.2.c Eliminate the day with the lowest average value

I.B.2.d The Weekend CBL Basis contains 2 days.

I.B.3. Step 3. Calculate Weekend Average Day CBL values for the event.

I.B.3.a For each hour of the event, the CBL value is average of usage in that hour in the two days that comprise the CBL basis.

II. Elective Weather-Sensitive CBL Formulation

II.A. Step 1. Calculate the Average Day CBL values for each hour of the event period described in (I) above.

II.B. Step 2. Calculate the Event Final Adjustment Factor. This factor is applied to each of the individual hourly values of the Average Day CBL.

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

II.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.

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

II.B.1.c Apply the Average Day CBL formula as described in I The Average Day CBL (page 5-3), 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 ten hours).

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

II.B.2. Calculate the Adjustment Basis Average Usage

II.B.2.a The adjustment basis average usage is the simple average of the participant's usage over the two-hour adjustment period on the event day.

II.B.3. Calculate the gross adjustment factor

II.B.3.a The gross adjustment factor is equal to the Adjustment Basis Average Usage divided by the Adjustment Basis Average CBL

II.B.4. Determine the Final adjustment factor. The final adjustment factor is as follows:

II.B.4.a If the gross adjustment factor is greater than 1.00, then the final adjustment factor is the smaller of the gross adjustment factor or 1.20

II.B.4.b If the gross adjustment factor is less than 1.00, the final adjustment factors are the greater of the gross adjustment factor or .80.

II.B.4.c If the gross adjustment factor is equal to 1.00, the final adjustment factor is equal to the gross adjustment factor.

II.C. Step 3. Calculate the Adjusted CBL values.

II.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 Customer Baseline 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:

NYISO EMERGENCY DEMAND RESPONSE PROGRAM MANUAL
DRAFT - For Discussion Purposes Only

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	7	5	8.33	33	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	9	7	9.30	37	1
CBL DAY 4	4	4	5	6	7	8	6	6	6.75	27	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	8
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 totals:

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	7	5	8.33	33	4
CBL DAY 3	4	5	6	8	9	12	9	7	9.30	37	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	8.6	6.5

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	8.6	6.5
EVENT DAY - Actual Load	2	3	3	4
Load Reduction using Average Day CBL	7.8	7.4	5.6	2.5

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 consumption is as shown in the following table:

<i>Time</i>	<i>HB 8</i>	<i>HB 9</i>	<i>HB 10</i>	<i>HB 11</i>	<i>HB 12</i>	<i>HB 13</i>	<i>HB 14</i>	<i>HB 15</i>	<i>Adjustment Basis Average Usage</i>
<i>EVENT DAY - Actual Load</i>	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.

<i>Adjustment Basis Average Usage</i>	<i>Adjustment Basis Average CBL</i>	<i>Gross Adjustment Factor</i>
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.

<i>Time</i>	<i>HB 12</i>	<i>HB 13</i>	<i>HB 14</i>	<i>HB 15</i>
<i>Weather-Adjusted CBL</i>	10.5	11.1	9.2	7.0
<i>EVENT DAY - Actual Load</i>	2	3	3	4
<i>Load Reduction using Weather-Adjusted CBL</i>	8.5	8.1	6.2	3.0

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 Baseline Calculation Method (Local Generation Only)

For a resource with Local Generation using separate metering, 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 Generation 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. $MWh(k) = \text{sum}(h(i)...h(j))$ 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 and Compliance

5.3.1 Performance

Performance for metering configurations where load reduction is included is measured as the difference between the Customer Baseline and the actual metered usage by hour during the event. The Customer Baseline type used for computing performance shall be the same day-type as the day-type of the EDRP event. For Local Generation, 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 5-1, Metering Configuration.

Load Reduction Only Configuration

For premises subscribing only the load reduction, performance for each hour shall be calculated as:

$$P_h = (CB-xx)_h - AL_h \text{ (Meter configuration Figure 5-1a)}$$

or

$$P_h = (CB-xx)_h - AN_h \text{ (Meter configuration Figure 5-1b or Figure 5-1c)}$$

P_h = performance for the hour

$CB-xx_h$ = 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 meter L in configuration Figure 5-1a

AN_h = actual load for the hour using meter N in configuration Figure 5-1b and Figure 5-1c

Local Generation Only Configuration

For premises subscribing only Local Generation, performance for each hour shall be calculated as:

$$P_h = OG_h - (GCB-xx)_h$$

P_h = performance for the hour

OG_h = Metered On-site generator output for the hour using meter G in either configuration Figure 5-1a or Figure 5-1b

$GCB-xx_h$ = Customer Baseline day-type (weekday – GCB-WD, Saturday – GCB-SA or Sunday GCB-SU) for the hour h as determined for Local Generation described in Section 5.2.4.

Load and Local Generation Configuration

For premises subscribing both the Local Generation and load reduction participating in the same EDRP event, performance for each hour shall be the net of Local Generation and load as defined below:

$$P_h = [OG_h - (GCB-xx)_h] + [(CB-xx)_h - AL_h] \text{ (Meter configuration Figure 5-1a)}$$

or

$$P_h = (CB-xx)_h - AN_h \text{ (Meter configuration Figure 5-1b or Figure 5-1c)}$$

P_h = performance for the hour

- OG_h = Metered On-site generator output for the hour
- GCB-xx_h = Customer Baseline day-type (weekday – GCB-WD, Saturday – GCB-SA or Sunday GCB-SU) for the hour h as determined for Local Generation described in Section 5.2.4.
- CB-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 meter L in configuration Figure 5-1a
- AN_h = actual load for the hour using meter N in configuration Figure 5-1b and Figure 5-1c

5.3.2 Compliance

Initial Compliance

Initial Compliance (IC) is measured as the first event hour in which performance in the hour is greater than zero (actual load is less than baseline).

Final Compliance (Restored Load)

Final Compliance (FC) is measured as the last hour in which performance is greater than zero, or the last hour of the EDRP event, whichever is earlier.

Compliance Period

The Compliance Period includes every hour in the EDRP event in which performance was greater than zero, beginning with the Initial Compliance hour and ending with the Final Compliance hour or the end of the EDRP event, whichever is earlier.

Table 5.1 illustrates examples of Initial Compliance and Final Compliance for an event starting at noon and lasting for five hours.

Table 5.1 Examples of Performance during an EDRP event

			NYISO EDRP Event						
	10 –11 AM	11-12 AM	12 -1 PM	1 -2 PM	2 -3 PM	3 -4 PM	4 -5 PM	5 -6 PM	6 -7 PM
Customer 1									
BL	125	125	125	125	150	150	150	150	125
AL	130	120	110	100	100	125	150	160	140
Performance		5	15	25	50	25	0		
			IC	P	P	FC			
Compliance Period									
Customer 2									
BL	200	200	250	250	250	200	200	200	200
AL	200	200	250	225	200	175	175	175	200
Performance			0	25	50	25	25	25	
				IC	P	P	FC		
Compliance Period									

Customer 3									
BL	300	300	350	350	350	300	300	300	300
AL	300	300	350	325	325	325	275	275	300
Performance			0	25	25	0	25	25	
				IC	P	P	FC		
Compliance Period									
Legend	BL = Baseline		IC = Initial Compliance			P = Performance			
	AL = Actual Load		FC = Final Compliance						

5.4 Settlement Procedures

Load reductions for which all required data are not uploaded by the CSP 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 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 Data Receipt

The NYISO will not accept Load reduction performance data received in any manner other than uploaded in the Demand Response Information System (DRIS) and will not accept Load reduction performance data uploaded after 5:00:00 P.M. on the date that is 75 days after the deployment. The NYISO shall not pay a CSP for claimed Load reductions that are not supported by performance data provided by the CSP in accordance with NYISO Procedures.

The NYISO may subsequently review the data through Market Mitigation and Analysis.

5.4.2 EDRP Reporting and Data Format

Curtailment Services Provider shall upload data directly into the Demand Response Information System (DRIS), adhering to the format specified in the *NYISO Demand Response Information System User's Guide* (available from the NYISO Web site at http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp)

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.

5.4.3 Calculation and Payments

The NYISO shall pay CSPs that cause a verified reduction in demand in response to the deployment of the EDRP program in accordance with Section 22.10 of Attachment G of the *NYISO Services Tariff*. Emergency Demand Response Program resources that are scheduled to perform in either the Day-Ahead Demand Response Program (DADRP) or Demand Side

Ancillary Services Program (DSASP) during an EDRP event will have their EDRP energy payments adjusted to reflect the payments made for performance under the DADRP or DSASP.

5.4.4 Verification, Errors, and Fraud

All load reduction data are subject to audit by the NYISO and its Market Mitigation & Analysis department.

5.5 Assessment of Program Charges to Load

5.5.1 Objectives of Cost Allocation

Payments made to CSPs for EDRP events will be allocated to load in conformance with the provisions of the *NYISO Services Tariff*, Attachment G.

5.5.2 Conditions under Which EDRP Will Be Deployed

EDRP will be deployed as described in the *NYISO Emergency Operations Manual* (available from the NYISO Web site at http://www.nyiso.com/public/markets_operations/documents/manuals_guides/index.jsp by activating the **Operations** option in the navigation pane and choosing the **Emergency Operations** link in the display pane).

5.5.3 Cost Allocation Formula

The cost of EDRP payments will be recovered from all Transmission Customers in accordance with Section XI 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.

This page intentionally blank.

6. TARGETED DEMAND RESPONSE PROGRAM

6.1 Program Overview

The NYISO will deploy the Emergency Demand Response Program (EDRP) in targeted areas within load zone J under certain specific conditions and in response to a request for 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 Targeted Demand Response 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

There will be no changes to the cost allocation methodology for payment of energy reduction achieved by participating EDRP resources under a TDRP deployment.

6.2 Conditions for Deploying Targeted Demand Response

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 Targeted Demand Response Program.

6.2.1 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.

6.2.2 In-Day Advisory/Deployment Conditions

Transmission Owner may request the NYISO to deploy the Targeted Demand Response Program 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.

Lower Voltage Systems (33kV or Below)

- The TDR program 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.