
new . york . independent . system . operator



nyiso
Emergency Demand Response Program
Manual

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1.0 Definitions and Acronyms

Capability Period - Six (6) month periods which are established as follows: (1) from May 1 through October 31 of each year (“Summer Capability Period”); and (2) from November 1 of each year through April 30 of the following year (“Winter Capability Period”).

Centrally Dispatched Emergency Power Generating Unit (CDEPGU) – As defined by the Dept. of Environmental Conservation 6 NYCRR Part 200, a stationary source characterized as an on-site power generating unit that may be operated following receipt by the unit's owner or operator of a start-up signal that was initiated by the NYISO during implementation of the NYISO's EDRP.

Curtailment Customer Aggregator (or Aggregator) – An organization qualified as a CSP that enters into contracts with Demand Side Resources to either interrupt load or start up Local Generation under the EDRP.

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.

Curtailment Services Provider (CSP) – A qualified provider that can produce real-time, verified reductions in NYCA Load of at least 100 kW, pursuant to the Emergency Demand Response Program (“EDRP”) and related ISO procedures. CSPs can be either an LSE, a Direct Customer, a Curtailment Customer Aggregator, or a Curtailment Program End Use Customer.

Customer Base Load (CBL) – Average hourly energy consumption as calculated in Section 6, used to determine the level of load curtailment provided.

Day-Ahead Zonal LBMP – The price (in \$/MWh) for combined energy, losses, and transmission congestion determined on an hourly basis in the day-ahead electricity market.

Demand Side Resources - Resources that result in the reduction of a Load in a responsive and measurable manner and within time limits established in the ISO Procedures.

EDRP – Emergency Demand Response Program, described in this manual.

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 Condition - Any abnormal system condition as specified by the ISO that requires immediate automatic or manual action to prevent or limit loss of transmission facilities or Generators that could adversely affect the reliability of the electric system.

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.

Installed Capacity (ICAP) - A Generator or Load facility that complies with the requirements in the Reliability Rules and is capable of supplying and/or reducing the demand for energy in the New York Control Area for the purpose of ensuring that sufficient energy and capacity are available to meet reliability rules. The Installed Capacity requirements, established by the New York State Reliability Council, includes a margin of reserve in accordance with the Reliability Rules.

Interval Metering – 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.

Load Serving Entity (LSE) – Any entity, including a municipal electric system and an electric cooperative, authorized or required by law, regulatory authorization or requirement, agreement, or contractual obligation to supply Energy, Capacity and/or Ancillary Services to retail end users located within the NYCA, including NYISO Direct Customers.

Local Generator - A generator operated by or on behalf of loads offering load reductions pursuant to the Emergency Demand Response Program. Such generators are not synchronized to a utility's local distribution system or, if synchronized to the local distribution system, support a load that is equal to or in excess of the generator's capacity; *i.e.* when operating, the local generator supplies energy only to the end user whose load it is being operated to serve and does not supply energy to the distribution system. On-site generators that are base-loaded do not qualify for the EDRP.

Locational Based Marginal Price (LBMP) - The price of energy bought or sold in the LBMP Markets at a specific location or zone.

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.

New York Independent System Operator (NYISO) - Not for profit organization created to supply New York's electric power needs and to facilitate the power market equitably.

NYCA –The Control Area that is under the control of the NYISO which includes transmission facilities listed in the ISO/TO Agreement Appendices A-1 and A-2, as amended from time-to-time, and Generation located outside the NYS Power System that is subject to protocols which allow the ISO and other Control Area operator(s) to treat some or all of that Generation as though it were part of the NYS Power System.

NYISO Customer – An entity which has complied with the requirements contained in the ISO Services Tariff, including having signed a Service Agreement, and is qualified to utilize the Market Services and the Control Area Services provided by the NYISO under the ISO Services Tariff; provided, however, that a party taking services under the Tariff pursuant to an unsigned Service Agreement filed with the Commission by the NYISO shall be deemed a Customer.

NYISO 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.

NYISO Limited Customer – An entity that joins the NYISO to participate in the EDRP; registration requirements are the same as for a NYISO Customer except that a Limited Customer:

- is not required to satisfy the financial assurance obligations imposed on Customers,
- their status as a Limited Customer expires at the end of the EDRP program, and
- voting privileges are waived with respect to the governance process.

All NYISO Customers meeting the eligibility criteria set forth in Section 3 qualify as Limited Customers, and may participate in the EDRP subject to the registration procedures defined in Section 4.

NYISO Services Tariff – The document that sets forth the provisions applicable to the services provided by the ISO related to its administration of competitive markets for the sale and purchase of Energy and Capacity and for the payments to Suppliers who provide Ancillary Services to the ISO in the ISO Administered Markets and provision of Control Area Services, including services related to ensuring the reliable operation of the NYS Power System.

NYS DEC – New York State Department of Environmental Conservation.

Operating Reserve Shortage – Failure to maintain the Minimum Operating Reserve Requirement as defined in Section 4.1.1 of the NYISO System Operating Procedures.

Real-Time Zonal LBMP – The price (in \$/MWh) for combined energy, losses, and transmission congestion determined on a roughly five-minute basis in the real-time electricity market.

Remote Metering - Metering equipment which allows for remote collection of metering data.

Special Case Resource - Loads capable of being interrupted upon demand, and distributed generators, rated 100 kW or higher, that are subject to special rules set forth in the NYISO Services Tariff, in order to facilitate their participation in the Installed Capacity market as Installed Capacity Suppliers.

Zone - One of eleven geographical areas located within the NYCA that is bounded by one or more of the fourteen New York State Interfaces. During the implementation of the LBMP Markets, all Loads located within the same Load Zone pay the same Day-Ahead LBMP and the same Real-Time LBMP for Energy purchased in those markets.

2.0 Program Summary

The *Emergency Demand Response Program* (EDRP) provides a mechanism for load reduction during emergency conditions, more specifically defined in this document, thereby facilitating the reliability of the New York State bulk power system.

Retail end users who agree to participate in the EDRP can be accommodated through one of four types of Curtailment Service Providers (CSPs):

- Load Serving Entities (LSEs), either that currently serving the load or another LSE,
- through NYISO-approved Curtailment Customer Aggregators
- as a Direct Customer of the NYISO
- as a NYISO-approved Curtailment Program End Use Customer

Curtailment Customer Aggregators and Curtailment Program End Use Customers must register with the NYISO as Limited Customers as defined in Section 4.0.

CSPs should be able to provide load reduction of at least 100 kW per Zone and be able to respond within two hours of emergency notification.

Participation in the EDRP is voluntary and no penalties attach if a CSP fails to respond to a NYISO notice to reduce load.

Retail end users participating in the EDRP may also participate in the NYISO's Special Case Resources Program if otherwise qualified.

CSPs will be given notice no less than two hours in advance of the time specified to reduce load, pursuant to NYISO emergency operations procedures. If the ISO activates the Emergency Demand Response Program for more than four hours, each CSP shall be paid the higher of \$500/MWh, or the zonal Real-Time LBMP per MWh of demand reduced, starting with the hour specified by the ISO as the starting time of the activation, or, in the event that the ISO specified that the demand reduction begin as soon as possible, starting with the hour that the CSP began its response.

If the ISO activates the EDRP for four hours or less, each CSP shall be paid as if the EDRP had been activated for four hours. Each CSP that reduces demand shall be paid the higher of \$500/MWh or the zonal Real-Time LBMP per MWh of demand reduced, for the duration of the ISO activation of the EDRP or for two hours whichever is greater, starting with the hour specified by the ISO as the starting time of the activation, or, in the event that the ISO specified that the demand reduction begin as soon as possible, starting with the hour that the CSP began its response. Each CSP shall be paid the zonal Real-Time LBMP per MWh of demand reduced for the remainder of the four hour minimum payment period, provided that a verified demand reduction was effectuated by the time specified in the ISO's notice.

A detailed explanation of payments can be found in Section 6.

The program will be effective May 1, 2001 and will continue through October 31, 2002. At the end of each Capability Period, the program will be evaluated and changes recommended as necessary.

3.0 Eligibility Criteria / Participant Qualification

3.1 Effective Period of the Program

The program begins on May 1, 2001, and will continue through October 31, 2002. At the end of each Capability Period (May-October and November-April), program performance will be evaluated to see if any rules and procedures need to be modified.

Entities wishing to participate may apply for entry into the program at any time. If you are also planning to qualify as a Special Case Resource you should review the rules and regulations that apply to Installed Capacity (ICAP) suppliers found in [1], or contact NYISO Market Relations.

3.2 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 [2] 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. LSEs may claim load reductions from their retail end users or the retail end users of another LSE. Load curtailment programs currently in place or under implementation may directly qualify for the EDRP (see 3.4 Restrictions below).
- *Direct Customers* of the NYISO as defined in [2] may claim their own load reductions.
- 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 is required to 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. 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; no penalties are imposed upon CSPs or Demand Side Resources for not responding to load reduction requests.

3.3 Minimum Qualifications for CSPs

To serve as a CSP, you must:

- 1) Be a NYISO Customer (in the case of LSEs and Direct Customers) 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 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.
- 4) Be capable of responding within two hours of notice from the NYISO.

¹ These generators either can be non-synchronized to the grid or synchronized to the grid with no net export to the grid while serving load.

- 5) Follow the registration procedures defined in Section 4 of this manual.
- 6) CSPs are required to provide hourly interval metering data to validate performance; specific metering requirements are given in Section 6 of this manual.

3.4 Restrictions

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

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.

3.5 Requirements for Curtailment Customers With ~~On-Site Generation~~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. ~~On-site generation~~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) The generator may operate non-synchronous or synchronous with the grid as long as there is no net electric export while serving the load.
- 2) Be capable of responding within 2 hours of a request to reduce load.
- 3) Must have an integrated hourly or permanent recording meter as described in Section 6.1, Metering Requirements.
- 4) Be capable of receiving notification from a Curtailment Service Provider (CSP).
- 5) Be compliant with the appropriate NYS DEC permitting / registration requirements.
- 6) 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 or obligations a Local Generator may have to buy or sell energy into the wholesale market.

3.6 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. SCR is available to generators and load reduction providers that meet testing, metering and other requirements. The capacity payments under SCR and the EDRP energy payments are additive. 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. 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 will activate the EDRP. See the ICAP Manual located at www.nyiso.com/markets/icapinfo.html for more details on SCR.

3.7 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.

4.0 CSP Registration Procedures

To qualify as a Curtailment Service Provider (CSP) you must be an LSE, Direct Customer, Curtailment Customer Aggregator or 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:

4.1 Load Serving Entities (LSE)

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

1. Complete Attachment A of this manual.
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, and will not be disclosed to third parties without the express permission of the end-use customer, unless aggregated or otherwise presented in such a way as to preserve confidentiality.
3. By submitting 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 deemed approved 14 calendar days after LSE submission of Attachment B for each retail end user unless the NYISO contacts the LSE via phone or e-mail to the contrary.

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

1. Complete Attachment A of this manual.
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, and will not be disclosed to third parties without the express permission of the end-use customer, unless aggregated or otherwise presented in such a way as to preserve confidentiality.
3. Within 2 days after receipt of 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.
4. The EDRP participant registration is deemed approved in 14 calendar days after notification is provided to the LSE unless the NYISO contacts the LSE via phone or e-mail to the contrary.

4.2 Direct Customers

Direct Customers of the NYISO should fill out Attachment A and one copy of Attachment B.

4.3 Curtailment Customer Aggregators

5. Curtailment Customer Aggregators are companies 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.

2. Complete Sections A, B, F, G, H, J and K of the NYISO Registration Packet, available at the NYISO website
3. Sign the Market Services Tariff.
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. Any information on the identity of a Demand Side Resource that is provided to the NYISO will be treated as confidential, and will not be disclosed to third parties without the express permission of the end-use customer, unless aggregated or otherwise presented in such a way as to preserve confidentiality
5. Within 2 days after receipt of 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 deemed approved in 14 calendar days after notification is provided to the LSE unless the NYISO contacts the Curtailment Customer Aggregator via phone or e-mail to the contrary.

The application process can take up to 30 days.

4.4 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 zone and wants to participate in the EDRP directly with the NYISO.

If you are applying for NYISO Limited Customer status as an EUC and will only be a seller to the NYISO:

1. Complete Attachment A of this manual.
2. Complete Sections A, B, F, G, H, J and K of the NYISO Registration Packet, available at the NYISO website
3. Sign the Market Services Tariff.
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.
5. Within 2 days after receipt of 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 deemed approved in 14 calendar days after notification is provided to the LSE unless the NYISO contacts the EUC via phone or e-mail to the contrary.

The application process can take up to 30 days.

5.0 Operating Mechanism / Implementation

5.1 When Will the Program be Called?

The EDRP is limited to when called by the NYISO as a part of the In-day Peak Hour Forecast response to an Operating Reserve Peak Forecast Shortage as defined in [3]. The EDRP will be called in conjunction with Special Case Resources.

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 [3], or in response to the Major Emergency state as defined in [4]. 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 NYISO will declare an Alert State 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 be re-established, the NYISO will utilize the EDRP to re-establish real-time Operating Reserves.

5.2 Procedures for Contacting Participants

Each CSP will designate a contact person responsible for interfacing between the NYISO and the CSP. When the EDRP is invoked, the NYISO will notify each CSP. Each CSP will notify the Demand Side Resources in accordance with the communications procedures agreed upon between the CSP and the Demand Side Resource.

The message from the NYISO will include an order to reduce load at a specific time. The message will also contain an estimate of the load reduction duration. The NYISO will keep the CSPs updated concerning the status of the load reduction.

If the estimated load reduction period ordered by the NYISO is extended, the NYISO will contact CSPs to provide an updated restoration time.

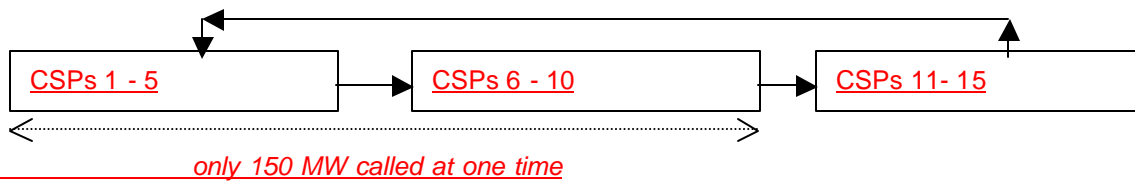
5.3 NYISO Protocol for Dispatching of EDRP Generators Limited by the DEC 150MW Expanded “Emergency” Definition

Under amendments to DEC Regulations 6 NYCRR Parts 200, 201, 225 and 227 dated May 3, 2001, exempt generators may keep their existing emergency classification and operate during a blackout or when called by the NYISO’s EDRP. Generators that operate when the NYISO calls are classified by DEC as “centrally dispatched emergency power generating units” or CDEPGU’s. This exemption allows up to 200 hours per year of NYISO operation and is limited to 150 MW of actual dispatch at any given time statewide. This 150 MW limit is only for generators using the emergency generator exemption. Registration, State Facility and Title V Permit operation is not impacted by the 150 MW limit.

The proposed protocol recognizes that NYISO Operations deal with CSPs, not individual Demand Side Resources. Also, operating procedures developed prior to the DEC ruling did not selectively call upon resources based upon location. The approach outlined below keep the operational requirements simple but at the same time allow every subscribing CSP an opportunity to participate.

1. The NYISO will call all CDEPGU generators statewide during each EDRP event until such time that 150MW has been activated collectively under the NYISO EDRP Manual Attachment B.
2. Once 150MW of CDEPGU's have been signed up statewide, dispatch will occur in a "Round Robin" sequence. Dispatch will be by CSP. Position number in the round robin dispatch sequence will be based on the submission date of the first valid EDRP Attachment B form by the CSP which registers as a CDEPGU. Once the CSP is called for an EDRP event they will move to the back of the line, in order, and wait their turn for the next EDRP event.

To illustrate the round robin approach, assume that 15 CSPs with CDEPGU generation are enrolled, each with 15 MW. The round robin sequence would apply when more than 150 MW are subscribed, and would work as follows:



3. The NYISO will also identify any additional CDEPGU generators that the NYISO would have dispatched during the EDRP event in the absence of the 150 MW DEC limitation. These units will be treated as having a forced outage as a result of an environmental limitation.
4. Should the DEC revise its position on the 150 MW limitation, CDEPGUs will be allowed to modify their historic outage data to the extent that their forced outage statistics were affected by the cap.

6.0 Metering, Verification, Billing and Settlement

6.1 Metering Requirements

By June 1, 2002 CSP-Direct customers and CSP-NYISO approved Curtailment Program End Use Customers must use certified MSP to install meters and MDSP to read meters. CSP-Curtailment Customer aggregators and CSP-LSEs must use certified MSP and MDSP or be qualified to perform MSP and MDSP responsibilities. Utility or MDSP is needed to read the revenue grade meter on load.

6.1.1 Metering Device Requirements

Hourly interval metering data is required to validate performance. Demand Side Resources providing load reduction only must use the revenue metering on the load as the source of performance data. If the revenue metering does not provide hourly interval data, an hourly interval meter must be installed by a certified MSP or the local distribution utility. If the installation is performed by an MSP, the MSP must certify that the device and the installation comply with all state and local code requirements. Demand Side Resources providing ~~on-site generation~~Local Generation only, not validated by the revenue metering, may be metered initially with a properly installed and calibrated integrated hourly metering device that is certified by a Professional Engineer as meeting ANSI C12 standard. Such meters would be periodically tested and calibrated in accordance with the standards applicable to MSPs and MDSPs.

6.1.2 Metering Configuration Requirements

Premises participating in the EDRP shall subscribe under one of two configurations: ~~on-site generation~~Local Generation only or load only. Integrated hourly metering devices shall be required as follows:

- 1) When a premise subscribes only the ~~on-site generation~~Local Generation, the hourly interval meter shall be installed to measure the generator's output; or
- 2) When a premise subscribes only the load, 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 premise subscribes both the ~~on-site generation~~Local Generation and load, metering can be configured so as to measure only the load or combined load and generation.

Figure 6.1 illustrates examples of acceptable configurations.

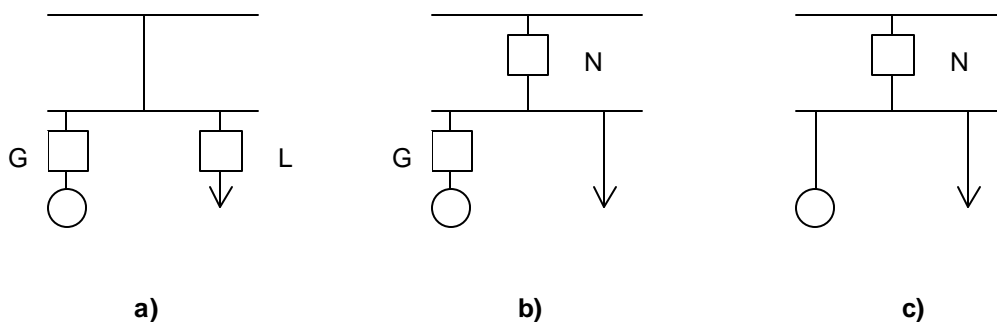


Figure 6.1 – Metering Configurations

6.2 Calculation of Customer Baseline

6.2.1 Historical Operating Data

CSPs shall be required to 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 ~~on-site generation~~Local Generation participating in the NYISO Special Case Resource (SCR) program and the EDRP

NYISO forms required to qualify as a Special Case Resource will satisfy the requirement for the EDRP program; or

- 2) For ~~on-site generation~~Local Generation that is only participating the EDRP

For ~~on-site generation~~Local Generation that is participating in the EDRP, but not participating in the NYISO Special Case Resource program the generator meter ID and MSP ID certifying meter installation must be supplied on the End-Use registration form in Attachment B;

- 3) For loads with existing interval meters

Provide a minimum of 1 complete billing period of hourly interval data immediately preceding the first Capability Period the load will participate in;

- 4) For totalized loads with existing interval meters

For totalized loads, provide hourly interval data for a minimum of 1 complete billing period of hourly interval data for all participating loads at the premise; or

- 5) For newly installed load interval meters

For newly installed interval meters, provide the prior three month's summary of monthly kwh consumption and demand values, if available.

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

The Customer Baseline (CB) is the average hourly load, rounded to the nearest kWh, for each of the 24 hours in a day. The Customer Baseline type used for computing performance shall be the same day-type as the day-type of the EDRP event. Customer Baseline is required for EDRP metering configurations described in section 6.1.2 whenever load is participating in the EDRP program. For ~~on-site generation~~Local Generation, the generator output as metered will be used for performance as defined in section 6.3.

For the EDRP program, the CBL calculation will be for the four-hour window associated with the minimum payment period.

Customer Baseline – Weekday (CB-WD):

Performance in satisfaction of a bid for hours h(i) to h(j) in day d(n) would be assessed against a CBL determined by:

1. Calculating the energy consumption 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 or the Day-Ahead programs occurred.

$$\text{kwh}(k) = \text{sum}(h(i)...h(j)) \text{ for each day } k = d(n-12)...d(n-1011)$$

2. Selecting the 5 highest values of kwh(k) and use those days d(l), l = 1...5 to calculate the CBL.
3. Calculating the CBL for each hour h(i) as the average of the five h(i) values for days d(l), l = 1...5.
4. If more than 5 of the past 10 days have been excluded due to EDRP and/or Day-Ahead participation, look back beginning with day d(n-1112) until 5 non-excluded days are found. In no cases will we go back further than day d(n-3031).

5. If, after looking back 30 days, fewer than 5 days are eligible for the CBL calculation due to exclusions, use only those eligible days.

As an example, Assume a 4-hour bid from 12 noon to 4 pm was accepted. The past 10 days Mwh consumption for similar hours was:

Time	Day n-12	Day n-23	Day n-34	Day n-45	Day n-56	Day n-67	Day n-78	Day n-89	Day n-910	Day n-1011
12-1	10	8	9	7	10	12	5	7	7	8
1-2	11	6	12	8	11	8	8	8	6	10
2-3	7	9	9	6	9	9	8	8	6	9
3-4	5	6	7	6	7	7	6	7	5	6

Steps 1 and 2: sum the Mwh for the appropriate hours each day and select the 5 highest totals:

	Mwh n-12	Mwh n-23	Mwh n-34	Mwh n-45	Mwh n-56	Mwh n-67	Mwh n-78	Mwh n-89	Mwh n-910	Mwh n-1011
	33	29	37	27	37	36	27	30	24	33
selected ?	Y		Y		Y	Y				Y

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

Time	Day n-12	Day n-34	Day n-56	Day n-67	Day n-1011	CBL
12-1	10	9	10	12	8	9.8
1-2	11	12	11	8	10	10.4
2-3	7	9	9	9	9	8.6
3-4	5	7	7	7	6	6.4

Weekend Days:

Saturday (CB-SA) and Sunday (CB-SU) CBLs will be computed separately.

1. Calculate the energy consumption during similar hours over the past 3 Saturdays/Sundays, excluding days where curtailment due to participation in the EDRP or the Day-Ahead programs occurred.
2. Select the 2 highest values of kwh and use those days to calculate the CBL.

3. Calculate the CBL for each hour h(i) as the average of the values for the 2 highest days.
4. Don't look back any more than 3 weekends to select the 2 highest periods (i.e, don't extend the window if exclusions occur).

Exclusion provisions:

Three types of exclusions are required when computing the calculation of the simple average: EDRP event days, days when load curtails as part of the Day-Ahead Load Reduction Program (DADRP), and shutdown days. :

- a) If one or more EDRP event days occur within the range of days used to calculate the Customer Baseline for the day of an EDRP event, the previous EDRP event day is eliminated from the average. The simple average for each hour is determined from the remaining days following the calculation provisions established above for the appropriate Customer Baseline day-type.
- b) If one or more DADRP event days occur within the range of days used to calculate the Customer Baseline for the day of a DADRP event, the previous DADRP event day is eliminated from the average. The simple average for each hour is determined from the remaining days following the calculation provisions established above for the appropriate Customer Baseline day-type.
- c) In the case where a day included in the simple average contains 4 or more consecutive hours with hourly values are less than 75% of the simple average for the corresponding hour, that day is excluded and the simple average is determined from the remaining days following the calculation provisions established above for the appropriate Customer Baseline day-type.

6.2.3 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 or the Day-Ahead programs occurred.

$$kwh(k) = \text{sum}(h(i)...h(j)) \text{ for each day } k = d(n-2)...d(n-11)$$
2. Select the 5 lowest values of kwh(k) and use those days d(l), l = 1...5 to calculate the CBL.
3. Calculate the CBL for each hour h(i) as the average of the five h(i) values for days d(l), l = 1...5.
4. If more than 5 of the past 10 days have been excluded due to EDRP and/or Day-Ahead participation, look back beginning with day d(n-12) until 5 non-excluded days are found. In no case go back further than day d(n-31).
5. If, after looking back 30 days, fewer than 5 days are eligible for the CBL calculation due to exclusions, use only those eligible days.

6.3 Performance Measurements and Compliance

6.3.1 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 ~~on-site-generation~~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 6.1.

Load Only Configuration

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

$$P_h = (CB-xx)_h - AL_h \text{ (Meter configuration 6.1a)}$$
$$P_h = (CB-xx)_h - AN_h \text{ (Meter configuration 6.1b and 6.1c)}$$

Where 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 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

~~On-site Generation~~Local Generation Only Configuration

For premises subscribing only ~~on-site-generation~~Local Generation, performance for each hour shall be calculated as:

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

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

$GCB-xx_h$ = 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 ~~On-site Generation~~Local Generation Configuration

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

$$P_h = [OG_h - (GCB-xx)_h] + [(CB-xx)_h - AL_h] \text{ (Meter configuration 6.1a)}$$
$$P_h = (CB-xx)_h - AN_h \text{ (Meter configuration 6.1b and 6.1c)}$$

Where 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 6.2.3.

$CB-xx_h$ = 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 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

6.3.2 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 6.1 illustrates examples of Initial Compliance and Final Compliance for an event starting at noon and lasting for five hours.

Table 6.1 - 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							

6.4 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 may 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 settlement payment.

6.4.1 Data Submission

A CSP will 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. Failure to so provide such data will result in a CSP not receiving payment for its participation in the EDRP. In cases where the CSP is not the Meter Data Service Provider (MDSP), upon receipt of the data by the NYISO, the NYISO will immediately forward the data to the MDSP (in most, if not all, cases the Transmission Owner) for optional review. After 14 calendar days the NYISO will accept the data as submitted unless challenged by the MDSP. The ISO maintains the ability to subsequently review the data through the Market Monitoring Unit.

6.4.2 EDRP Reporting

In establishing the reporting requirements for this program, information regarding the identity of Demand Side Resources participating in this program shall be treated as confidential by the NYISO, and will not be shared with third parties.

The following forms (found in Attachment D) shall be required for reporting performance in an EDRP event:

1. Event Participation Report – One for each load or ~~on-site-generation~~Local Generation resource participating in a CSP's EDRP program;
2. Zone Detail Report – Records results of individual Event Participation Reports;
3. Zone Recap – Totals all Zone Detail Reports by Zone;
4. CSP Event Participation Summary Report – Reports load reductions and ~~on-site-generation~~Local Generation by zone for payment.

6.4.3 Demand Side Resource Reduction Data

A CSP will submit response(s) of the Demand Side Resource(s) or ~~on-site-generation~~Local Generation that participated in the emergency event aggregated by hour and by zone.

- a) Where the CSP's Demand Side Resource response is based on individual end-use loads alone or for premises with both participating load and ~~on-site-generation~~Local Generation, the CSP is required to provide metered hourly interval data for each load and the ~~on-site-generation~~Local Generation for the entire billing period in which the EDRP event occurred.
- b) Where the CSP's Demand Side Resource response is provided only from ~~on-site-generation~~Local Generation, the CSP shall provide interval data for the 24-hour period ending midnight of the day of the EDRP event.
- c) If the EDRP event occurs less than 10 days into a billing period for any end-use load or premises with participating load and ~~on-site-generation~~Local Generation, the prior month's bill period data must also be provided for that end-use load and ~~on-site-generation~~Local Generation.

6.4.4 Data Format

Individual end-use or ~~on-site-generation~~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) MV-90 Row-Day format;
- b) Comma-Separated Variable format with the following minimum entries: meter ID, account number, date, hourly values from hour ending 01:00 through hour ending 24:00 for the entire billing period;
- c) other standardized formats as defined by NYISO.

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

- b) e-mail to: EDRPMgrdlawrence@nyiso.com;

- c) CD-ROM or other electronic medium;
- d) other methods as defined by NYISO.

6.5 Energy Payments

6.5.1 Calculation of Payments

The NYISO will calculate the payment to CSPs using the following formula:

If the Emergency is four hours or longer:

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

If the Emergency is less than four hours:

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

+

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

P_h = performance during hour h as defined in Section 6.3.1

$\text{LBMP}_{\text{RT Zonal, } h}$ = Real-time zonal LBMP for hour h

In most cases, NYISO Operators will specify a start and end time for the curtailment event. This information will be provided at least two hours prior to the starting time. Demand Side Resources will be expected to begin curtailment at the specified starting 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 begin at the time when the NYISO directs the retail end user to reduce load or, if load reduction is requested as soon as possible, when the retail end user begins his load reduction response.

CSPs that fail to provide load reduction when requested by the NYISO incur no penalties for failure to respond to the EDRP.

6.5.2 Distribution of Payments

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

Payments will be made by the ISO as part of the monthly bill generated by the ISO. The bill will record the payment as an emergency energy payment and will break down the payment by total kWh by zone, hourly zonal price, and total payment. 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.

6.5.3 Verification, Errors and Fraud

All load reduction data is subject to audit by the NYISO and its market monitoring unit. Disputes concerning erroneous payments shall be resolved through the ISO's Dispute Resolution Procedures.

If the ISO in its review of the CSP's account determines the CSP or one of its customers has committed fraud to extract EDRP payments from the ISO, the ISO will have the right to ban the CSP or the CSP's customer from the EDRP as well as pursue all of the ISO's legal rights, at its sole discretion.

6.6 Assessment of Program Charges

6.6.1 Objectives of Cost Allocation

The costs for the program will equal the sum of all payments to customers calculated and paid out under Section 6.5.1.

In general, cost allocations should be designed with fairness and market efficiency (i.e., sending the correct price signals) in mind. If it can be determined that some locations provoke the need for a service and/or benefit from that service, then it is proper (from both a fairness and market efficiency perspective) to charge loads in those locations for the service specifically.

In the case of the EDRP, the cost allocation method should be done on a Zonal rather than statewide (i.e., "all loads - everytime") basis so that price signals will be produced that help encourage reliability improvements **where** reliability needs to be improved.

6.6.2 Causes for EDR Being Invoked

EDR will be invoked during situations in which one or both of the following actually occur or are predicted to occur *within a specific Zone or set of Zones*:

EDRP Condition 1

Internal Load **exceeds** Available (Internal) Generation *plus* Import Capability

Where Import Capability equals the lesser of Transmission Import Capability for that Zone (or set of Zones) **OR**
Supply Available for Import via that Transmission

EDRP Condition 2

Locational Operating Reserve Requirements **exceed** Available Operating Reserves.

6.6.3 EDR Cost Allocation

Based upon the objectives for cost allocation and the causes for initiating the EDRP (i.e., Conditions 1 and 2 as defined above), the following cost allocation method will be used:

Costs associated with EDRP will be allocated to all Loads in Zones for which EDRP will directly help to alleviate Conditions 1 and or 2.

The above rule translates into the following table:

Table 6.2 Emergency Demand Reduction Program Cost Allocation	
Location of Condition 1 and/or 2	EDR Cost Allocation
All or Part of One NYCA Zone (including relief for Local Reliability Rule problems within a Zone as requested by a TO)	All Loads in that 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})
An External Control Area	The External Control Area ($L_{external}$)

6.6.4. Cost Allocation Formula

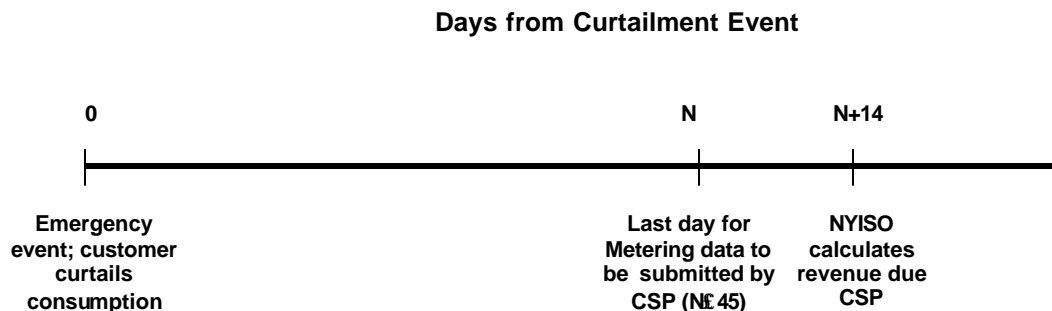
The monthly charge for EDRP payments will be recovered from all Transmission Customers, and will be calculated as the product of (A) payments made to Curtailment Service Providers and (B) the ratio of (i) the customer's billing units for the month to (ii) the sum of all billing units during that month..

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 Wheels 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 zone or zones, including relief to meet a Local Reliability Rule within a 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 on the customer bill and will have supporting material that will include the amount of load response for each hour of the emergency.

6.7 Timeline for Settlement



For the month immediately following the calculation of revenues to be paid to the CSP:

- Approximately on 8th of following month NYISO bills are generated; costs and revenues will be posted to the CSP and LSE Billing Statements
- Approximately on 16th payments are due from the LSEs
- Approximately on 22nd revenues will be due from the ISO to the CSPs

7.0 References

- [1] latest ICAP manual.
- [2] OATT (or Services Tariff) where NYISO members are defined.
- [3] Section 4.4.1 of the NYISO Emergency Operations Manual.
- [4] Section 3.2 of the Emergency Operations Manual.

Attachment A – Curtailment Service Provider (CSP) Registration

Emergency Demand Response Program (EDRP)

Entities applying for Curtailment Services Provider status under the Emergency Demand Response Program (EDRP) are advised that, as of April 17, 2001, the NYISO will begin accepting application paperwork for processing. The program will formally begin operation on the date of approval of the EDRP tariff by the Federal Energy Regulatory Commission (FERC). The NYISO fully expects that FERC will approve the EDRP tariff in a timely manner. In the unlikely event that FERC disapproves the EDRP tariff filing, the NYISO assumes no liability for damages, losses, claims, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and other obligations by or to third parties, arising out of or resulting from the applicant's effort to subscribe Demand Side Resources.

The requirements for EDRP suppliers are controlled by the New York Independent System Operator's ("NYISO Tariff") and the "NYISO Emergency Demand Response Program Manual".

This form must be faxed to **518-356-6208, attention: Manager EDRP** or e-mailed to **dlawrence@nyiso.com**

Operations Contact Information

All communications by the NYISO during an EDRP event will be sent to the primary and secondary contacts listed below (additional contacts should be provided on a separate sheet).

Primary Contact Name: _____

Organization: _____

Address: _____

Phone: _____

Cellphone: _____

Pager: _____

Fax: _____

E-mail: _____

Secondary Contact Name: _____

Organization: _____

Address: _____

Phone: _____

Cellphone: _____

Pager: _____

Fax: _____

E-mail: _____

Administrative Contact Information

All inquiries and notices of an administrative nature by the NYISO will be sent to the address provided below.

Name: _____
Organization: _____
Address: _____

Phone: _____
Cellphone: _____
Pager: _____
Fax: _____
E-mail: _____

Check Only One – Which type of organization are you?

Curtailment Customer Aggregator	Load Serving Entity	Direct Customer	Curtailment Program End Use Customer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Is your organization a current NYISO Customer? (check one) Yes No
(If no, you must become either a NYISO Customer or a NYISO Limited Customer to participate in this program. See Manual Section 4 for application requirements)
Please check all the LBMP zone(s) in which you plan to provide a Demand Side Resource:

West <input type="checkbox"/>	Genesee <input type="checkbox"/>	Central <input type="checkbox"/>
North <input type="checkbox"/>	Mohawk Valley <input type="checkbox"/>	Capital <input type="checkbox"/>
Hudson Valley <input type="checkbox"/>	Millwood <input type="checkbox"/>	Dunwoodie <input type="checkbox"/>
NYC <input type="checkbox"/>	Long Island <input type="checkbox"/>	

The CSP certifies that it meets the requirements to be a Curtailment Service Provider and that the information contained in this form and its attachments is complete and correct.

IN WITNESS WHEREOF, this Curtailment Service Provider's Emergency Demand Response Program Registration has been submitted on this, the _____ day of _____, 20__.

NAME OF CSP SUPPLIER: _____

Name: _____

Title: _____

Authorized Representative Signature

Attachment B - Emergency Demand Response Program – End Use Customer Registration

This form can be emailed to dlawrence@nyiso.com
(use one form for each Demand Side Resource Registered by the CSP)

NOTE: The information in this section is optional.

Organization: _____
Street Address: _____

NOTE: The information in this section is optional.

Organization: _____
Street Address: _____

Emergency Demand Response Program (EDRP) Load Certification

Name of energy provider for this Demand Side Resource: _____

Name of Local Distribution Company (LDC): _____

LDC's Electric Account Number (s) for Demand Side Resource: _____

Meter Service Provider: _____

Meter Data Service Provider: _____

LBMP Zone of Demand Side Resource: _____

Total Facility Load _____ MW (rounded to nearest 0.1 MW)

Amount of Interruptible Load Rating _____ MW (rounded to nearest 0.1 MW)

For on-Site Generators, Capacity Rating _____ MW (rounded to nearest 0.1 MW)

DEC Permit Status (check one): Emergency Exempt Registration State Facility Title V

Type of EDR (check one) on-Site Generator Interruptible Load Gen + Int. Load

Type of metering (check all that apply) –

Existing utility interval meter Meter ID #: _____

Permanent recording meter on generator / interrupted load Meter ID#: _____

Permanent interval meter on generator, if new date installed or to be installed _____

_____ Meter ID #: _____

Attach MSP certification if new meter

Name of Curtailment Service Provider supplying Demand Side Resource: _____

Period for which CSP will supply Demand Side Resource: ___/___/___ to ___/___/___

Authorized Representative of Curtailment

Date

Customer Aggregator ~~or LSE, if applicable~~

Attachment C - Example Settlement Calculation

An emergency is issued on July 1, 2001 at 4pm

The customer responds by reducing their demand by 10MW

The emergency lasts for 4 hours

The emergency was activated to relieve a local system emergency in zone J

The market prices are:

Hour ending:

5 PM \$600

6 PM \$600

7PM \$600

8PM \$500

Using the formulas from above the revenues are:

$$(10 * 600) + (10*600) + (10*600) + (10*500) = \$23,000$$

Data is submitted to the ISO on July 3rd by the CSP

The ISO sends to data to the TO on July 5th

The TO does not object to the data within 14 calendar days

On approximately August 8th the bill is sent to the CSP with a credit of \$23,000

The payment is transferred to the CSP on approximately August 26th.

On August 8th a bill is sent out to all LSEs with a charge of $\$23,000 * (LSE_{load}/Aggregate\ Zonal\ Load)$

On August 16th the LSEs pay \$23,000

Attachment D: NYISO Emergency Demand Response Program (EDRP) Event Participation Reporting Instructions

This spreadsheet contains four (4) worksheet forms and four (4) sample sheets:

- End-Use Event Form
- Zone Detail Report
- Zone Recap
- CSP Summary Form

- | | |
|---------------------------|--|
| Indiv. Form | <u>Complete 1 form for each EDRP Demand Side Resource</u> |
| Zone Detail Report | <u>Complete 1 or more, depending on number of participants per zone</u> |
| Zone Recap | <u>Complete one form for each zone when there is more than one Zone Detail Report per Zone</u> |
| CSP Summary Form | <u>Complete one</u> |

Note: *These forms may be substituted by an automated system, provided that all data shown on these forms is stored in the automated system and referenced by the appropriate form name.*

Detailed Instructions:

End-Use Event

Participation Form Complete 1 form for each EDRP Demand Side Resource

This report identifies dates used for the CBL Basis, the CBL calculation dates, the CBL and actual metered values used to compute the net load reduction/generator output for an EDRP event. One page per registered End-Use participant. The net load reduction/generator output for each participating Demand Side Resource is sent to the NYISO in the EDRP Event Detail Data file.

Participant information section

Date of EDRP Event:	Date EDRP event was called
CSP Name/ID:	CSP Name or ID
Name of LSE:	Name of Load-Serving Entity for the Demand Resource Side

LSE's Electric Account No.:	LSE's Account number for the Demand Side Resource
Meter Number:	Meter identifier
Load Name:	Account Name of the Demand Resource Side
NYISO PTID:	Point Identifier assigned by NYISO upon registration of the Demand Side Resource

LBMP Zone of EDRP Load:	Zone location of the Demand Side Resource
Type of EDR: (check all that apply)	If this metered account (premise) is using both on-site emergency generation and load curtailment for the load reduction, check both boxes Check this box if Demand Side Resource is using on-site backup generation for load reduction under EDRP (Formatted as Monotype Sorts - use the 3 key on the keyboard to make a check mark.)
On-Site Generator	

Attachment D: NYISO Emergency Demand Response Program (EDRP) Event Participation Reporting Instructions

CSP Event Zone Recap Complete 1 or more, depending on number of CSP Zone Detail Report pages per zone

When more than one CSP Event Zone Detail Report page exists for a specific zone, use this recap sheet to summarize the net load reductions for that zone. If more than one page is needed, fill in the Page number and total pages in upper right corner; subtotal each page.

Date of EDRP Event: Date EDRP event was called
CSP Name/ID: CSP Name or ID
Zone: Enter the zone reported on this form - one zone per page

Detail section: Transfer the page subtotals of the CSP Zone Detail Reports by hour. One zone per CSP Event Zone Recap.

CSP Event Participation Summary Report Complete one report for each EDRP event.

This report summarizes all net load reduction by zone for payment processing by the NYISO. This data is used for the EDRP Summary Data File.

Date of EDRP Event: Date EDRP event was called
CSP Name/ID: CSP Name or ID
Detail section: Transfer the page subtotals of the CSP Zone Detail Reports and/or CSP Event Zone Recaps by hour.

Attachment D: NYISO Emergency Demand Response Program (EDRP) End-Use Event Participation Form

Date of EDRP Event: _____

NYISO PTID:

CSP Name/ID: _____

LBMP Zone of EDRP Load:

Name of LSE: _____

LSE's Electric Acct. No: _____

Type of EDR: *(check all that apply)*

Meter Number: _____

On-site Generator

Load Name: _____

Interruptible Load

Check box at left if Load is Net Metered

Load Data - CBL Determination Data

Enter all values rounded to .001 MWh

Dates included in CBL Basis for this EDRP Event (mm/dd/yy in reverse chronological order)		A1		A2		B	C	D
Dates used for this EDRP event (check max. of 5)		Hour of Day (hour ending)	CBL - LOAD: Fill in simple average for each hour (CBL)	CBL - Metered On-site Generation: Fill in simple average for each hour (CBL)	LOAD: Fill in only EDRP event hours with actual meter readings	GENERATION: Fill in only EDRP event hours with actual meter readings	Hourly Performance: (fill in only EDRP event hours)	
1.	<input style="width: 100px; height: 20px;" type="text"/>	<input type="checkbox"/>	1					
2.	<input style="width: 100px; height: 20px;" type="text"/>	<input type="checkbox"/>	2					
3.	<input style="width: 100px; height: 20px;" type="text"/>	<input type="checkbox"/>	3					
4.	<input style="width: 100px; height: 20px;" type="text"/>	<input type="checkbox"/>	4					
5.	<input style="width: 100px; height: 20px;" type="text"/>	<input type="checkbox"/>	5					
6.	<input style="width: 100px; height: 20px;" type="text"/>	<input type="checkbox"/>	6					
7.	<input style="width: 100px; height: 20px;" type="text"/>	<input type="checkbox"/>	7					
8.	<input style="width: 100px; height: 20px;" type="text"/>	<input type="checkbox"/>	8					
9.	<input style="width: 100px; height: 20px;" type="text"/>	<input type="checkbox"/>	9					
10.	<input style="width: 100px; height: 20px;" type="text"/>	<input type="checkbox"/>	10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			23					
			24					
			25*					

(Enter all dates excluded that should otherwise be included in the CBL Basis for this event and a Reason Code for each date.)

Dates Excluded:	Reason:
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Reason Codes:

- E** EDRP Participation
- D** DADRP Participation
- S** Shutdown-use NYISO rule
- O** Other - must specify

**The extra hour that appears at the time shift from DST to EST will be after the first hour beginning 2 and the missing hour that occurs during the time shift from EST to DST will be represented by an empty field. For example, the hours will appear as 1,2,2,3,... and 1,3,4,...*

Hourly Performance Calculations

Load only = col. A - col. B

Generation only (metered) = col. A2 - col. C

Generation only (NET metered) = (col. A - col. B)

Load and generation (NET metered) (col. A - col. B)

Load and generation (separately metered) (col. A1 - col. B) + (col. C - col. A2)

Prepared by: _____ Date: _____
 Phone: _____ Fax: _____
 E-mail: _____

Attachment D-Example: NYISO Emergency Demand Response Program (EDRP) Event Participation Report

EXAMPLE 1: LOAD REDUCTION - NO EXCLUSION DATES

Date of EDRP Event: 4-May-01

NYISO PTID: 711349

CSP Name/ID: Curtailment Service Provider/12345

LBMP Zone of EDRP Load: C

Name of LSE: Load-Serving Entity

LSE's Electric Acct. No: 1111-1111-1111-1111

Meter Number: 28046

Type of EDR: *(check all that apply)*

On-site Generator

Interruptible Load ✓

Check box at left if Load is Net Metered

Load Name: Load Reduction Customer

Enter all values rounded to .001 MWh

Load Data - CBL Determination Data			A1	A2	B	C	D	
Dates included in CBL Basis for this EDRP Event (mm/dd/yy in reverse chronological order)			Hour of Day (hour ending)	CBL - LOAD: Fill in simple average for each hour (CBL)	CBL - Metered On-site Generation: Fill in simple average for each hour (CBL)	LOAD: Fill in only EDRP event hours with actual meter readings	GENERATION: Fill in only EDRP event hours with actual meter readings	Hourly Performance: (fill in only EDRP event hours)
1.	5/2/2001	<input checked="" type="checkbox"/>	1	1.107				
2.	5/1/2001	<input checked="" type="checkbox"/>	2	1.12				
3.	4/30/2001	<input checked="" type="checkbox"/>	3	1.2				
4.	4/27/2001	<input checked="" type="checkbox"/>	4	1.21				
5.	4/26/2001	<input checked="" type="checkbox"/>	5	1.26				
6.	4/25/2001	<input type="checkbox"/>	6	1.24				
7.	4/24/2001	<input type="checkbox"/>	7	1.23				
8.	4/23/2001	<input type="checkbox"/>	8	1.25				
9.	4/20/2001	<input type="checkbox"/>	9	1.28				
10.	4/19/2001	<input type="checkbox"/>	10	1.3				
			11	1.32				
			12	1.33				
			13	1.35	1.14			0.21
			14	1.34	1.127			0.213
			15	1.33	1.095			0.235
			16	1.314	1.05			0.264
			17	1.265	1.1			0.165
			18	1.21				
			19	1.17				
			20	1.16				
			21	1.154				
			22	1.139				
			23	1.132				
			24	1.29				
			25*					

(Enter all dates excluded that should otherwise be included in the CBL Basis for this event and a Reason Code for each date.)

Dates Excluded:	Reason:
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Reason Codes:

- E** EDRP Participation
- D** DADRP Participation
- S** Shutdown-use NYISO rule
- O** Other - must specify

**The extra hour that appears at the time shift from DST to EST will be after the first hour beginning 2 and the missing hour that occurs during the time shift from EST to DST will be represented by an empty field. For example, the hours will appear as 1,2,2,3,... and 1,3,4,...*

Hourly Performance Calculations

Load only = col. A - col. B
 Generation only (metered) = col. A2 - col. C
 Generation only (NET metered) = (col. A - col. B)
 Load and generation (NET metered) (col. A - col. B)
 Load and generation (separately metered) (col. A1 - col. B) + (col. C - col. A2)

Prepared by: _____ Date: _____
 Phone: _____ Fax: _____
 E-mail: _____

Attachment D-Example: NYISO Emergency Demand Response Program (EDRP) Event Participation Report

EXAMPLE 2: LOAD REDUCTION WITH EXCLUSION DATES

Date of EDRP Event: 4-May-01

NYISO PTID: 711648

CSP Name/ID: Curtailment Service Provider/12345

LBMP Zone of EDRP Load: C

Name of LSE: Load-Serving Entity

LSE's Electric Acct. No: 2222-2222-2222-2222

Meter Number: 44417

Type of EDR: *(check all that apply)*

On-site Generator ✓

Interruptible Load ✓

Check box at left if Load is Net Metered

Load Name: Load Reduction Customer #2

Enter all values rounded to .001 MWh

Load Data - CBL Determination Data			A1	A2	B	C	D	
Dates included in CBL Basis for this EDRP Event (mm/dd/yy in reverse chronological order)			Hour of Day (hour ending)	CBL - LOAD: Fill in simple average for each hour (CBL)	CBL - Metered On-site Generation: Fill in simple average for each hour (CBL)	LOAD: Fill in only EDRP event hours with actual meter readings	GENERATION: Fill in only EDRP event hours with actual meter readings	Hourly Performance: (fill in only EDRP event hours)
1.	5/2/2001	<input checked="" type="checkbox"/>	1	1.1				
2.	5/1/2001	<input checked="" type="checkbox"/>	2	1.1				
3.	4/30/2001	<input checked="" type="checkbox"/>	3	1.2				
4.	4/27/2001	<input type="checkbox"/>	4	1.2				
5.	4/26/2001	<input type="checkbox"/>	5	1.2				
6.	4/25/2001	<input checked="" type="checkbox"/>	6	1.2				
7.	4/24/2001	<input checked="" type="checkbox"/>	7	1.2				
8.	4/23/2001	<input type="checkbox"/>	8	1.3				
9.	4/13/2001	<input type="checkbox"/>	9	1.3				
10.	4/12/2001	<input type="checkbox"/>	10	1.4				
			11	1.4				
			12	1.5				
			13	1.5		1.3		
			14	1.6		1.14		0.2
			15	1.6		1.1		0.46
			16	1.6		1.1		0.5
			17	1.6		1.1		0.5
			18	1.6				
			19	1.5				
			20	1.5				
			21	1.4				
			22	1.3				
			23	1.2				
			24	1.1				
			25*					

(Enter all dates excluded that should otherwise be included in the CBL Basis for this event and a Reason Code for each date.)

Dates Excluded:	Reason:
1. 4/20/2001	S
2. 4/19/2001	S
3. 4/18/2001	S
4. 4/17/2001	S
5. 4/16/2001	S
6.	
7.	
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Reason Codes:

- E** EDRP Participation
- D** DADRP Participation
- S** Shutdown-use NYISO rule
- O** Other - must specify

**The extra hour that appears at the time shift from DST to EST will be after the first hour beginning 2 and the missing hour that occurs during the time shift from EST to DST will be represented by an empty field. For example, the hours will appear as 1,2,2,3,... and 1,3,4,...*

Hourly Performance Calculations

Load only = col. A - col. B

Generation only (metered) = col. A2 - col. C

Generation only (NET metered) = (col. A - col. B)

Load and generation (NET metered) (col. A - col. B)

Load and generation (separately metered) (col. A1 - col. B) + (col. C - col. A2)

Prepared by: _____ Date: _____
 Phone: _____ Fax: _____
 E-mail: _____

Attachment D-Example: NYISO Emergency Demand Response Program (EDRP) Event Participation Report

EXAMPLE 3: ON-SITE EMERGENCY GENERATION ONLY

Date of EDRP Event: 4-May-01

NYISO PTID: 718639

CSP Name/ID: Curtailment Service Provider/12345

LBMP Zone of EDRP Load: J

Name of LSE: Load-Serving Entity

LSE's Electric Acct. No: 7777-7777-7777-7777

Meter Number: 17953

Type of EDR: *(check all that apply)*

On-site Generator ✓

Load Name: Load Reduction Customer #3

Interruptible Load

Check box at left if Load is Net Metered

Enter all values rounded to .001 MWh

Load Data - CBL Determination Data		A1	A2	B	C	D	
Dates included in CBL Basis for this EDRP Event (mm/dd/yy in reverse chronological order)		Hour of Day (hour ending)	CBL - LOAD: Fill in simple average for each hour (CBL)	CBL - Metered On-site Generation: Fill in simple average for each hour (CBL)	LOAD: Fill in only EDRP event hours with actual meter readings	GENERATION: Fill in only EDRP event hours with actual meter readings	Hourly Performance: (fill in only EDRP event hours)
1.	<input type="checkbox"/>	1		0			
2.	<input type="checkbox"/>	2		0			
3.	<input type="checkbox"/>	3		0			
4.	<input type="checkbox"/>	4		0			
5.	<input type="checkbox"/>	5		0			
6.	<input type="checkbox"/>	6		0			
7.	<input type="checkbox"/>	7		0			
8.	<input type="checkbox"/>	8		0			
9.	<input type="checkbox"/>	9		0			
10.	<input type="checkbox"/>	10		0			
		11		0			
		12		0			
		13		0		0.5	0.5
		14		0		0.7	0.7
		15		0		0.7	0.7
		16		0.1		0.7	0.6
		17		0.1		0.8	0.7
		18		0.2			
		19		0.2			
		20		0			
		21		0			
		22		0			
		23		0			
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(Enter all dates excluded that should otherwise be included in the CBL Basis for this event and a Reason Code for each date.)

Dates Excluded:	Reason:
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Reason Codes:

- E** EDRP Participation
- D** DADRP Participation
- S** Shutdown-use NYISO rule
- O** Other - must specify

**The extra hour that appears at the time shift from DST to EST will be after the first hour beginning 2 and the missing hour that occurs during the time shift from EST to DST will be represented by an empty field. For example, the hours will appear as 1,2,2,3,... and 1,3,4,...*

Hourly Performance Calculations

Load only = col. A - col. B
 Generation only (metered) = col. A2 - col. C
 Generation only (NET metered) = (col. A - col. B)
 Load and generation (NET metered) (col. A - col. B)
 Load and generation (separately metered) (col. A1 - col. B) + (col. C-col. A2)

Prepared by: _____ Date: _____
 Phone: _____ Fax: _____
 E-mail: _____

Attachment D-Example: NYISO Emergency Demand Response Program (EDRP) Event Participation Report

EXAMPLE 4: LOAD REDUCTION PLUS ON-SITE EMERGENCY GENERATION (METERED SEPARATELY) - NO EXCLUSION DATES

Date of EDRP Event: 4-May-01

NYISO PTID: 718945

CSP Name/ID: Curtailment Service Provider/12345

LBMP Zone of EDRP Load: J

Name of LSE: Load-Serving Entity

LSE's Electric Acct. No: 9999-9999-9999-9999

Meter Number: 32888

Type of EDR: *(check all that apply)*

On-site Generator

Interruptible Load

Check box at left if Load is Net Metered

Load Name: Load Reduction Customer #4

Enter all values rounded to .001 MWh

Load Data - CBL Determination Data			A1	A2	B	C	D	
Dates included in CBL Basis for this EDRP Event (mm/dd/yy in reverse chronological order)			Hour of Day (hour ending)	CBL - LOAD: Fill in simple average for each hour (CBL)	CBL - Metered On-site Generation: Fill in simple average for each hour (CBL)	LOAD: Fill in only EDRP event hours with actual meter readings	GENERATION: Fill in only EDRP event hours with actual meter readings	Hourly Performance: (fill in only EDRP event hours)
1.	5/2/2001	<input checked="" type="checkbox"/>	1	1.107	0			
2.	5/1/2001	<input type="checkbox"/>	2	1.12	0			
3.	4/30/2001	<input type="checkbox"/>	3	1.2	0			
4.	4/27/2001	<input checked="" type="checkbox"/>	4	1.21	0			
5.	4/26/2001	<input checked="" type="checkbox"/>	5	1.26	0			
6.	4/25/2001	<input type="checkbox"/>	6	1.24	0			
7.	4/24/2001	<input checked="" type="checkbox"/>	7	1.23	0			
8.	4/23/2001	<input checked="" type="checkbox"/>	8	1.25	0			
9.	4/20/2001	<input type="checkbox"/>	9	1.28	0			
10.	4/19/2001	<input type="checkbox"/>	10	1.3	0			
			11	1.32	0			
			12	1.33	0.1			
			13	1.35	0.2	1.36	0.46	0.25
			14	1.34	0.5	1.36	0.5	0
			15	1.33	0.5	1.32	0.5	0.01
			16	1.314	0	1.2	0.5	0.614
			17	1.265	0	1.2	0.5	0.565
			18	1.21	0			
			19	1.17	0			
			20	1.16	0			
			21	1.154	0			
			22	1.139	0			
			23	1.132	0			
			24	1.29	0			
			25*					

(Enter all dates excluded that should otherwise be included in the CBL Basis for this event and a Reason Code for each date.)

Dates Excluded:	Reason:
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Reason Codes:

- E** EDRP Participation
- D** DADRP Participation
- S** Shutdown-use NYISO rule
- O** Other - must specify

**The extra hour that appears at the time shift from DST to EST will be after the first hour beginning 2 and the missing hour that occurs during the time shift from EST to DST will be represented by an empty field. For example, the hours will appear as 1,2,2,3,... and 1,3,4,...*

Hourly Performance Calculations

Load only = col. A - col. B
 Generation only (metered) = col. A2 - col. C
 Generation only (NET metered) = (col. A - col. B)
 Load and generation (NET metered) (col. A - col. B)
 Load and generation (separately metered) (col. A1 - col. B) + (col. C - col. A2)

Prepared by: _____ Date: _____
 Phone: _____ Fax: _____
 E-mail: _____

