NEW YORK INDEPENDENT SYSTEM OPERATOR

EMERGENCY DEMAND RESPONSE PROGRAM MANUAL

Emergency Demand Response Program Manual

Revision: 6.0

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Committee Approved: _____

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Revision History

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6.0	**7/20/08**	Reinstated use of "Direct Customer" to simplify definitions. Generally accepted term adopted at program inception in 2001. Removed registration form attachments and file format attachments. Available on Demand Response page of NYISO website. Revised language for section 4.2.1 Program Limitations. Modified Notification Procedures (section 4.3 and 4.4) to update messages. Added CBL Window Day selection examples to section 5.2.2: Single weekday event, Multiple weekday events, Weekend event. Reformatted tables in section 5.2.3 Example Customer Baseline Calculation. Corrected figure and table cross-references. Revised timeline for settlement to reflect revised settlement language in section 5.6 Timeline for Settlement. Corrected TOCs for Tables and Figures. EDITS: 5/19/08 MULTIPLE REFERENCES Updated NYISO website references Direct Customer changed to align with the secondary definition of an LSE in the Market Services Tariff: an entity that takes service directly from the ISO to supply its own Load in the NYCA. **Section** **Topic** Removed What's New page. 1 Revised definitions to align with Market Services Tariff definitions. Included reference to Market Services Tariff, where applicable. Removed Direct Customer definition. 2 Program Summary removed. 3.1 NEW 2.1: Effective period of the program removed; program is permanent. 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. 3.7 NEW 2.7: Added statement restricting resources included in small customer aggregations to one NYISO reliability program. Other minor wording changes. 4.1 NEW 3.1: Removed automatic registration after 30 days – NYISO will notify the LSE of approved registration. Also added annual re-

Revision	Date	Changes	
			registration each spring.
		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.
		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.
		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.
		5.2.1	NEW 4.2.1: Revised program limitation language. and removed references to NYSERDA's reimbursement of expenses .
		5.2.2	Removed references to NYSERDA's reimbursement of expenses.
			NEW 4.4: Added new sub-section titled "Notification Message Examples"
		6.1	NEW 5.1: Added sentence: "Transmission Owner or MDSP certification is required to read the revenue grade meter on load.
		6.1.2	NEW 5.1.2: Added descriptions of identifiers in Metering Configuration diagrams
		6.2	NEW 5.2: CBL Section will be completely revised to make it easier to follow, including better examples. Not complete in time for first presentation of manual revisions.
		6.3.1	NEW 5.3.1: "load" changed to "load reduction" in several places.
		6.4.3	Section titled: Demand Side Resource Reduction Data removed. Specified requirements for billing data for entire bill period surrounding an event.
		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.
		6.4.5	NEW 5.4.4: Revised statement to align with tariff language (Attachment G, article 10).
		6.5.1	NEW 5.5.1: Changes to wording of subsection: Objectives of Cost Allocation
		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.
		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.
		6.6	NEW 5.6: Redrawing of Timeline for Settlement
		7	NEW 6: Added Targeted Demand Response Program information from Technical Bulletin 164.
		OTHER NOTATIONS	

Revision	Date	Changes	
		Highlighted text	Internal document references that will change as a result of the manual update. Figures and table numbers may also change as a result of these revisions.
		SECTIONS STILL TO BE EDITED	
			CBL rules and examples –revisions to clarify program rules and improve examples
			Attachments: Registration Forms and End-Use Participation Fomr
5.0	**4/02/04**	**Section**	**Topic**
		3.3 (2)	Footnote removes host load size restriction on DG resources.
		3.5	Removed host load size restriction on DG resources.
		4.1.3	Remove 2-day notification requirement for LSE.
		4.1.4	Change deemed approved time limit from 14 to 30 days
		4.3.5	Remove 2-day notification requirement for LSE.
		4.3.6	Change deemed approved time limit from 14 to 30 days
		4.4.5	Remove 2-day notification requirement for LSE.
		4.4.6	Change deemed approved time limit from 14 to 30 days
		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.
4.0	**4/29/03**	**Section**	**Topic**
		2.0	Removed 25 MW cap on small customer aggregation program
		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.
		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.
		5.2.2	Clarifies NYSERDA's rules for program expense reimbursement.
		6.1	Clarifies meter installation and reading language.
		6.1.1	Clarifies that meter certification data is required only for non-revenue grade meters.
		6.2.1	Notes that the CSP is responsible for CBL calculation.
		6.6.4	Clarifies that the NYISO provides hourly payment information by customer to CSPs separate from the consolidated invoice.
3.0	**2/28/03**	**Section**	**Topic**
		2.0	Removed 25 MW cap on small customer aggregation program
		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.
		5.2.2	Clarifies NYSERDA's rules for program expense reimbursement.
		6.1	Clarifies meter installation and reading language.

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		6.1.1	Clarifies that meter certification data is required only for non-revenue grade meters.
		6.2.1	Notes that the CSP is responsible for CBL calculation.
		6.6.4	Clarifies that the NYISO provides hourly payment information by customer to CSPs separate from the consolidated invoice.
2.0	**3/20/02**	**Section**	**Topic**
		3.8	Alternative Performance Measures for Small Customer Aggregations can be submitted for approval to the NYISO.
		3.9	Curtailment Service Providers must participate in NYISO sponsored EDRP program evaluations.
		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.
		5.3	Updated EDRP Notification Procedures to reflect the procedures put in place during the summer 2001.
		6.1	Updated Metering Requirements
		6.2.1.1	Alternative weather-sensitive Customer Base Line (CBL) options
		6.7	Updated Settlement Payment timeline
		Att. A, B	
		Att. D	Added .csv event data reporting format description.
1.0	**7/11/01**	**Initial Release**	

1. Definitions and Acronyms

1.1. Market Services Tariff Definitions

The reference number following the term identifies the Market Services Tariff:

Capability Period: MST 2.17

Curtailment Customer Aggregator (or Aggregator): MST 2.33a

Curtailment Services Provider (CSP): MST 2.33b

Day-Ahead Zonal LBMP: MST 2.36

Demand Side Resources: MST 2.39

EDRP: MST 2.47a

Emergency State: MST 2.48

Installed Capacity (ICAP): MST 2.74

Load Serving Entity (LSE): MST 2.91

Load Zone: MST 2.93

Local Generator: MST 2.94a

Locational Based Marginal Price (LBMP): MST 2.97

New York Control Area (NYCA): MST 2.110

NYISO Customer: MST 2.34

NYISO Limited Customer: MST 2.88b

Real-Time Zonal LBMP: MST 2.154

Special Case Resource MST 2.172c

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 6, used to determine the level of load curtailment provided.

Direct Customer – An entity, which 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 ISO to supply its own load in the NYCA.

EDRP Loads – Retail end-users that provide load reduction and have been registered 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 his assignee, used to evaluate total operating capacity.

Interval Meter – An approved metering device, which 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 ISO 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 **Section 4.4 of the NYISO Emergency Operations Manual**.

Remote Metering - Metering equipment, which 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 Market 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.
- Demand Side Resources participating in the ISO Energy Market or the Ancillary Services Market may also participate in EDRP.
- An individual retail customer taking service as an LSE and registered to take service directly from the ISO to supply its own Load in the NYCA as defined in the Market 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 Customer's (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 are imposed 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.

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 registered as LSEs that take service directly from the ISO to supply their own Load in the NYCA) or a NYISO Limited Customer (in the case of Aggregators and EUCs) of the NYISO 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 generators[1] or to reduce a measurable and verifiable portion of the load.

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

3. Be capable of reducing at least 100 kW of load per Zone.
4. Be capable of responding within two hours of notice from the NYISO.
5. Follow the registration procedures defined in Section 4 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 registered 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 activated.

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. The NYISO will consult with the appropriate LSE and Electric Distribution Company to verify that the load to be reduced is not under any other specific contractual obligation that would prevent participation in the EDRP.

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 follows:

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 into 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 also may be penalties imposed for non performance by other programs in which the SCR resource is simultaneously enrolled. In the event that the NYISO activates SCR to reduce their consumption of energy in accordance with the criteria set forth in Section 5, the NYISO may activate the EDRP. SCRs that have registered 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 activated. See the ICAP Manual located at http://www.nyiso.com/public/products/demand_response/scr_icap.jsp for more details on SCR.

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 time of high usage or outages. The EDRP is designed to be compatible with these programs.

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 only registered 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 ISO for developing and administrating the alternative methodology. The ISO may, at its discretion, require that some or all of such cost 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 it obligation under the aggregation agreement. Customers belonging to such 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. CSP Registration Procedures

To qualify as a Curtailment Service Provider (CSP) you must be an LSE serving retail load, an individual customer taking service from an LSE and registered to take service directly from the ISO to supply its own Load in the NYCA, Curtailment Customer Aggregator or a Curtailment Program End Use Customer. The registration form is posted on the NYISO web site (www.nyiso.com) and included in Attachment A to this manual. The general requirements for each CSP class are as follows:

3.1. Load Serving Entities (LSE) serving Retail Load

For LSE's enrolling a retail end user whose load is served by the LSE:

1. Complete Attachment A of this manual. An electronic version of Attachment A is available on the NYISO website at: http://www.nyiso.com/public/products/demand_response/edrp.jsp

2. Register each Demand Side Resource with the NYISO after signing a contract using the EDRP Certification form provided in Attachment B of this manual. Any information on the identity of a Demand Side Resource that is provided to the NYISO will be treated as confidential, provided however it will be shared with the local Transmission Owner if needed for reliability or planning purposes. All sections of Attachment B must be complete for registration in the program. An electronic version of Attachment B is available on the NYISO website at: http://www.nyiso.com/public/products/demand_response/edrp.jsp

3. By submitting Attachment B (the EDRP Certification Form), the LSE confirms that the load to be reduced is not under any specific contractual obligation that would prevent participation in the EDRP.

4. The EDRP participant registration is approved when the NYISO contacts the LSE to notify them of approval of the resource in the EDRP and a customer ID is provided.

5. Annual Re-registration. Each spring, prior to the Summer Capability Period, the NYISO will provide each LSE with a list of active resources with specific registration information. The LSE will confirm which resources will remain active in the program by May 1.

For LSEs that are enrolling a retail end user whose load is served by a different LSE:

1. Complete Attachment A of this manual. An electronic version of Attachment A is available on the NYISO website at: http://www.nyiso.com/public/products/demand_response/edrp.jsp

2. Register each Demand Side Resource with the NYISO after signing a contract using the EDRP Certification form provided in Attachment B of this manual. Any information

on the identity of a Demand Side Resource that is provided to the NYISO will be treated as confidential, provided however it will be shared with the local Transmission Owner if needed for reliability or planning purposes. All sections of Attachment B must be complete for registration in the program. An electronic version of Attachment B is available on the NYISO website at: http://www.nyiso.com/public/products/demand_response/edrp.jsp

3. After receipt of Attachment B, (the EDRP Certification Form), the NYISO will forward the registration to the appropriate LSE and Electric Distribution Company to confirm that the load to be reduced is not under any specific contractual obligation that would prevent participation in the EDRP.

The EDRP participant registration is approved when the NYISO contacts the LSE to notify them of approval of the resource in the EDRP. The application process can take up to 30 days.

4.

5. Annual Re-registration. Each spring, prior to the Summer Capability Period, the NYISO will provide each LSE with a list of active resources with specific registration information. The LSE will confirm which resources will remain active in the program by May 1.

3.2. An individual load taking service from an LSE and registered to take service directly from the ISO to supply its own Load in the NYCA

1. An individual load taking service from an LSE and registered to take service directly from the ISO to supply its own Load in the NYCA should fill out Attachment A and Attachment B. Any information on the identity of a Demand Side Resource that is provided to the NYISO will be treated as confidential, provided however it will be shared with the local Transmission Owner if needed for reliability or planning purposes. Electronic versions of Attachment A and Attachment B are available on the NYISO website at: http://www.nyiso.com/public/products/demand_response/edrp.jsp

2. All sections of Attachment B must be complete for registration in the program.

3. The EDRP participant registration is approved when the NYISO contacts the individual load taking service from an LSE to notify them of the approval of the resource in the EDRP. The application process may take up to 30 days.

4. Annual Re-registration. Each spring, prior to the Summer Capability Period, the NYISO will request confirmation from the individual load taking service from an LSE as to the status of their participation in EDRP. To remain an active resource, the individual load taking service from an LSE will be asked to confirm its participation in the program by May 1.

3.3. Curtailment Customer Aggregators

Curtailment Customer Aggregators are NYISO Limited Customers that work with owners of generation and load reduction to make it easier to participate in the NYISO Emergency Demand Response program. To register as a Curtailment Customer Aggregator, you must become at least a NYISO Limited Customer. If you are applying for NYISO Limited Customer status as a Curtailment Customer Aggregator and will only be a seller to the NYISO:

1. Complete Attachment A of this manual. An electronic version of Attachment A is available on the NYISO website at: http://www.nyiso.com/public/products/demand_response/edrp.jsp

2. Complete Sections A, B, F, G, H, J and K of the NYISO Registration Packet, available at the NYISO website at: http://www.nyiso.com/public/services/nyiso_registration/index.jsp

3. Sign the Market Services Tariff as a NYISO Limited Customer.

   - Register each Demand Side Resource with the NYISO after signing a contract using the EDRP Certification form provided in Attachment B of this manual. Any information on the identity of a Demand Side Resource that is provided to the NYISO will be treated as confidential, provided however it will be shared with the local Transmission Owner if needed for reliability or planning purposes. All sections of Attachment B must be complete for registration in the program. An electronic version of Attachment B is available on the NYISO website at:http://www.nyiso.com/public/products/demand_response/edrp.jsp

4. After receipt of Attachment B (the EDRP Certification Form), the NYISO will forward the registration to the appropriate LSE and Electric Distribution Company to confirm that the load to be reduced is not under any specific contractual obligation that would prevent participation in the EDRP.

6. The EDRP participant registration is approved when the NYISO contacts the Curtailment Customer Aggregator to notify it of approval of the resource in EDRP. The application process can take up to 30 days.

7. Annual Re-registration. Each spring, prior to the Summer Capability Period, the NYISO will provide each Curtailment Customer Aggregator with a list of active resources with specific registration information. The Curtailment Customer Aggregator will confirm which resources will remain active in the program by May 1.

3.4. Curtailment Program End Use Customer (EUC)

An EUC is any Local Generation owner or retail end user capable of interrupting load that can reduce at least 100kW in a load zone and wants to participate in the EDRP directly with the NYISO as a Limited Customer of the NYISO.

An EUC shall:

1. Complete Attachment A of this manual. An electronic version of Attachment A is available on the NYISO website at: http://www.nyiso.com/public/products/demand_response/edrp.jsp

2. Complete Sections A, B, F, G, H, J and K of the NYISO Registration Packet, available at the NYISO website, available at the NYISO website at: http://www.nyiso.com/public/services/nyiso_registration/index.jsp

3. Sign the Market Services Tariff as a Limited Customer.

4. Register each Demand Side Resource with the NYISO after signing a contract using the EDRP Certification form provided in Attachment B of this manual. All sections of Attachment B must be complete in order to register in the program. An electronic version of Attachment B is available on the NYISO website at: http://www.nyiso.com/public/products/demand_response/edrp.jsp

5. After receipt of Attachment B (the EDRP Certification Form), the NYISO will forward the registration to the appropriate LSE and Electric Distribution Company to confirm that the load to be reduced is not under any specific contractual obligation that would prevent participation in the EDRP.

6. The EDRP participant registration is approved when the NYISO contacts the End Use Customer to notify it of approval of the resource in EDRP. The application process can take up to 30 days.

7. Annual Re-registration. Each spring, prior to the Summer Capability Period, the NYISO will contact each End Use Customer to confirm participation in the upcoming season. The End Use Customer will confirm its participation or notify the NYISO that they will no longer participate by May 1.

4. Operating Mechanism / Implementation

4.1. When Will the Program be Called?

The NYISO will invoke 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 Section 4.4 of the NYISO Emergency Operations Manual, or in response to the Major Emergency state as defined in Section 4.4 of the NYISO Emergency Operations Manual. 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 calling upon EDRP resources to relieve system or zonal emergencies. The EDRP may be called in conjunction with Special Case Resources.

The NYISO will declare an Alert State, or Major Emergency for real-time shortage of Operating Reserve, and activate all available in-state generating resources to re-establish the Operating Reserve if required levels of real-time Operating Reserves cannot otherwise be re-established. The NYISO will utilize the EDRP to re-establish real-time Operating Reserves.

4.2. NYISO Protocol for Local Generator Participation

This section describes the circumstances under which 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 activations 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 NOx 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 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 activates 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 NYISO notification. This section describes the contact procedures and actions that will be requested of CSPs.

The time frame for advisory and activation 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 always 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. Click on the web link within the notification email that was sent. This will provide a response page. Once the available MW by load zone information is entered and submitted, it will automatically be tallied at the NYISO with other CSP responses.

3. If for some reason this link is unavailable, the CSP 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 will 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 activated 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 Notification Activation, Immediate Activation, 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 Activation:

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 activation of the EDRP program, and is only meant to be advisory.

4.4.2. Activating 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

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 ±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 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 so as 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

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.

2. When a premises subscribes only load reduction, the hourly interval meter shall be installed to meter the entire facility or for totalized load, an hourly interval meter is required for each participating load.

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.

Figure 5-1 illustrates examples of acceptable configurations.

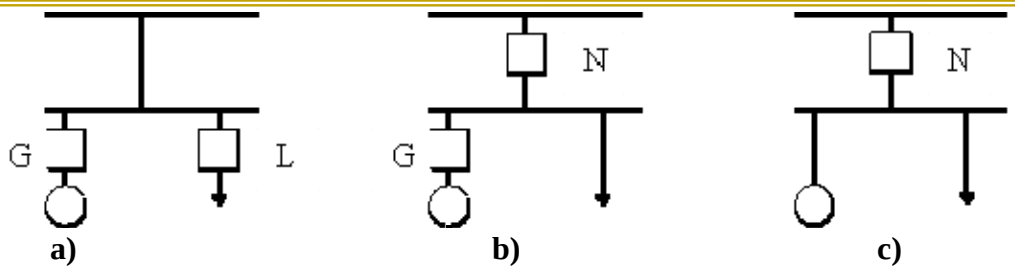


Figure 5-1. Metering Configuration
Where: G = Generator Meter, L = Load Meter, N = Net Meter

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 registration for participation in the EDRP. These requirements may be met by:

1. For Local Generation that is participating in the EDRP, the generator meter ID and MSP ID certifying meter installation on the End-Use registration form in Attachment B;

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)

The Customer Baseline Load

5.2.1. Select a CBL method

1. The participant selects the CBL formula when it registers, or is registered by its LSE or CSP, with the NYISO for program participation. The choice of CBL becomes effective when the NYISO accepts the registration.

2. At the initial registration to the PRL program, participants may elect either the Average Day CBL or the Adjusted CBL formula.

3. At the time that the new Adjustable CBL formulation becomes effective, registered participants in the PRL program may apply to change to the adjusted formula CBL method beginning thirty (30) days after such notification or to become effective May 1, 2002.
4. Participants may switch CBL methods by making application to the NYISO. For such a change applicable to the summer capability period (May 1 – October 31), the application must be submitted to NYISO by April 1. For a change applicable to the winter capability period (November 1 – April 30), the application must be submitted to NYISO by October.
5. The change in the CBL formula becomes effective at the beginning of the next capability period after the NYISO accepts the application.

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 Base Load (CBL) calculation to the NYISO and ensure that calculations are complete and accurate.

I. The Average Day CBL

A. Average Day CBLs for Weekdays

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

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 smaller. This value becomes the initial seed value for the average event period usage level.

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

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

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

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.

A.1.b.4 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.

A.1.b.5 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.

A.1.b.6 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.

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

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

Figure 5-2: Example of CBL Window Selection - Single Weekend 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 EVENT)	JUL 9 SCR/EDRP EVENT	JUL 10	JUL 11	JUL 12

KEY:	NON-EVENT DAY	SCR/EDRP EVENT	DADRP SCHEDULE	INELIGIBLE DAY (DAY BEFORE EVENT)	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 5-3. 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 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 EVENT)	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 EVENT)	JUL 10 SCR/EDRP EVENT	JUL 11 DADRP SCHEDULE	JUL 12

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

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.

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.

A.2.b The remaining five days constitute the CBL Basis.

Step 3. Calculate Average Day CBL values for the event.

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.

B. Average Day CBL for Weekends

Step 1. Establish the CBL Window

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.

Figure 5-4: 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 EVENT)	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***						

Step 2. Establish the CBL Basis.

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

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

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

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

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

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

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

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

A. Calculate the Adjustment Basis Average CBL

2.A.1 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.

2.A.2 Calculate the Adjustment Basis Average CBL.

2.A.2.a Apply the Average Day CBL formula as described in I. Average Day CBL (page 2), 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).

2.A.2.b Calculate the average of the two usage values derived in 2.A.2.a, which is the Adjustment Basis Average CBL.

B. Calculate the Adjustment Basis Average Usage

2.B.1 The adjustment basis average usage is the simple average of the participant's usage over the two-hour adjustment period on the event day.

C. Calculate the gross adjustment factor

2.C.1 The gross adjustment factor is equal to the Adjustment Basis Average Usage divided by the Adjustment Basis Average CBL

D. Determine the Final adjustment factor. The final adjustment factor is as follows:

2.D.1 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

2.D.2 If the gross adjustment factor is less than 1.00, the final adjustment factors are the greater of the gross adjustment factor or .80.

2.D.3 If the gross adjustment factor is equal to 1.00, the final adjustment factor is equal to the gross adjustment factor.

Step 3. Calculate the Adjusted CBL values.

A. 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:

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 in the right-hand column above would be the non-weather –adjusted value. If this customer was 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:

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 1.07 – the following table shows the resulting new 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	9.2	7.0
EVENT DAY - Actual Load	2	3	3	4
Load Reduction using Weather-Adjusted CBL	**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 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) = 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:

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

or

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

Where 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

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:

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

Where P_h = performance for the hour

OG_h = Metered On-site generator output for the hour using meter G in either configuration 6.1a or 6.1b

$GCB\text{-}xx_h$ = Customer Baseline day-type (weekday – GCB-WD, Saturday – GCB-SA or Sunday GCB-SU) for the hour h as determined for Local Generation described in Section 6.2.3.

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:

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

or

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

Where P_h = performance for the hour

OG_h = Metered On-site 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 Generation described in Section 6.2.3.

$CB\text{-}xx_h$ = 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 6.2.2

AL_h = actual load for the hour using meter L in configuration 6.1a

AN_h = actual load for the hour using meter N in configuration 6.1b and 6.1c

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 - 11AM	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

CSPs shall provide verification of load reduced within 45 days of the emergency by providing interval billing meter data to the NYISO. Verification of load reduction not received by the NYISO within 45 days of the emergency shall not be compensated pursuant to this program. All load reduction is subject to NYISO audit, and market monitoring unit review. The NYISO will be responsible for calculating settlement payment.

5.4.1. Data Submission

A CSP shall submit the response(s) of the Demand Side Resource(s) that participated in the emergency event to the NYISO within 45 days of the event being called. However, the ISO

will not accept event data beyond 75 days after the event and shall not pay a CSP for claimed demand reductions, the supporting data for which the CSP has failed to provide to the NYISO, pursuant to ISO Procedures within 75 days of the event.

. The ISO may subsequently review the data through the Market Monitoring Unit.

5.4.2. EDRP Reporting

The Event Participation Report (found in Attachment C) or the equivalent .csv file format described in Attachment D shall be required for reporting performance in an EDRP event. Either version shall be completed for each load or Local Generation resource participating in a CSP's EDRP program within 45 days of the event and no later than 75 days after the event.

5.4.3. Data Format

CSPs should submit one file per day containing meter and CBL data for all participants.

Individual end-use or Local Generation hourly interval load data for the billing period in which an EDRP event occurred shall be submitted in electronic form to the NYISO in one of the following formats:

a) Excel spreadsheet format (Event Participation Summary Report) as described in Attachment C. A template can be found on the NYISO website at: http://www.nyiso.com/public/products/demand_response/edrp.jsp

b) Comma-Separated Variable format as described in Attachment D. A template can be found on the NYISO website at: http://www.nyiso.com/public/products/demand_response/edrp.jsp

Electronic data files may be submitted via one of the following methods:

a) e-mail to: edrp-scr@nyiso.com;

b) CD-ROM or other electronic medium mailed to:

EDRP Coordinator
New York Independent System Operator
Auxiliary Market Operations
3890 Carman Road
Schenectady, NY 12303

5.4.4. Calculation and Payments

The ISO shall pay Curtailment Service Providers that cause a verified reduction in demand in response to the activation of the Emergency Demand Response Program. If the ISO activates the Emergency Demand Response Program, it shall pay Curtailment Service Providers for four hours of such demand reduction or for the period of time that the Emergency Demand Response program is activated, whichever is greater.

Payment to a CSP for an EDRP event will not be made unless the CSP has submitted all required data in the ISO-specified format within the timeframe established in this EDRP manual.

For resources subscribing load reduction only or resources subscribing a combination of load reduction (see Figure 5-1a) and Local Generation resources with a metering configuration such that the meter measures the net of load and local generation (see Figure 5-1b or Figure 5-1c) whose MW performance in any hour is at or below the peak load consumption of the resource, the NYISO will calculate the payment to CSPs using the following formula:

If the Emergency is four hours or longer:

P_h * max($500, LBMP $_{RT\ Zonal,\ h}$) for each hour *h* of the emergency

If the Emergency is less than four hours:

P_h * max($500, LBMP $_{RT\ Zonal,\ h}$) for each of the first two hours *h* of the emergency, or for the duration of the emergency, whichever is greater (a minimum two-hour payment for performance)

+

P_h * LBMP $_{RT\ Zonal,\ h}$ for the remainder of the four-hour period.

P_h = performance during hour *h* as defined in Section 5.3.1
LBMP $_{RT\ Zonal,\ h}$ = Real-time zonal LBMP for hour *h*

For Local Generation Resources, using separate metering, whose MW performance in any hour exceeds the calculated baseline of that resource, the NYISO will pay the resource for that portion of the energy reduction (G_h) as follows:

G_h * LBMP $_{RT\ Zonal,\ h}$

Where G*h* is the performance of the Local Generation Resource in excess of the hourly peak load consumption.

NYISO Operators will specify a start time and end time for the curtailment event. The start time may be immediate. This information will be provided at least two hours prior to the start time. Demand Side Resources are expected to begin curtailment at the specified start time. Participants who respond to a notice will be paid for performance in accordance with the above formulas for either the length of the curtailment period or four hours, whichever is greater. The four-hour minimum payment period will be identified by the NYISO or, if load reduction is requested as soon as possible, when the retail end user begins his load reduction response.

Payments will be made by the NYISO directly to the CSPs.

Payments will be made by the ISO as part of the ISO's monthly settlement process. The invoice entry will be labeled as Demand Response Statement on the Consolidated Invoice. A separate breakout of payment by hour by resource will also be provided outside the settlement and invoice process. These payments will be made to the CSPs for all emergencies which have had data submitted and approved in accordance with the data policy prior to the end of the month.

5.4.5. Verification, Errors and Fraud

All load reduction data is subject to audit by the NYISO and its Market Monitoring unit.

5.5. Assessment of Program Charges to Load

5.5.1. Objectives of Cost Allocation

Payments made to CSPs for EDRP events under Section 5.4.4 will be allocated to load as specified herein and in conformance with the provisions of the ISO Market Services Tariff, Attachment G.

5.5.2. Causes for EDRP Being Invoked

EDRP will be invoked as described in Section 4.4 of the NYISO Emergency Operations Manual.

5.5.3. EDRP Cost Allocation

Costs associated with EDRP will be allocated to all Loads in Zones for which EDRP will directly help to alleviate the conditions under which EDRP was invoked**.**

The above rule translates into the following table:

Table 5-2. EDRP Cost Allocation

Location of Condition 1 and/or 2	EDR Cost Allocation
All or Part of One NYCA load zone (including relief for Local Reliability Rule problems within a load zone as requested by a TO)	All Loads in that load zone (L_z)
Two or More NYCA Zones	All Loads in those Zones (L_{zsum})
All Zones in NYCA	All Loads in NYCA (L_{system})

5.5.4. Cost Allocation Formula

The cost of EDRP payments will be recovered from all Transmission Customers in the affected zones,, calculated as the product of (A) payments made to Curtailment Service Providers and (B) the ratio of (i) the customer's billing units for the month to (ii) the sum of all billing units during that month.

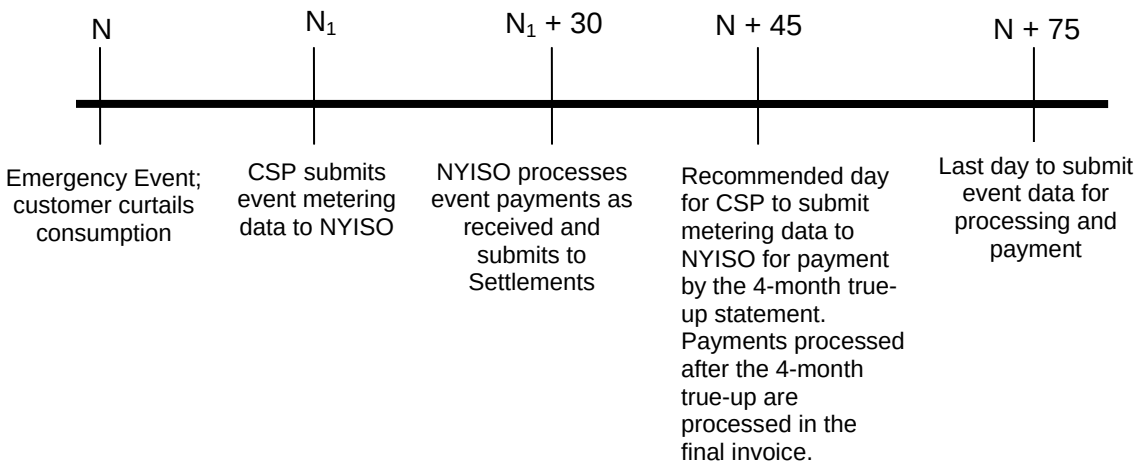
Billing units shall be based on the Actual Energy Withdrawals for all Transmission Service to supply Load in the NYCA, and hourly Energy schedules for all Wheel Throughs and Exports. To the extent that the ISO activates the Emergency Demand Response Program in response to an Emergency or a real-time locational Operating Reserves shortage or a peak forecast of an Operating Reserves shortage in a particular load zone or zones, including relief to meet a Local Reliability Rule within a load zone as requested by a Transmission Owner, the billing units for such charges will be based on the Actual Energy Withdrawals in the affected zone(s) during the hours in which the Emergency Demand Response Program was activated.

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.

5.6. Timeline for Settlement

Figure 5-5. Timeline for Settlement



6. Targeted Demand Response Program

6.1 Program Overview

The NYISO will activate Emergency Demand Response Program 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 activating 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 activations.

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 activation.

6.2 Conditions for Activating 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 activation. 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.

6.2.1Day 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/Activation Conditions

Transmission Owner may request the NYISO to activate 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 activated 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.

7. References

[1] Installed Capacity Manual (available on NYISO website at http://www.nyiso.com/public/products/demand_response/scr_icap.jsp)

[2] Market Administration and Control Area Services Tariff (available on NYISO website at http://www.nyiso.com/public/documents/tariffs/market_services.jsp)

[3] Section 4.4 of the NYISO Emergency Operations Manual (available on NYISO website at http://www.nyiso.com/public/webdocs/documents/manuals/operations/em_op_mnl.pdf)

[4] Section 3.2 of the NYISO Emergency Operations Manual (available on NYISO website at http://www.nyiso.com/public/webdocs/documents/manuals/operations/em_op_mnl.pdf).