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new . york . independent . system . operator



nyiso  
Emergency Demand Response  
Program Manual

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LIPA Comments

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## 1.0 Definitions and Acronyms

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~~Billing Credits – Credits to a customer’s electric bill for load reduced during a curtailment period.~~

**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”).

~~Congestion Loss Component – The component of the LBMP measured at a location or the Transmission Usage Charge between two locations that is attributable to the cost of Transmission Congestion.~~

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

**Curtailment Program End Use Customer (EUC)** – An ~~retail~~ end-user ~~customer that~~ qualified as a CSP ~~that 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<sub>7</sub> of at least 100 kW, pursuant to the Emergency Demand Response Program (“EDRP”) and related ISO procedures.

**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.

~~\*\*NYISO Direct Customer – (get from ?)(See web site) (move to NYISO Direct Customer)~~

~~Economic Condition – An abnormal high market price of energy that occurs over a period that could be the direct result of a large demand for electricity by the consumer during a time when a low supply of energy is available.~~

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

**EDRP Loads** – ~~End Retail use customers~~~~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.(get from NYISO SOP).~~

**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.

~~\*\*NYISO Limited Customer – ?? (move to NYISO Limited Customer)~~

**Load Curtailment (or Reduction)** - A reduction in energy usage at a retail end user's customer facility that is the result of the customer-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 customers end users located within the NYCA, including ~~NYISO Direct Customers, an entity that takes service directly from the ISO to supply its own Load in the NYCA.~~

**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-use customer-end user whose load it is being operated to serve and does not supply energy to the distribution system.

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

~~Marginal Energy Component – The Energy component of the LBMP that is bid, produced, purchased, consumed, sold or transmitted over a period of time and measured in kilowatt or megawatt hours.~~

~~Marginal Loss Component – The component of the LBMP at a bus that accounts for the Energy Losses, as measured between that bus and the reference bus.~~

~~Metering Authority – ??~~

~~**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 installation, and customer association, validation, editing and estimation (CAVEE).~~

**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 ~~(e.g., telemetry signal biasing)~~ 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, and
- their status as a Limited Customer expires at the end of the EDRP program.

**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.

**NYISO Customer** – See web site <http://www.nyiso.com/>

**NYISO Limited Customer** – See web site <http://www.nyiso.com/>

**NYS DEC** – New York State Department of Environmental Conservation.

**Operating Reserve Shortage** – ~~get from~~ [NYISO SOP](#).

**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 is connected to a telephone modem~~ which allows for remote collection of metering data.

~~Self Generation – Using an on-site electrical generator to meet all or part of a facility's electricity needs.~~

**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.

~~System Electrical Demand – The total load of all the electricity using devices and equipment that are turned on at one time on an electrical distribution system.~~

~~System Electrical Peak Demand – The largest hourly electrical load on an electrical distribution system during the summer or winter periods.~~

~~Transmission Congestion – A condition on an electrical transmission system during times of peak electrical demand which prevents the transmission of additional electricity through the transmission system.~~

~~Weather Sensitive Load - Electrical load which increases as the outdoor temperature either increases or decreases.~~

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.

Zone = \_\_\_\_\_

## 2.0 Program Summary

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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.

~~Customers-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 Customer of the NYISO
- as a NYISO-approved Curtailment Program End Use Customer

CSPs should be able to provide load reduction of at least 100 kW per ~~zone~~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.

~~Customers-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, ~~and~~ pursuant to NYISO emergency operations procedures. CSPs shall be paid the higher of \$500 per MWh or the Real Time Zonal LBMP per MWh of verified load reduction. If the CSP is required by the ISO to reduce load for four hours or less, payment will be the higher of the \$500 per MWh or the Real Time zonal LBMP per MWh of verified load reduction for the first two hours of verified load reduction and the Real Time zonal LBMP per MWh of verified load reduction for the second two hours. If the NYISO extends the load reduction request beyond four hours, all hours will be paid the higher of \$500 per MWh or the Real Time zonal LBMP per MWh of verified load reduction. 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

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### 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 ~~customers-retail end users~~ able to provide Load Reduction (EDRP Loads) 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 ~~customers-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 ~~customers-retail end users~~ or the ~~customers-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 EDRP Loads 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 EDRP Loads 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 ~~or-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 generators<sup>1</sup> or to reduce a measurable and verifiable portion of the load.
- 3) Be capable of reducing at least 100 kW of load per Zone.

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<sup>1</sup> 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.

- 4) Be capable of responding within two hours of notice from the NYISO.
- 5) ~~Complete the appropriate sections (based on the CSP category for which you are registering) of the form provided in Attachment A. 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 EDRP Load cannot subscribe the same metered load with more than one CSP.

~~Customers-Retail end users~~ under a contract that prevents them from curtailing energy are prohibited from participating in the program. The NYISO will ~~confirm-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

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 will serve all or part of what otherwise would be NYISO load (i.e., the customer's 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 achieving full reduction 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 ~~call~~ notification from a Curtailment Service Provider (CSP).
- 5) Be compliant with the appropriate NYS DEC permitting / registration requirements.
- 6) EDRP Loads 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.

~~It is anticipated that operation will only be requested during weekday daylight hours and participation is voluntary.~~

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 s if the NYISO calls for



operation and the SCR does not perform. See the ICAP Manual ~~for more details~~ located at [www.nyiso.com/markets/icapinfo.html](http://www.nyiso.com/markets/icapinfo.html) ~~for more details~~.

### **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.

The EDRP and local reliability programs may ask participants to curtail back to back, concurrently or have times that overlap. During the times when the EDRP and the local reliability programs have requested concurrent or overlapping load reduction the price paid shall be the highest price offered between the two programs.

## 4.0 CSP Registration Procedures

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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](http://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: Just need to fill out Attachment A and one copy of Attachment B for each participating load).~~

1. Complete Attachment A of this manual.
2. Register each EDRP Load with the NYISO after signing a contract using the EDRP Certification form provided in Attachment B of this manual.

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 ~~retail end user site~~ EDRP Load with the NYISO after signing a contract using the EDRP Certification form provided in Attachment B of this manual.
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 10 business days after notification is provided to the LSE unless the NYISO contacts the LSE via phone or e-mail to the contrary.

~~The NYISO will notify the LSE of the new participant in the EDRP within 2 days after receipt of the EDRP Certification form.~~

~~The EDRP participant registration is deemed approved in 10 business days after notification is provided to the LSE unless the NYISO contacts the Curtailment Customer Aggregator via phone or e-mail to the contrary. ( what are the concerns?). The registration will be forwarded 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.~~

### 4.2 Direct Customers

~~(Direct Customers of the NYISO should f~~Fill out Attachment A and one copy of Attachment B).

### 4.3 Curtailment Customer Aggregators

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. They do not require ~~customers-retail end users~~ to become members of the NYISO, will handle all the NYISO administrative activities and may offer other benefits or incentives. To register as

~~Registration to become an Curtailment Customer Aggregator, you must become a NYISO Limited Customer. includes:~~

~~5. Becoming a NYISO Customer or [NYISO Limited Customer]. If you are applying for NYISO ~~Customer~~Limited Customer status as an Curtailment Customer Aggregator and will only be a seller to the NYISO:~~

- ~~1. Complete Sections A, B, F, G, H, J and K of the NYISO Registration Packet, available at the NYISO website~~
- ~~2. Sign the Market Services Tariff.~~
- ~~3. Register each EDRP Load with the NYISO after signing a contract using the EDRP Certification form provided in Attachment B of this manual.~~
- ~~4. 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.~~
- ~~5. The EDRP participant registration is deemed approved in 10 business days after notification is provided to the LSE unless the NYISO contacts the Curtailment Customer Aggregator via phone or e-mail to the contrary.~~

~~There is no charge to become a NYISO Customer/Limited Customer (other fees?) and the application process can take up to 60-30 days.~~

- ~~2. Register each ~~Customer~~ retail end user site with the NYISO after signing a contract using the EDRP Certification form provided in Attachment ~~A~~B.~~
- ~~3. The NYISO will notify the LSE of the new participant in the EDRP within 2 days after receipt of the EDRP Certification form.~~
- ~~4. The EDRP participant registration is deemed approved in ~~3~~ 10 business days after notification is provided to the LSE unless the NYISO contacts the Curtailment Customer Aggregator via phone or e-mail to the contrary. (what are the concerns?). The registration will be forwarded to the appropriate ~~LSB~~ 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.~~

#### **4.4 Curtailment Program End Use Customer (EUC)**

An EUC is any Local Generation owner or ~~customer~~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. Registration to become an EUC includes:

- ~~1. Becoming a NYISO Limited Customer. If you are applying for NYISO Limited Customer status as an EUC and will only be a seller to the NYISO:~~
- ~~• Complete Sections A, B, F, G, H, J and K of the NYISO Registration Packet, available at the NYISO website~~
- ~~• Sign the Open Access Transmission and Market Services Tariffs~~

6. Register each EDRP Load with the NYISO after signing a contract using the EDRP Certification form provided in Attachment B of this manual.
7. 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.
8. The EDRP participant registration is deemed approved in 10 business 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.

- ~~1. Becoming a NYISO Customer or NYISO[Limited Customer] using the application form found under [www.nyiso.com/services/relations/cregistration/index.html](http://www.nyiso.com/services/relations/cregistration/index.html). If you are applying for NYISO Customer/Limited Customer status as an EUC and you will only sell to the NYISO please note this in Section A of the application found in Attachment A. Register each site with the NYISO using Section D if a generator (maybe) and submit the EDRP Certification form. There is no charge to become a either a NYISO Customer (other fees) or a NYISO Limited Customer and the application process can take up to 60 days. (can this be shorter?).~~
- ~~2. NYISO will notify the LSE serving your electric requirement of your participant in the EDRP within 2 days of the submission of the EDRP Certification form.~~

~~The EDRP participant registration is deemed approved in 3-10 business days after submission unless the NYISO contacts the EUC via phone or e-mail to the contrary. (concerns?) The registration will be forwarded 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.~~

#### **~~4.5 Procedure to Apply for Limited Customer Status~~**

All provisions as required for full ~~Customer~~ Retail End User status except:

- ~~? Status expires at the end of the EDRP program (Oct. 31, 2002)~~
- ~~? No financial assurance obligations (Aggregators will not be buying energy or other services)~~
- ~~? Non-voting membership~~
- ~~? No registration, application fees~~

## 5.0 Operating Mechanism / Implementation

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### 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 may be called in conjunction with Special Case Resources in situations where 24-hour advance notice is possible.

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. ~~The NYISO will contact this individual to initiate a curtailment within the program. The CSP will be responsible for establishing procedures to communicate with load reduction customers.~~

~~minimum duration of curtailment~~

When the EDRP is invoked, the NYISO will notify each CSP. Each CSP will notify the EDRP loads in accordance with the communications procedures agreed upon between the CSP and the EDRP load.

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.

## 6.0 Metering, Verification, Billing and Settlement

### 6.1 Metering Requirements

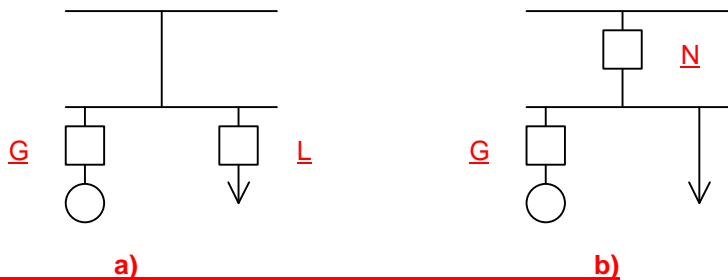
#### 6.1.1 Metering Device Requirements

CSPs are required to provide hourly interval metering data to validate performance. EDRP participants must have an installed integrated hourly metering device approved for use by the LSE that provides integrated hourly kWh values for market settlement purposes.

#### 6.1.2 Metering Configuration Requirements

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

- 1) When a premise subscribes only the on-site generation, the hourly interval meter shall be installed to measure the generator's output;
- 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; or
- 3) When a premise subscribes both the on-site generation and load, both the on-site generation and the load must be metered separately. Metering of the load 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**

Metering equipment must be installed for 10 previous weekdays, excluding holidays and NYISO declared curtailment days.

~~GSPs are required to provide hourly interval metering to validate performance. EDRP participants must have NYPSC or other appropriate regulatory body approved metering equipment that provides integrated hourly kWh values for market settlement purposes. These requirements can be met by using either:~~

- ~~1) metering capable of recording integrated hourly values for the actual net generation; or~~
- ~~2) metering that provides load change by measuring actual load before and after the reduction request, such that there is a valid integrated hourly value for the hour prior to the event and each hour during the event.~~

~~(Need a statement about metering on emergency generation).~~

## 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, one of the following is required:
  - a) For on-site generation participating in the NYISO Special Case Resource (SCR) program, test data supplied to qualify as a Special Case Resource will satisfy the requirement for the EDRP program; or
  - b) For on-site generation that is not participating in the NYISO Special Case Resource program, provide four-hour test results of pledged output, or provide historical operating data for operations within the 6 months prior to participating in the EDRP. Resources that have environmental or operational limitations may qualify by performing a two-hour test or by providing historical operating data for operations within the 6 months prior to participating in the EDRP;
- 2) For loads, provide a minimum of 1 complete billing period of hourly interval data immediately preceding the first Capability Period the load will participate in;
- 3) For totalized loads, hourly interval data for a minimum of 1 complete billing period is required for all participating loads at the premise; or
- 4) In the event of a newly installed interval meter, the CSP shall provide the prior three month's monthly billing history.

### 6.2.2 Baseline Calculation Method

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, the generator output as metered will be used for performance as defined in section 6.3.

Customer Baselines for the EDRP program shall be calculated as the simple average for each hour, as defined below:

To calculate the **Customer Baseline-Weekday (CB-WD)**, use the previous 10 weekdays, except for exclusion days, ending midnight prior to the emergency event day to compute the simple average for each hour. If due to exclusions less than 7 weekdays are available from the previous 10 weekdays, continue selecting previous weekdays in reverse chronological order until there are 7 weekdays in the simple average.

To calculate the **Customer Baseline-Saturday (CB-SA)**, use the previous 3 Saturdays, except for exclusion days, ending midnight prior to the emergency event day to compute the simple average for each hour. A minimum of 3 Saturdays are required for computing the simple average for CB-SA.

To calculate the **Customer Baseline-Sunday (CB-SU)**, use the previous 3 Sundays, except for exclusion days, ending midnight prior to the emergency event day to compute the simple average for each hour. A minimum of 3 Sundays are required for computing the simple average for CB-SU.

Exclusion provisions:

Three types of exclusions are required when computing the calculation of the simple average: holidays, EDRP event days and shutdown days as defined below:

- a) Six (6) holidays shall be excluded from the average when any of the holidays fall on a weekday, those holidays are: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. Dates for these holidays shall be published by the NYISO prior to each Capability Period in which the EDRP program is available;
- b) 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 simple 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; and
- 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.

- ~~1. The otherwise applicable load shall be determined by taking the simple average, by hour, of the 10 previous weekdays, excluding holidays and NYISO-declared curtailment days.~~
- ~~2. The following 6 days shall be considered holidays (when the holiday falls on a weekday) and excluded from the average for this method: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.~~
- ~~3. The average by hour for weekdays shall be computed as follows: the simple average, by hour, for 10 previous consecutive weekdays prior to the day of the actual event when there are no holidays or NYISO curtailment events in the 10 previous consecutive weekdays (Example 2.3 in Attachment D).~~
- ~~4. Exclusions from the rolling average for weekdays:
  - ~~4.1 If a holiday or curtailment day occurs within the 10 previous consecutive weekdays prior to the day of the actual event, the holiday or curtailment day is eliminated from the simple average. In this case, the simple average by hour is produced from the remaining number of days as long as there is a minimum of 7 days in the average (Example 2.4.1 in Attachment D).~~
  - ~~4.2 If there are less than 7 weekdays in the average due to multiple curtailment days and/or holidays, go back to include previous weekdays until there are 7 previous weekdays in the average (Example 2.4.2 in Attachment D).~~
  - ~~4.3 Exclude the value from any hour in which the actual load in that hour is more than 50% greater or more than 50% less than the corresponding hourly rolling average after all other exclusions. There must be a minimum of 7 and a maximum of 10 hourly weekday values for every hour (Example 2.4.3 in Attachment D).<sup>2</sup>~~~~

<sup>2</sup> ~~This provision accounts for exclusion of shutdowns and also for hours when extreme operating conditions may occur from recovery operations or equipment testing. Excluding hours where the actual load is less than 50% of the rolling average for the hour prevents the customer's~~



~~5. Weekend calculation: the rolling average by hour for a weekend Emergency Demand Response Program event shall include the 6 weekend days (Saturdays and Sundays) prior to the weekend event (Example 2.5 in Attachment D).~~

~~5.1 Exclusions: Any weekend day that contains an Emergency Demand Response Program event shall be excluded from the rolling average by hour calculation and shall not be replaced (Example 2.5.1 in Attachment D).~~

### **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, 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:

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

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

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

#### **On-site Generation Only Configuration**

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

$$P_h = OG_h$$

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

#### **Load and On-site Generation Configuration**

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

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

~~performance from being understated. Windfalls are prevented by excluding hours where the difference between actual load and the rolling average is greater than 50%.~~

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

Where  $P_h$  = performance for the hour

$OG_h$  = Metered On-site generator output 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

### 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, following or including an hour in which performance is greater than zero, or the last hour of the EDRP event, whichever is earlier. Final compliance will also occur if the actual load goes above the CBL at any point during the event ( $(CB-xx)_h - AL_h$  is less than zero).

#### 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.

## 6.3 Start and End of Performance Period

Performance is measured as the difference between the baseline (rolling average by hour) and the actual metered usage by hour during the event.

$$P_h = BL_h - AL_h$$

Where  $P_h$  = performance in the hour

$BL_h$  = baseline for the hour as calculated using the rolling average method described above

$AL_h$  = actual load in the hour

### 6.3.1 Initial Compliance

Initial Compliance (P-IC) is the maximum measurement of compliance after the customer has reduction within the first two hours of the event, as the first event hour in which performance in the hour is greater than zero (actual load is less than baseline).

### 6.3.2 Final Compliance (Restored Load)

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

### 6.3.3 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								
		10:00 - 11 AM	11:00 - 12 AM	12:00 - 1 PM	1:00 - 2 PM	2:00 - 3 PM	3:00 - 4 PM	4:00 - 5 PM	5:00 - 6 PM	6:00 - 7 PM
<b>Customer 1</b>										
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			
			<b>P-IC</b>	<b>P</b>	<b>P</b>	<b>P-FC</b>				
Compliance Period										
<b>Customer 2</b>										
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		
				<b>P-IC</b>	<b>P</b>	<b>P</b>	<b>P-FC</b>			
Compliance Period										
<b>Customer 3</b>										
BL	300	300	350	350	350	300	300	300	300	
AL	300	300	350	325	325	325	275	275	300	
Performance			0	25	25	-25	25	25		
				<b>P-IC</b>	<b>P-FC</b>					
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 EDRP Load(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 ~~Metering Authority~~MDSP (in most, if not all, cases the Transmission Owner) for optional review. After ~~5-10~~ business days the NYISO will accept the data as submitted unless challenged by ~~the Metering Authority~~the MDSP. The ISO maintains the ability to subsequently review the data through the Market Monitoring Unit.

#### 6.4.2 EDRP Reporting

The following forms shall be required for reporting performance in an EDRP event:

1. Event Participation Report – One for each load or on-site 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 by zone for payment.

#### 6.4.3 EDRP Load Reduction Data

A CSP will submit response(s) of the EDRP Load(s) or on-site generation that participated in the emergency event aggregated by hour and by zone.

- c) Where the CSP's EDRP load response is based on individual end-use loads alone or for premises with both participating load and on-site generation, the CSP is required to provide metered hourly interval data for each load and the on-site generation for the entire billing period in which the EDRP event occurred.
- d) Where the CSP's EDRP load response is provided only from on-site generation, the CSP shall provide interval data for the 24-hour period ending midnight of the day of the EDRP event.
- e) 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, the prior month's bill period data must also be provided for that end-use load and on-site generation.

#### 6.4.4 Data Format

Individual end-use or on-site 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: [EDRPMgr@nyiso.com](mailto:EDRPMgr@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:***

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

~~$\Sigma (B - R) * L * (\text{Greater of } \$500, \text{Real-Time Zonal LBMP}) \text{ for each hour of the emergency}$   
(maybe (1-L) depending upon how loss factor is defined by NYISO)~~

***If the Emergency is less than four hours:***

~~The greater of 2 hours or the length of the emergency:~~

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

$$P_h * \text{LBMP}_{\text{RT Zonal, h}} \text{ for hours three and four.}$$

~~$\Sigma (B - R) * L * (\text{Greater of } \$500, \text{Real-Time Zonal LBMP}) \text{ for each hour of the emergency}$~~

~~$\Sigma (B - R) * L * (\text{Real-Time Zonal LBMP}) \text{ for the amount of time between the end of the emergency and four hours from the start of the customer's response (Given that the retail end user customer responds within two hours after the emergency was issued.)}$~~

~~$P_h = \text{performance during hour h as defined in Section 6.3.1}$~~

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

~~$B = \text{Baseline Usage in MWh}$~~

~~$R = \text{Usage During Response to Emergency (MWh)}$~~

~~$L = \text{Appropriate Transmission and Distribution Loss factor}$~~

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. EDRP Loads will be expected to begin curtailment at the specified starting time, ~~with reasonable allowance made for early startup~~. The four hour minimum run time will begin at the time when the NYISO directs the ~~customer-retail end user~~ to reduce load or, if load reduction is requested as soon as possible, when the ~~customer-retail end user~~ begins his load reduction response.

Participants will only be paid for performance during the event.

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.

## 6.6 **Assessment of Program Charges**

~~The costs for the program will equal the sum of all payments to customers calculated and paid out under Section 6.4.1.~~

### ~~6.6.1 Local Emergency~~

~~For a local emergency costs will be allocated to all LSEs serving load in that zone according to the formula:~~

~~$\Sigma$  Total of Hourly Emergency Payments \* (LSE<sub>load</sub>/Aggregate Zonal Load) for each hour of emergencies in the billing month. (Question: what value of LSE load do we use? RT, RT+DAM, or some base value? Shouldn't we also include generators who are short in RT?)~~

~~This charge will appear as a distinct line item on the LSE's bill and will have supporting material that will include the amount of load response for each hour of the emergency.~~

### ~~6.6.2 System Emergency~~

~~For a system emergency costs will be allocated to all LSEs according to the formula:~~

~~$\Sigma$  Total of Hourly Emergency Payments \* (LSE<sub>load</sub>/Aggregate NYCA Load) for each hour of emergencies in the billing month.~~

~~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.~~

### 6.6.1 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:

<b>Table 6.2 Emergency Demand Reduction Program Cost Allocation</b>	
<b>Location of Condition 1 and/or 2</b>	<b>EDR Cost Allocation</b>
<u>All or Part of One NYCA Zone (including relief for Local Reliability Rule problems within a Zone as requested by a TO)</u>	<u>All Loads in that Zone (<math>L_z</math>)</u>
<u>Two or More NYCA Zones</u>	<u>All Loads in those Zones (<math>L_{zsum}</math>)</u>
<u>All Zones in NYCA</u>	<u>All Loads in NYCA (<math>L_{system}</math>)</u>
<u>An External Control Area</u>	<u>The External Control Area (<math>L_{external}</math>)</u>

#### 6.6.4. Cost Allocation Formula

For a system emergency costs will be allocated to all LSEs according to the formula:

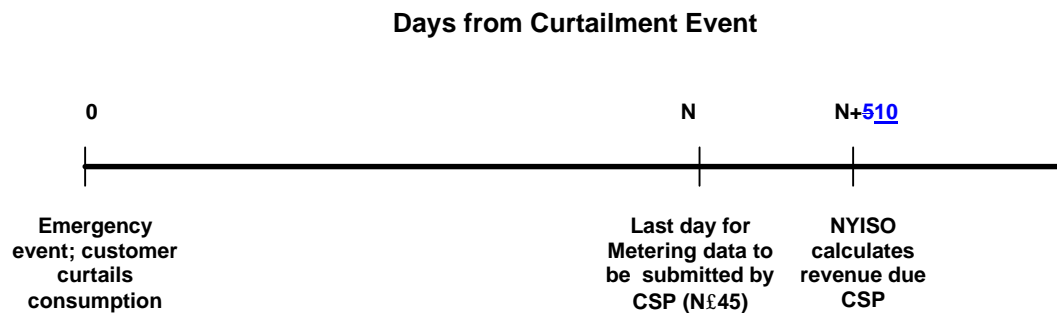
$$\Sigma \text{ Total of Hourly Emergency Payments} * (LSE_{load} / \text{Responsible Load})$$

for each hour of emergencies in the billing month. Responsible Load is one of the four loads ( $L_z$ ,  $L_{zsum}$ ,  $L_{system}$ , or  $L_{external}$ ) defined in Table 6.2 and selected based upon the location of Condition 1 and/or 2. Responsible load consists of:

- Bilateral, DAM and RT energy
- NYCA Exports and Imports [to serve a NYISO LBMP energy purchase]

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

|

|

## 7.0 References

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- [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

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## Emergency Demand Response Program (EDRP)

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

~~EDRP Suppliers may only supply an EDR that has not been previously committed in the New York market or in any market.~~ This form must be faxed to **518-356-XXXX** or e-mailed to **xxxxxxx attention: Manager EDRP**

All inquires, notices and communications by the NYISO will be sent to the address provided below.

Name: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
E-mail: \_\_\_\_\_

---

### Circle Only One – Which type of organization are you?

Aggregator                      Load Serving Entity              Direct Customer              End Use Customer

---

**Is your organization a current NYISO Customer?** (circle 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 ~~XX-4~~ for more application requirements)

Please list all the LBMP zone(s) you plan on providing an EDR: \_\_\_\_\_  
\_\_\_\_\_

The CSP certifies that it meets the requirements to be an CSP supplier 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: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

\_\_\_\_\_  
Authorized Representative

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

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[This form can be emailed to \\_\\_\\_\\_\\_@nyiso.com](#)

(use one form for each Retail End User ~~Customer~~ Registered by the CSP)

## Emergency Demand Response Program (EDRP) Load Certification

Owner / Operator of EDRP Load: \_\_\_\_\_

Location of EDRP Load: \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

Name of Local Distribution Company (LDC): \_\_\_\_\_

LDC's Electric Account Number (s) for EDRP Load: \_\_\_\_\_

---

Maximum demand recorded in past 12 months for above account: \_\_\_\_\_ KW

LBMP Zone of EDRP Load: \_\_\_\_\_

Capacity Rating of EDRP Load \_\_\_\_\_ MW (rounded to nearest 0.1 MW)

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

~~Transmission District System Line Loss: \_\_\_\_\_ (?)~~

**~~NOTE: EDRP Load can not exceed Capacity Rating x (1 + line loss) or Maximum recorded demand (?)~~**

Type of metering (check all that apply) –

\_\_\_\_\_ Existing utility interval meter; \_\_\_\_\_ **Meter ID #: \_\_\_\_\_**

\_\_\_\_\_ Permanent recording meter on generator / interrupted load – attach 15 minute metering data

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

~~\_\_\_\_\_ Permanent visual (non recording) meter – attach operator logs identifying reading every 15 minutes~~

~~\_\_\_\_\_ Temporary visual (non recording) meter – attach operator logs identifying reading every 15 minutes~~

~~For On-Site Generators, provide:~~

~~Generator Manufacturer, Model number, serial number and nameplate rating(s)~~

~~\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_~~

~~Identify types of loads that will be transferred to generation or interrupted~~

~~\_\_\_\_\_ Entire facility load~~

~~\_\_\_\_\_ Specific Equipment (identify load, transfer switches etc) \_\_\_\_\_~~

---

Curtailment Customer Aggregator (Aggregator) or LSE Information

Name of Aggregator or LSE supplying EDRP Load: \_\_\_\_\_

Period for which Aggregator or LSE will supply EDRP Load: \_\_\_\_/\_\_\_\_/\_\_\_\_ to \_\_\_\_/\_\_\_\_/\_\_\_\_

---

Contact information for ISO notification of curtailments:

Phone Number (\_\_\_\_) \_\_\_\_ - \_\_\_\_; Pager (\_\_\_\_) \_\_\_\_ - \_\_\_\_; E-Mail \_\_\_\_\_

~~\_\_\_\_\_~~  
~~Authorized Representative of Owner / Operator of EDRP Load~~ \_\_\_\_\_ Authorized Representative of Curtailment  
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 \$4500

Using the formulas from above the revenues are:  
 $(10 * 600) + (10 * 600) + (10 * 600) + (10 * 4500) = \$223,000$

Data is submitted to the ISO on July 3<sup>rd</sup> by the CSP  
 The ISO sends to data to the TO on July 5<sup>th</sup>  
 The TO does not object to the data within 5-10 business days  
 On approximately August 8<sup>th</sup> the bill is sent to the CSP with a credit of \$223,000  
 The payment is transferred to the CSP on approximately August 26<sup>th</sup>.

On August 8<sup>th</sup> a bill is sent out to all LSE with a charge of \$223,000 \* (LSE<sub>load</sub>/Aggregate Zonal Load)

On August 16<sup>th</sup> the LSEs pay \$223,000  
~~On August 22<sup>nd</sup> the NYISO pays the CSPs \$22,000~~

### Curtailment Incentive Worksheet (per event) ISO Emergency Program - Energy Only Event Duration Equals 4 Hours

Customer Name: \_\_\_\_\_  
 Customer Contact: \_\_\_\_\_  
 Customer Phone: \_\_\_\_\_  
 Curtailment Service Provider: \_\_\_\_\_  
 Utility or Meter Service Provider: \_\_\_\_\_  
 Customer Account #: \_\_\_\_\_

kW Nominated by Customer: 10,000  
 ISO Program Payment per kWh (Emergency): (higher of \$0.50 per kWh or LBMP)  
 Emergency Duration and Time Called: 4 hours beginning at 4:00 PM  
 Zone Customer is located in: J

Date	Hour	Customer Historic KW/hr	Customer Actual KW/hr	Customer KW - Curtailed per Hr.	Incentive Awarded per kW/hr	Payment	Curtailment Type
07/01/00	05:00 PM	14000	4000	10000	\$0.6000	\$6,000.00	ISO Emergency
07/01/00	06:00 PM	14000	4000	10000	\$0.6000	\$6,000.00	ISO Emergency
07/01/00	07:00 PM	14000	4000	10000	\$0.6000	\$6,000.00	ISO Emergency
07/01/00	08:00 PM	14000	4000	10000	\$0.4000	\$4,000.00	ISO Emergency
<b>ISO Payment to CSP</b>						<b>\$22,000.00</b>	





**Curtailment Incentive Worksheet (per event)**  
**ISO Emergency Program - Energy Only**  
**Event Duration Equals 6 Hours**

Customer Name: \_\_\_\_\_  
 Customer Contact: \_\_\_\_\_  
 Customer Phone: \_\_\_\_\_  
 Curtailment Service Provider: \_\_\_\_\_  
 Utility or Meter Service Provider: \_\_\_\_\_  
 Customer Account #: \_\_\_\_\_

kW Nominated by Customer: 500  
 ISO Program Payment per kWh (Emergency): (higher of \$0.50 per kWh or LBMP)  
 Emergency Duration and Time Called: 6 hours beginning at 1:00 PM  
 Zone Customer is located in: J

<u>Date</u>	<u>Hour</u>	<u>Customer Historic KW/hr</u>	<u>Customer Actual KW/hr</u>	<u>Customer KW - Curtailed per Hr.</u>	<u>Incentive Awarded per kW/hr</u>	<u>Payment</u>	<u>Curtailment Type</u>
07/01/00	01:00 PM	1275	675	600	\$0.5000	\$300.00	ISO Emergency
07/01/00	02:00 PM	1325	700	625	\$0.5000	\$312.50	ISO Emergency
07/01/00	03:00 PM	1211	700	511	\$0.5000	\$255.50	ISO Emergency
07/01/00	04:00 PM	1434	725	709	\$0.6250	\$443.13	ISO Emergency
07/01/00	05:00 PM	1550	900	650	\$0.7515	\$488.48	ISO Emergency
07/01/00	06:00 PM	1500	1050	450	\$0.5000	\$225.00	ISO Emergency

ISO Payment to CSP      **\$2,024.60**

## Attachment D - Example Customer Base Load Calculations

# ~~Simple Rolling Average with no Holidays or EDRP~~

NYISO Event

*Example 2.3.1*

April 2001							May 2001							June 2001							July 2001							August 2001							September 2001						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7	29	30	1	2	3	4	5	27	28	29	30	31	1	2	1	2	3	4	5	6	7	29	30	31	1	2	3	4	26	27	28	29	30	31	1
8	9	10	11	12	13	14	6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	7	8	9	10	11	9	10	11	12	13	14	15
15	16	17	18	19	20	21	13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21	12	13	14	15	16	17	18	16	17	18	19	20	21	22
22	23	24	25	26	27	28	20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25	23	24	25	26	27	28	29
29	30	1	2	3	4	5	27	28	29	30	31	1	2	24	25	26	27	28	29	30	29	30	31	1	2	3	4	26	27	28	29	30	31	1	30	1	2	3	4	5	6

Event occurs on May 3, 2001

Average includes April 19, 20, 23, 24, 25, 26, 27, 30, May 1 and May 2 (10 weekdays prior to day of event)

For each hour, the average will be made up of the sum of the loads for the hour divided by 10 (or the number of days to be included as described in items 2.3.2 and 2.3.1). For example, the average for hour ending 01:00 will be the sum of the loads from the hour ending 01:00 for each of the 10 days, divided by 10.

Time	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00
Day #1	100	150	200	250	300	350	400	450
Day #2	150	150	150	150	150	150	150	150
Day #3	100	100	100	100	100	100	100	100
Day #4	100	150	200	250	300	350	400	450
Day #5	150	150	150	150	150	150	150	150
Day #6	100	100	100	100	100	100	100	100
Day #7	100	150	200	250	300	350	400	450
Day #8	150	150	150	150	150	150	150	150
Day #9	100	100	100	100	100	100	100	100
Day #10	200	200	200	200	200	200	200	200
Sum	1,250	1,400	1,550	1,700	1,850	2,000	2,150	2,300
Average	125	140	155	170	185	200	215	230

# Simple Rolling Average with a Holiday

Example 2.3.2

April 2001							May 2001							June 2001							July 2001							August 2001							September 2001						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7	29	30	1	2	3	4	5	27	28	29	30	31	1	2	1	2	3	4	5	6	7	29	30	31	1	2	3	4	26	27	28	29	30	31	1
8	9	10	11	12	13	14	6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	7	8	9	10	11	2	3	4	5	6	7	8
15	16	17	18	19	20	21	13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21	12	13	14	15	16	17	18	9	10	11	12	13	14	15
22	23	24	25	26	27	28	20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25	23	24	25	26	27	28	29
29	30	1	2	3	4	5	27	28	29	30	31	1	2	24	25	26	27	28	29	30	29	30	31	1	2	3	4	26	27	28	29	30	31	1	30	1	2	3	4	5	6

Holiday

NYISO Event

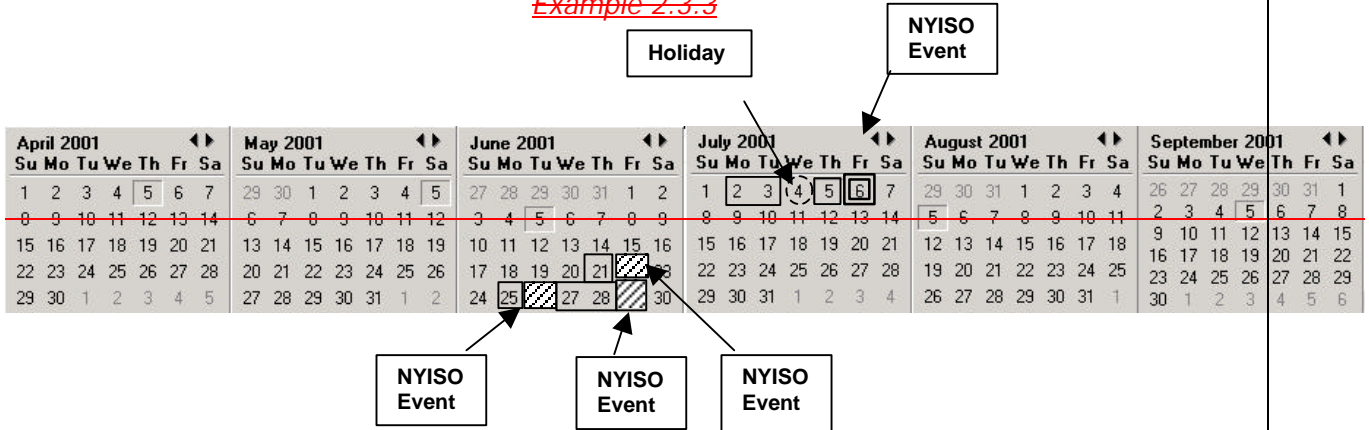
Event occurs on May 30, 2001

Average includes May 16, 17, 18, 21, 22, 23, 24, 25 and May 29 (9 weekdays prior to day of event – Memorial Day, May 28, 2001 is excluded from average)

Time	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00
Day #1	100	150	200	250	300	350	400	450
Day #2	150	150	150	150	150	150	150	150
Day #3	100	100	100	100	100	100	100	100
Day #4	100	150	200	250	300	350	400	450
Day #5	150	150	150	150	150	150	150	150
Day #6	100	100	100	100	100	100	100	100
Day #7	100	150	200	250	300	350	400	450
Day #8	150	150	150	150	150	150	150	150
Day #9	100	100	100	100	100	100	100	100
Sum	1,050	1,200	1,350	1,500	1,650	1,800	1,950	2,100
Average	116.67	133.34	150	166.67	183.34	200	216.67	233.34

# ~~Simple Rolling Average with a Holiday and Multiple EDRP Events Within the 10 Days Prior to Another EDRP Event~~

*Example 2.3.3*



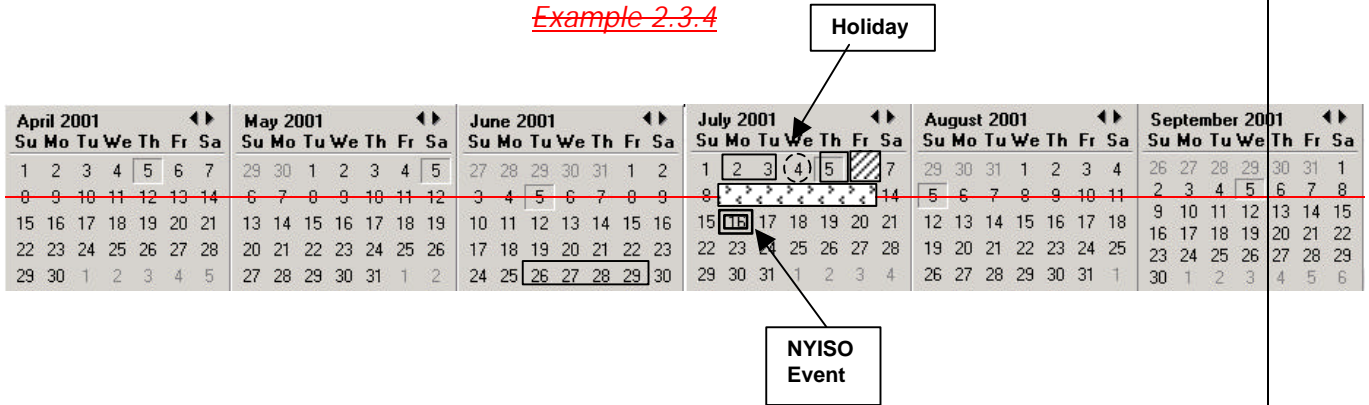
Event occurs on July 6, 2001

Average includes June 21, 25, 27, 28, July 2, 3, and 5 (7 weekdays prior to day of event — Excluded from average: NYISO events of 6/22, 6/26 and 6/29 plus holiday — Independence Day, 7/4)

Time	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00
Day #1	100	150	200	250	300	350	400	450
Day #2	150	150	150	150	150	150	150	150
Day #3	100	100	100	100	100	100	100	100
Day #4	100	150	200	250	300	350	400	450
Day #5	150	150	150	150	150	150	150	150
Day #6	100	100	100	100	100	100	100	100
Day #7	100	150	200	250	300	350	400	450
Sum	800	950	1100	1,250	1,400	1,550	1,700	1,850
Average	114.29	135.71	157.14	178.57	200	221.43	242.86	264.29

# ~~Simple Rolling Average with High/Low Usage Hour Exclusions~~

Example 2.3.4



~~Event occurs on July 16, 2001~~

~~Shutdown occurs from July 9 through July 13, 2001~~

~~Average includes June 26, 27, 28, 29 and July 2, 3, and 5 (7 weekdays prior to day of event — Excluded from average: holiday — Independence Day, 7/4 and July 6)~~

~~July 6 is excluded because actual load in one or more hours fell below 50% of rolling average for minimum number of days required in average~~

~~In this example, the average for each hour will be made up of the sums of the loads for the hour divided by 7. For example, the average for hour ending 01:00 will be the sum of the loads from the hour ending 01:00 for each of the 7 days, divided by 7.~~

7-day rolling average including July 6

Time	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00
June 27 (Day #1)	150	150	150	150	200	200	200	200
June 28 (Day #2)	100	150	200	250	200	350	400	450
June 29 (Day #3)	100	150	200	250	300	350	400	450
July 2 (Day #4)	100	150	200	250	300	350	400	450
July 3 (Day #5)	150	150	150	150	200	200	200	200
July 5 (Day #6)	100	150	200	250	300	350	400	450
July 6 (Day #7)	75	75	75	75	75	100	100	100
Sum	775	975	1175	1375	1575	1900	2100	2300
Average	110.71	139.29	167.86	196.43	225.00	271.43	300.00	328.57

50% Avg.	55.36	69.64	83.93	98.21	112.50	135.71	150.00	164.29
Exclude	none	none	July 6	July 6	July 6	July 6	July 6	July 6

*Revised 7-day rolling average – excluding July 6*

Time	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00
June 26 (Day #1)	100	150	200	250	300	350	400	450
June 27 (Day #2)	150	150	150	150	200	200	200	200
June 28 (Day #3)	100	150	200	250	200	350	400	450
June 29 (Day #4)	100	150	200	250	300	350	400	450
July 2 (Day #5)	100	150	200	250	300	350	400	450
July 3 (Day #6)	150	150	150	150	200	200	200	200
July 5 (Day #7)	100	150	200	250	300	350	400	450
Sum	800	1050	1300	1550	1800	2150	2400	2650
Average	114.29	150.00	185.71	221.43	257.14	307.14	342.86	378.57
50% Avg.	57.14	75.00	92.86	110.71	128.57	153.57	171.43	189.29
Exclude	none	none	none	none	none	none	none	none

# ~~Simple Rolling Average Calculation for Weekend Days~~

April 2001	May 2001	June 2001	July 2001	August 2001	September 2001
Su Mo Tu We Th Fr Sa	Su Mo Tu We Th Fr Sa	Su Mo Tu We Th Fr Sa	Su Mo Tu We Th Fr Sa	Su Mo Tu We Th Fr Sa	Su Mo Tu We Th Fr Sa
1 2 3 4 5 6 7	29 30 1 2 3 4 5	27 28 29 30 31 1 2	1 2 3 4 5 6 7	29 30 31 1 2 3 4	26 27 28 29 30 31 1
8 9 10 11 12 13 14	6 7 8 9 10 11 12	3 4 5 6 7 8 9	8 9 10 11 12 13 14	5 6 7 8 9 10 11	2 3 4 5 6 7 8
15 16 17 18 19 20 21	13 14 15 16 17 18 19	10 11 12 13 14 15 16	15 16 17 18 19 20 21	12 13 14 15 16 17 18	9 10 11 12 13 14 15
22 23 24 25 26 27 28	20 21 22 23 24 25 26	17 18 19 20 21 22 23	22 23 24 25 26 27 28	19 20 21 22 23 24 25	16 17 18 19 20 21 22
29 30 1 2 3 4 5	27 28 29 30 31 1 2	24 25 26 27 28 29 30	29 30 31 1 2 3 4	26 27 28 29 30 31 1	30 1 2 3 4 5 6

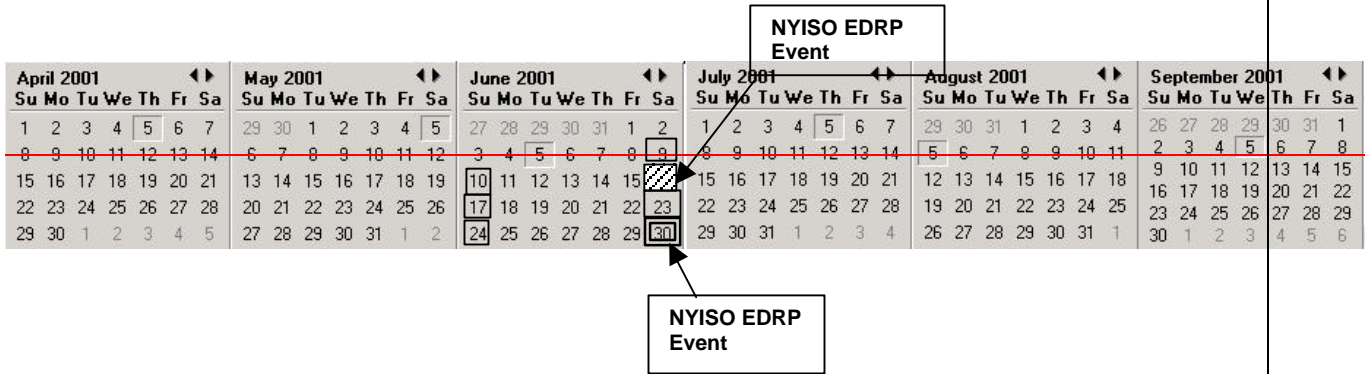
NYISO EDRP Event

Event occurs on June 16, 2001

Average includes May 26, 27, June 2, 3, 9, and June 10 (6 weekend days prior to day of event)  
 For each hour, the average will be made up of the sum of the loads for the hour divided by 6 (or the number of days to be included as described in items 2.5.1). For example, the average for hour ending 01:00 will be the sum of the loads from the hour ending 01:00 for each of the 6 days, divided by 6.

Time	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00
Day #1	100	150	200	250	300	350	400	450
Day #2	150	150	150	150	150	150	150	150
Day #3	100	100	100	100	100	100	100	100
Day #4	100	150	200	250	300	350	400	450
Day #5	150	150	150	150	150	150	150	150
Day #6	100	100	100	100	100	100	100	100
Sum	700	800	900	1000	1100	1200	1300	1400
Average	116.67	133.33	150	166.67	183.33	200	216.67	233.33

# ~~Simple Rolling Average Calculation for Weekend Days with Weekend EDRP Events Within 3 Weeks of One Another~~



Event occurs on June 30, 2001

Average includes June 9, 10, 17, 23 and June 24 (5 weekend days prior to day of event— Excluded from average: June 16 because another NYISO EDRP event occurred on that weekend day).

Time	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00
Day #1	100	150	200	250	300	350	400	450
Day #2	150	150	150	150	150	150	150	150
Day #3	100	100	100	100	100	100	100	100
Day #4	100	150	200	250	300	350	400	450
Day #5	150	150	150	150	150	150	150	150
Sum	600	700	800	900	1000	1100	1200	1300
Average	120	140	160	180	200	220	240	260

## Customer Baseline Weekday (CB-WD)

Simple average with no exclusions



Event occurs on May 3, 2001

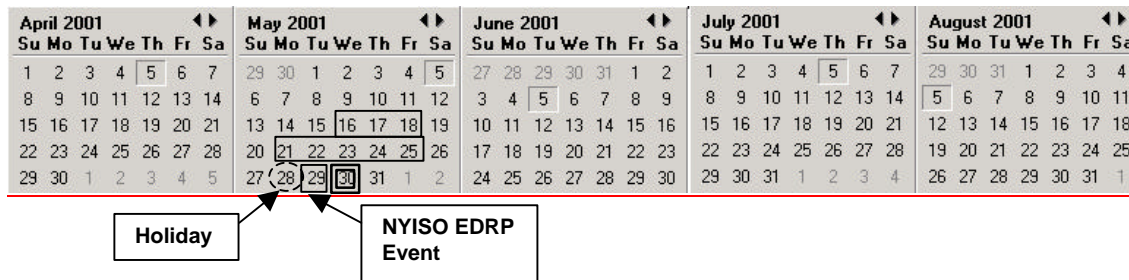
Average includes April 19, 20, 23, 24, 25, 26, 27, 30, May 1 and May 2 (10 weekdays prior to day of event)

Time	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00



<b><u>Day #1</u></b> <b><u>5/2</u></b>	<u>100</u>	<u>150</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>
<b><u>Day #2</u></b> <b><u>5/1</u></b>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>
<b><u>Day #3</u></b> <b><u>4/30</u></b>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<b><u>Day #4</u></b> <b><u>4/27</u></b>	<u>100</u>	<u>150</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>
<b><u>Day #5</u></b> <b><u>4/26</u></b>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>
<b><u>Day #6</u></b> <b><u>4/25</u></b>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<b><u>Day #7</u></b> <b><u>4/24</u></b>	<u>100</u>	<u>150</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>
<b><u>Day #8</u></b> <b><u>4/23</u></b>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>
<b><u>Day #9</u></b> <b><u>4/20</u></b>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<b><u>Day#10</u></b> <b><u>4/19</u></b>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>
<b><u>Sum</u></b>	<u>1,250</u>	<u>1,400</u>	<u>1,550</u>	<u>1,700</u>	<u>1,850</u>	<u>2,000</u>	<u>2,150</u>	<u>2,300</u>
<b><u>Average</u></b>	<u>125</u>	<u>140</u>	<u>155</u>	<u>170</u>	<u>185</u>	<u>200</u>	<u>215</u>	<u>230</u>
<u>Shutdown Test (avg *.25)</u>	<u>31</u>	<u>35</u>	<u>39</u>	<u>43</u>	<u>46</u>	<u>50</u>	<u>54</u>	<u>58</u>
<u>Date(s) with hourly value less than test amount</u>	<u>none</u>	<u>none</u>	<u>none</u>	<u>none</u>	<u>none</u>	<u>none</u>	<u>none</u>	<u>none</u>

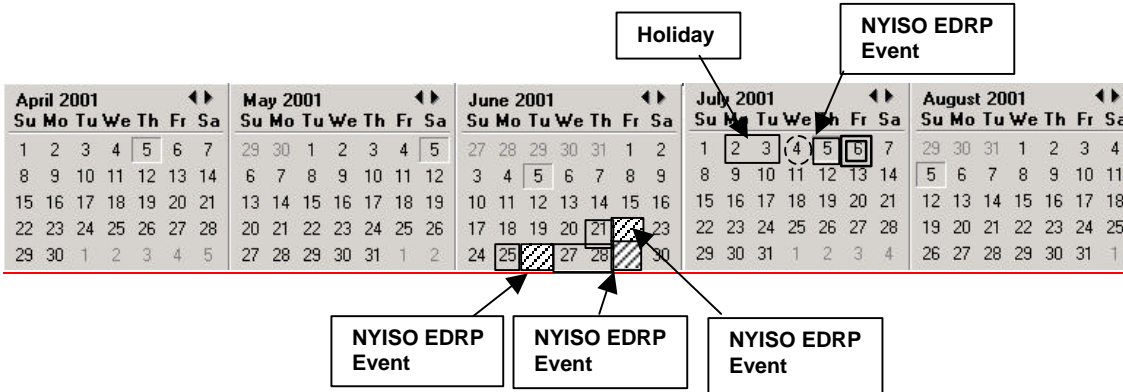
**Customer Baseline Weekday (CB-WD)**  
**Simple average with a holiday**



Event occurs on May 30, 2001  
Average includes May 16, 17, 18, 21, 22, 23, 24, 25 and May 29 (9 weekdays prior to day of event – Memorial Day, May 28, 2001 is excluded from average)

<u>Time</u>	<u>01:00</u>	<u>02:00</u>	<u>03:00</u>	<u>04:00</u>	<u>05:00</u>	<u>06:00</u>	<u>07:00</u>	<u>08:00</u>
<u>Day #1</u> <u>5/29</u>	<u>100</u>	<u>150</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>
<u>Day #2</u> <u>5/25</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>
<u>Day #3</u> <u>5/24</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>Day #4</u> <u>5/23</u>	<u>100</u>	<u>150</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>
<u>Day #5</u> <u>5/22</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>
<u>Day #6</u> <u>5/21</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>Day #7</u> <u>5/18</u>	<u>100</u>	<u>150</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>
<u>Day #8</u> <u>5/17</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>
<u>Day #9</u> <u>5/16</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>Sum</u>	<u>1,050</u>	<u>1,200</u>	<u>1,350</u>	<u>1,500</u>	<u>1,650</u>	<u>1,800</u>	<u>1,950</u>	<u>2,100</u>
<u>Average</u>	<u>117</u>	<u>133</u>	<u>150</u>	<u>167</u>	<u>183</u>	<u>200</u>	<u>217</u>	<u>233</u>
Shutdown Test (avg *.25)	29	33	38	42	46	50	54	58
Date(s) with hourly value less than test amount	none	none	none	none	none	none	none	none

**Customer Baseline Weekday (CB-WD)**  
**Simple average with multiple exclusions within the 10 days prior to the EDRP event**



Event occurs on July 6, 2001  
 Average includes June 21, 25, 27, 28, July 2, 3, and 5 (7 weekdays prior to day of event –  
 Excluded from average: NYISO events of 6/22, 6/26 and 6/29 plus holiday - Independence Day, 7/4)

<u>Time</u>	<u>01:00</u>	<u>02:00</u>	<u>03:00</u>	<u>04:00</u>	<u>05:00</u>	<u>06:00</u>	<u>07:00</u>	<u>08:00</u>
<u>Day #1</u> <u>7/5</u>	<u>100</u>	<u>150</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>
<u>Day #2</u> <u>7/3</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>
<u>Day #3</u> <u>7/2</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>Day #4</u> <u>6/28</u>	<u>100</u>	<u>150</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>
<u>Day #5</u> <u>6/27</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>
<u>Day #6</u> <u>6/25</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>Day #7</u> <u>6/21</u>	<u>100</u>	<u>150</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>
<u>Sum</u>	<u>800</u>	<u>950</u>	<u>1100</u>	<u>1,250</u>	<u>1,400</u>	<u>1,550</u>	<u>1,700</u>	<u>1,850</u>
<u>Average</u>	<u>114</u>	<u>136</u>	<u>157</u>	<u>179</u>	<u>200</u>	<u>221</u>	<u>243</u>	<u>264</u>
Shutdown Test (avg *.25)	<u>29</u>	<u>34</u>	<u>39</u>	<u>45</u>	<u>50</u>	<u>55</u>	<u>61</u>	<u>66</u>
Date(s) with hourly value less than test amount	<u>none</u>	<u>none</u>	<u>none</u>	<u>none</u>	<u>none</u>	<u>none</u>	<u>none</u>	<u>none</u>

## Customer Baseline Weekday (CB-WD)

### Simple average with exclusions for shutdown days

April 2001	May 2001	June 2001	July 2001	August 2001
Su Mo Tu We Th Fr Sa	Su Mo Tu We Th Fr Sa	Su Mo Tu We Th Fr Sa	Su Mo Tu We Th Fr Sa	Su Mo Tu We Th Fr Sa
1 2 3 4 5 6 7	29 30 1 2 3 4 5	27 28 29 30 31 1 2	1 2 3 4 5 6 7	29 30 31 1 2 3 4
8 9 10 11 12 13 14	6 7 8 9 10 11 12	3 4 5 6 7 8 9	8 9 10 11 12 13 14	5 6 7 8 9 10 11
15 16 17 18 19 20 21	13 14 15 16 17 18 19	10 11 12 13 14 15 16	15 16 17 18 19 20 21	12 13 14 15 16 17 18
22 23 24 25 26 27 28	20 21 22 23 24 25 26	17 18 19 20 21 22 23	22 23 24 25 26 27 28	19 20 21 22 23 24 25
29 30 1 2 3 4 5	27 28 29 30 31 1 2	24 25 26 27 28 29 30	29 30 31 1 2 3 4	26 27 28 29 30 31 1

NYISO EDRP Event

Days excluded due to load less than 75% of hourly avg for 4 consecutive hours

Event occurs on August 27, 2001

Initial average includes August 13, 14, 15, 16, 17, 20, 21, 22, 23, and August 24 (10 weekdays prior to day of event)

Days excluded due to load less than 75% of hourly average for 4 consecutive hours

Revised range of dates included in Customer Baseline-Weekday for this event: August 9, 10, 20, 21, 22, 23, and August 24 (reverse chronological order until minimum of 7 days are included in the average).

#### Initial average calculation

<u>Time</u>	<u>01:00</u>	<u>02:00</u>	<u>03:00</u>	<u>04:00</u>	<u>05:00</u>	<u>06:00</u>	<u>07:00</u>	<u>08:00</u>
<u>Day #1</u> <u>8/24</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>	<u>450</u>	<u>450</u>
<u>Day #2</u> <u>8/23</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>	<u>450</u>	<u>450</u>
<u>Day #3</u> <u>8/22</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>	<u>450</u>	<u>450</u>
<u>Day #4</u> <u>8/21</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>	<u>450</u>	<u>450</u>
<u>Day #5</u> <u>8/20</u>	<u>150</u>	<u>150</u>	<u>200</u>	<u>200</u>	<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>
<u>Day #6</u> <u>8/17</u>	<u>75</u>	<u>70</u>	<u>60</u>	<u>50</u>	<u>45</u>	<u>45</u>	<u>45</u>	<u>45</u>
<u>Day #7</u> <u>8/16</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>45</u>	<u>45</u>	<u>45</u>	<u>45</u>	<u>45</u>
<u>Day #8</u> <u>8/15</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>45</u>	<u>45</u>	<u>45</u>	<u>45</u>	<u>45</u>
<u>Day #9</u> <u>8/14</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>45</u>	<u>45</u>	<u>45</u>	<u>45</u>	<u>45</u>
<u>Day#10</u> <u>8/13</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>45</u>	<u>45</u>	<u>45</u>	<u>45</u>	<u>45</u>
<u>Sum</u>	<u>1225</u>	<u>1420</u>	<u>1660</u>	<u>1830</u>	<u>2125</u>	<u>2325</u>	<u>2325</u>	<u>2325</u>
<u>Average</u>	<u>123</u>	<u>142</u>	<u>166</u>	<u>183</u>	<u>213</u>	<u>233</u>	<u>233</u>	<u>233</u>
<u>Shutdown Test</u> <u>(avg * .25)</u>	<u>31</u>	<u>36</u>	<u>42</u>	<u>46</u>	<u>53</u>	<u>58</u>	<u>58</u>	<u>58</u>
<u>Date(s) with</u> <u>hourly value less</u> <u>than test amount</u>	<u>None</u>	<u>None</u>	<u>None</u>	<u>8/16</u> <u>8/15</u> <u>8/14</u> <u>8/13</u>	<u>8/17</u> <u>8/16</u> <u>8/15</u> <u>8/14</u> <u>8/13</u>	<u>8/17</u> <u>8/16</u> <u>8/15</u> <u>8/14</u> <u>8/13</u>	<u>8/17</u> <u>8/16</u> <u>8/15</u> <u>8/14</u> <u>8/13</u>	<u>8/17</u> <u>8/16</u> <u>8/15</u> <u>8/14</u> <u>8/13</u>

(continued on next page)

**Customer Baseline Weekday (CB-WD)**  
**Simple average with exclusions for shutdown days (continued)**

*Revised average calculation*

<u>Time</u>	<u>01:00</u>	<u>02:00</u>	<u>03:00</u>	<u>04:00</u>	<u>05:00</u>	<u>06:00</u>	<u>07:00</u>	<u>08:00</u>
<u>Day #1</u> <u>8/24</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>	<u>450</u>	<u>450</u>
<u>Day #2</u> <u>8/23</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>	<u>450</u>	<u>450</u>
<u>Day #3</u> <u>8/22</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>	<u>450</u>	<u>450</u>
<u>Day #4</u> <u>8/21</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>	<u>450</u>	<u>450</u>
<u>Day #5</u> <u>8/20</u>	<u>150</u>	<u>150</u>	<u>200</u>	<u>200</u>	<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>
<u>Day #6</u> <u>8/10</u>	<u>150</u>	<u>150</u>	<u>200</u>	<u>200</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>
<u>Day #7</u> <u>8/9</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>	<u>450</u>	<u>450</u>
<u>Sum</u>	<u>1300</u>	<u>1550</u>	<u>1900</u>	<u>2150</u>	<u>2600</u>	<u>2900</u>	<u>2950</u>	<u>3000</u>
<u>Average</u>	<u>186</u>	<u>221</u>	<u>271</u>	<u>307</u>	<u>371</u>	<u>414</u>	<u>421</u>	<u>429</u>
<u>Shutdown</u> <u>Test (avg</u> <u>*.25)</u>	<u>47</u>	<u>55</u>	<u>77</u>	<u>77</u>	<u>93</u>	<u>104</u>	<u>105</u>	<u>107</u>
<u>Date(s) with</u> <u>hourly value</u> <u>less than test</u> <u>amount</u>	<u>None</u>	<u>None</u>	<u>None</u>	<u>None</u>	<u>None</u>	<u>None</u>	<u>None</u>	<u>None</u>

**Customer Baseline Saturday (CB-SA) and Sunday (CB-SU)**  
**Simple average calculation for Saturdays**

**NYSE EDRP  
Event**

Event occurs on June 16, 2001

Average includes May 26, June 2, and June 9 (3 Saturdays prior to day of event)

<u>Time</u>	<u>01:00</u>	<u>02:00</u>	<u>03:00</u>	<u>04:00</u>	<u>05:00</u>	<u>06:00</u>	<u>07:00</u>	<u>08:00</u>
<u>Day #1</u> <u>6/9</u>	<u>100</u>	<u>150</u>	<u>200</u>	<u>250</u>	<u>300</u>	<u>350</u>	<u>400</u>	<u>450</u>
<u>Day #2</u> <u>6/2</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>	<u>150</u>
<u>Day #3</u> <u>6/26</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>Sum</u>	<u>350</u>	<u>400</u>	<u>450</u>	<u>500</u>	<u>550</u>	<u>600</u>	<u>650</u>	<u>700</u>
<u>Average</u>	<u>117</u>	<u>133</u>	<u>150</u>	<u>166</u>	<u>183</u>	<u>200</u>	<u>217</u>	<u>233</u>

For Customer Baseline Sunday (CB-SU), when the EDRP event occurs on a Sunday, follow the same procedure as above, substituting Sundays for the Saturdays shown in the example.

**Simple average calculation for Saturdays with an event exclusion**

**NYSE EDRP  
Event**

Event occurs on June 16, 2001

Average includes May 19, May 26, and June 9 (3 Saturdays prior to day of event, with June 2 excluded because another EDRP event occurred on that Saturday).

Average calculation for Customer Baseline Sunday would follow the same procedure as above when one of the 3 Sundays prior to the current EDRP event also was another EDRP event.

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