

Emergency Demand Response Program

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Reliability-Based Demand Response

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Remote Learning

SME Bio

Mitchell Braun

Associate Distributed Resources Operations Engineer



Mitchell Braun joined the NYISO in 2020 as a Market Structures Co-Op/Intern within the New Resource Integration team. In this role, he worked extensively with the Gurobi Optimization Engine to begin formulating a model to forecast the impacts of increased renewable penetration and electrification on New York's grid infrastructure. Currently, Mitch is a Market Operations Associate Engineer within the Distributed Resources Operations team. As a member of the Distributed Resources Operations team, he helps facilitate the NYISO's Demand Response Markets, as well as aid in the development of the Distributed Energy Resources Participation Model.

Prior to joining the NYISO, Mitch spent four years at a pool installation company servicing inground pool pumps, gas and electric heaters, and automated regulation systems across New York.

Mitch has a Bachelor's in Physics from Siena College, as well as a Master's in Electrical Engineering from Clarkson University.

Session Objectives

- Define the purpose of Emergency Demand Response Program (EDRP)
- Identify program eligibility requirements
- Summarize the process for enrollment
- Define and explain how Customer Baseline Load (CBL) is calculated
- Describe the method for measuring and reporting performance
- Explain the event notification process and customer response to an event
- Describe the reporting process for Event Response details
- Describe verification process for CBL after an event
- Describe settlement for an EDRP Event Response

Topic 1:

Purpose of Emergency Demand Response Program

Emergency Demand Response Program

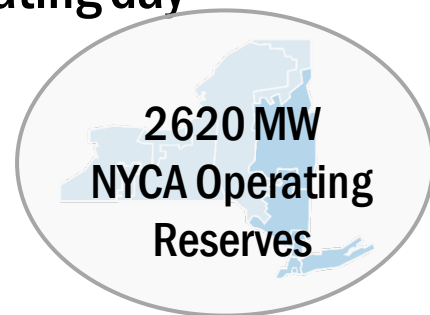
- Part of NYISO's reliability-based Demand Response programs
- Load reduction through interruptible loads, or loads with a qualified behind-the-meter Local Generator, or both
- Load reduction during a reliability event is voluntary
- Enrolled by Curtailment Service Providers (CSP)
 - Serves as interface between the NYISO and resource

Purpose - Emergency Demand Response Program

Purpose: Provide load reductions in response to NYISO instructions for a discrete period of time, to supplement generation when Operating Reserves are forecast to be short or when there is an actual Operating Reserve Deficiency or other system emergency

Operating Reserves

- Generation and/or Demand Response available to supply Energy or reduce demand in the event of a real time power system Contingency
 - Operating Reserves must be available from Generators or Demand Side Resources located within the NYCA and within specific regions in order to respond adequately to contingencies
- The NYCA's total Operating Reserve must be greater than or equal to $1\frac{1}{2}$ times the single largest contingency (in MW)
- NYISO procures 2620 MW of Operating Reserves every operating day
 - $2620 \text{ MW} = 2 \times \text{single largest contingency (1310 MW)}$



Operating Reserve Shortage

- **Failure to maintain the minimum Operating Reserves requirement in the day-ahead forecast or in real time (in-day)**
 - **As defined in the NYISO Emergency Operations Manual**
 - **Determined NYCA wide as well as at a locational level**
- **NYISO calls for activation of EDRP resources either NYCA wide or at a zonal level to provide load reduction**

Topic 2:

EDRP eligibility requirements

Eligibility Criteria – Curtailment Service Providers

- For EDRP, wholesale electricity market participants called the Curtailment Service Providers (CSPs) enroll retail end users who provide load reduction
- Four classes of CSPs
 1. Load Serving Entities (LSEs)
 - Currently serving retail end-users capable of load reduction, or
 - Enrolls another LSE's load solely for participating in EDRP
 2. Individual retail customers enrolled who take service directly from the NYISO to supply its Load in NYCA
 3. NYISO approved Curtailment Customer Aggregators of retail end users capable of Load Reduction
 - Aggregators can join NYISO as a NYISO Limited Customer
 4. NYISO approved Curtailment Program End Use Customers (EUC), end use customers whose Load is normally served by an LSE but who participate directly with the NYISO solely for purposes of EDRP.
 - An EUC must join the NYISO as a NYISO Limited Customer

Minimum Qualifications for CSPs

To serve as a CSP, an entity must:

- Be a NYISO Customer, or a NYISO Limited Customer
- Be able to cause a Load Reduction from the NYS Transmission System and/or local distribution system at direction of NYISO
- Be capable of reducing a minimum of 100 kW of NYCA Load in a single Load Zone
- Be capable of responding within two hours of notice from the NYISO
- Follow enrollment procedures defined in the EDRP manual
- Comply with metering requirements set forth by NYISO and provide hourly interval metering data to validate performance

Eligibility Requirements – Individual Resources

- Individual Demand Side Resources can enroll in either EDRP or the SCR program-, but not both
- Individual Demand Side Resources cannot enroll the same metered load with more than one CSP
- Local Generators that operate to fully serve their Load do not qualify for EDRP
- Demand Side Resources using a Local Generator to provide load relief through EDRP are subject to all applicable environmental rules and regulations
 - Demand Side Resources not complying with environmental requirements will not be permitted to participate in the EDRP

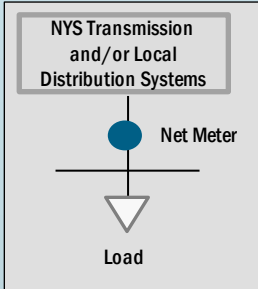
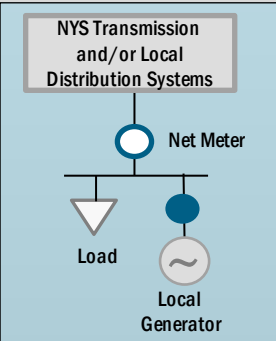
Metering Requirements

- Registered EDRP resources typically require an hourly interval billing meter to report event data and measure performance
- Interval metering devices could be
 - Hourly Revenue-grade, or
 - Non-revenue-grade meters that meet the $\pm 2\%$ accuracy threshold
- Resources that use alternate non-interval meter based metering standards to measure performance may participate in EDRP through the Small Customer Aggregation (SCA) program

Metering Configuration Requirements

- A CSP must identify a “Response Type” for each EDRP resource it enrolls in DRIS based on
 - (i) How the EDRP resource reduces its load during an event, and
 - (ii) The meter configuration of the EDRP resource’s facility

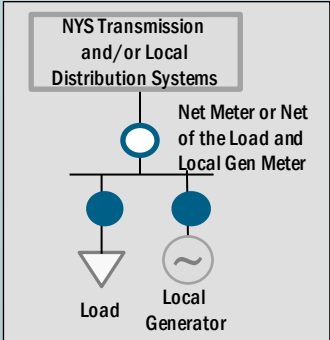
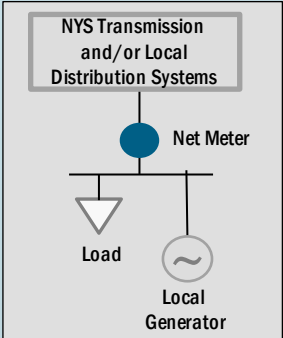
Metering Configuration Requirements


Response Type	Type of Load Reduction	Meter Configuration for Measurement of Load Reduction	
C - Curtailment	Curtailing the resource facility's load	Entire facility's net meter data	
G - Generator	Use of a Local Generator	Local Generator's meter data	

● Meter(s) used to report meter data into DRIS as evidence of Load Reduction

Metering Configuration Requirements New York ISO

Response Type	Type of Load Reduction	Meter Configuration for Measurement of Load Reduction
B- Both	(i) Curtailment and use of a Local Generator	(a) Entire facility's net meter data, or (b) Net of entire facility's Load meter data and Local Generator's meter data
	(ii) Use of a Local generator	(a) Entire facility's net meter data, or (b) Net of entire facility's Load meter data and Local Generator's meter data



 Meter(s) used to report meter data into DRIS as evidence of Load Reduction

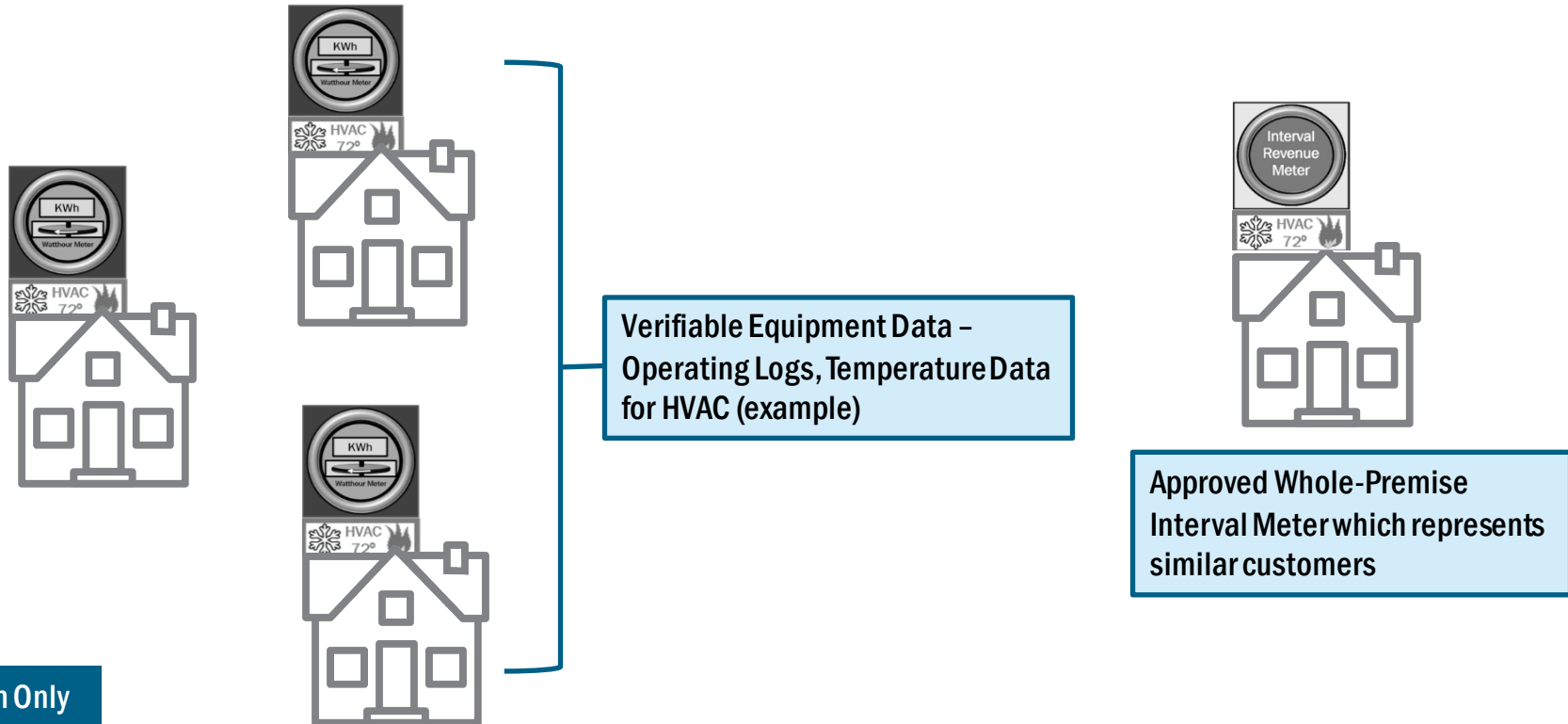
Small Customer Aggregations (SCA)

- The Small Customer Aggregation program allows Demand Side Resources to participate in EDRP using alternate non-interval meter based metering and performance measurement standards
 - NYISO review and approval required
- Small customer aggregations must be at least 0.5 MW per load zone
- Approval process includes the development, and NYISO approval of, a data sampling plan or measurement methodology that assigns an initial estimate of response per site in order to drive the sample size

SCA – Performance Measurement Methods

- **Proposals for measuring SCA performance can involve:**
 - **Approved whole-premises kW metering devices on a sample of resources**
 - **Approved end-use devices or process kW metering devices on a sample of resources**
 - **Provision for supplying verifiable behavioral actions, equipment operating logs, or other data that is deemed to be sufficient, indicating the load level the customer would have otherwise consumed, but for the EDRP event participation**
 - **Other measurements systems that indicate load level the customer otherwise would have consumed, but for the EDRP event participation**

SCA – Alternate Methods for Performance Measurement



For Illustration Only

SCA – NYISO Review and Approval Process

- Each initial proposal or significant revision for SCAs will be reviewed by NYISO and the Price Responsive Load Working Group
- Must be approved by a majority of the Chairs and Vice-Chairs of the Management Committee and Business Issues Committee and the Chairman of the Price Responsive Load Working Group
- The Small Customer Aggregator is responsible for all costs associated with developing and administering the alternate performance methodology

Topic 3:

Process for enrollment

Enrollment Process - Overview

- Demand Side Resources must be enrolled for participation in EDRP through the NYISO Demand Response Information System (DRIS) by the Curtailment Service provider (CSP)
- Before the CSP can enroll EDRP Resources in DRIS:
 - CSP must be registered in the NYISO MIS as eligible to participate in EDRP and reflect a Qualified MIS status in DRIS
 - To register as a Curtailment Service Provider (CSP), the organization must be
 - A NYISO Customer, or
 - A NYISO Limited Customer
- List of documents required for a CSP to complete the NYISO registration process found in the Member Relations Application to Register, Annex RR


EDRP Resource Enrollment in DRIS

- CSPs must set up and assign one or more Admin Contacts, and one or more Event-Responder Contacts in DRIS before individual resources can be enrolled
- CSPs must obtain authorization from each EDRP Resource in order to enroll the resource in the EDRP
 - CSP ensures compatibility with other Demand Response programs before enrolling resources

EDRP Resource Enrollment in DRIS

- The CSP enrolls resources every Capability Period in accordance with the applicable time frame for resource open enrollment provided in the DRIS Event calendar
 - Summer Capability Period
 - May through October
 - Winter Capability Period
 - November through April
- Any changes to enrollment information can be made during the monthly open enrollment period, such as separating a resource from a CSP's portfolio
- Resources must be re-enrolled in DRIS every capability period for participation in EDRP

EDRP Enrollment-DRIS Event Calendar


Demand Response Information System
Event Calendar

Main | MP ▾ | Resource ▾ | SCR ▾ | Performance Factors ▾ | DR Event ▾ | Mitigation ▾ | Tables ▾ | Notification ▾ | DSASP ▾ | BTM ▾

Events From: 01/14/2022 To: 03/31/2022

Events

Category	Auction Month	Start Date	End Date	Start Message	End Message
EDRPEnroll	March 2022	01/24/2022 08:00 AM	02/03/2022 05:00 PM	EDRP - Enrollment Period for auction month of Mar Opens	EDRP - Enrollment Period for auction month of Mar Closes

EDRP Enrollment in DRIS

- Resource enrollment data can be imported into DRIS as either a .csv or an .xls file
- Information required for enrolling a resource in DRIS include:
 - Resource ID (assigned by the NYISO)
 - Resource name
 - TO account number (assigned by the transmission owner)
 - Load Zone where resource is located
 - Transmission owner Abbreviation
 - Address
 - Generator Type (for resources that are Response Type G and B) (optional)
 - Generator Name Plate Rating (for resources that are Response Type G and B) (optional)

EDRP Enrollment in DRIS

- CBL method
 - A for Average day
 - W for Weather Sensitive
- Response Type (C,G or B)*
- Subscribed Load (Curtailment Declared Value in kW/h)
- Subscribed Gen (Generation Declared Value in kW/h)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Effective Date=															
2	Program=EDRP&															
3	Resource ID	Resource Name	TO Account Num	Zone	Transmission Owner Abbreviation	Street	Street 2	City	State	Zip Code	Generator Type ID	Generator Name Plate Rating	CBL Method	Response Type	Subscribed Load	Subscribed Gen

* CSPs enrolling a Response Type G or B resource must certify that the Local Generator complies with all federal, state, and local laws and regulatory requirements with respect to the operation of the Local Generator, and must provide documentation of compliance upon request of the NYISO

EDRP Enrollment Status

- **Status categories displayed for EDRP resources once the enrollment period closes:**
 - **Approved**
 - Resource is enrolled by NYISO
 - **Separated**
 - When resource is no longer part of the CSP's portfolio
 - Resource can be separated by the CSP or NYISO
 - Once separated, the resource cannot participate unless it is re-enrolled by the same or a different CSP, via an import file
 - **Denied**

EDRP Enrollment Status

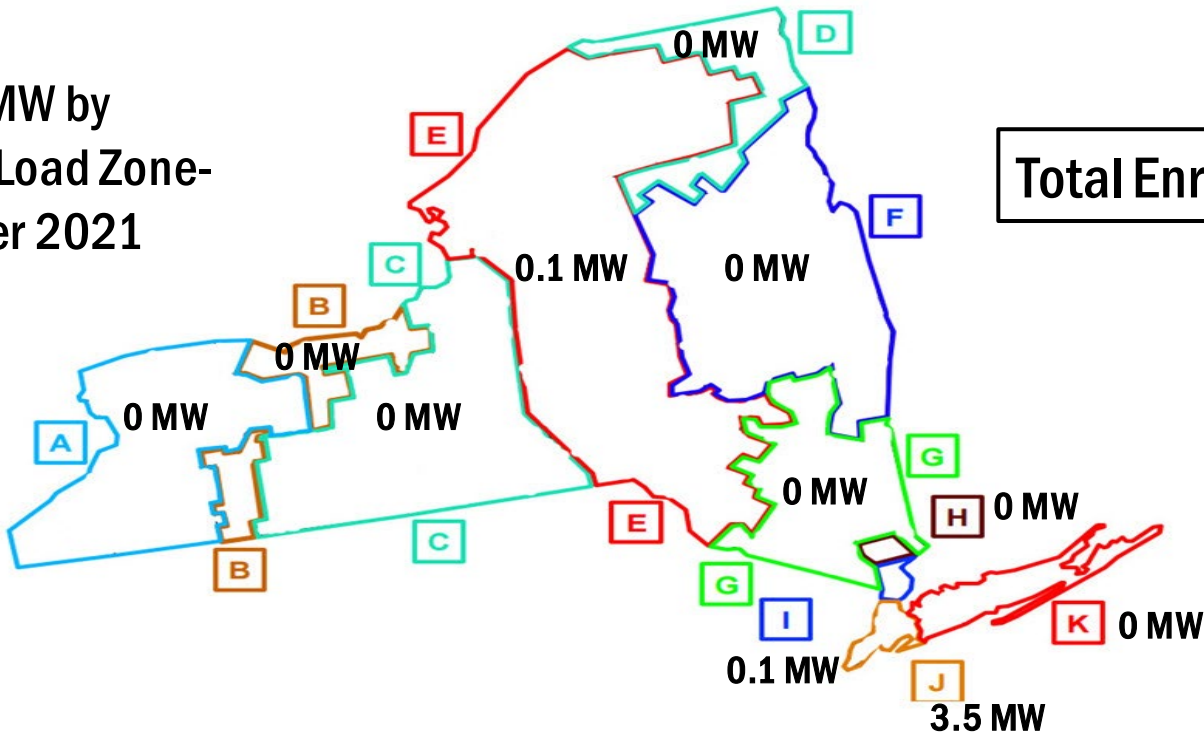
- **Pending/Under Review**
 - When resource enrollment is pending validation by NYISO
 - Resources are placed in this status automatically by DRIS if the information in any of the Monitored fields has changed from the last enrollment period to the current

Fields Monitored for both SCR and EDRP Enrollments
Zone
Transmission Owner
Transmission Owner Account Number
Resource Facility Street
Resource City
Resource Zip Code
Response Type*

- Once NYISO requested documentation has been received and reviewed, the resource status could be changed by the NYISO to approved or denied
- If denied, the CSP can re-enroll the resource in the following month's enrollment open period or the same month if the open enrollment period has not ended

EDRP Enrollment – Summer 2021

EDRP MW by
NYISO Load Zone-
Summer 2021



As reported in NYISO 2021 Annual Report on Demand Response Programs

Topic 4:

Customer Baseline Load calculation

Customer Baseline Load (CBL)

- **Customer Baseline Load (CBL)**
 - Baseline used for EDRP resources, also used for DADRP resources and SCR energy calculations to calculate energy response during a demand Response event/test
 - Reference period used: Highest five consumption days of last ten “like” days where DR event or schedule did not occur
- **CBL Calculation and Response Type:**
 - Response type B and C: Load supported by any behind the meter Local Generator or supply source, is not included in the metered Load used to calculate resource CBL
 - Response type G: Base-load portion of generation is excluded from actual performance of generator used in CBL calculation

Selecting a CBL method

- CBL method:
 - A for Average day
 - W for Weather adjusted
- The CSP selects the CBL formula when it enrolls a resource with the NYISO in the EDRP
 - The choice of CBL becomes effective when enrollment is accepted by NYISO
- CSP may elect either Average Day CBL or Weather Adjusted CBL formula
- Change in the CBL formula can be made during the next open enrollment period

Average Day CBL - Weekday

SUN	MON	TUE	WED	THU	FRI	SAT
Jun 8 Day 28	Jun 9 Day 30	Jun 10 Day 29	Jun 11 Day 28	Jun 12 Day 27	Jun 13 Day 26	Jun 14 Day 25
Jun 15 Day 24	Jun 16 Day 23	Jun 17 Day 22	Jun 18 Day 21	Jun 19 Day 20	Jun 20 Day 19	Jun 21 Day 18
Jun 22 Day 17	Jun 23 Day 16	Jun 24 Day 15	Jun 25 Day 14	Jun 26 Day 13	Jun 27 Day 12	Jun 28 Day 11
Jun 29 Day 10	Jun 30 Day 9	Jul 1 Day 8	Jul 2 Day 7	Jul 3 Day 6	Jul 4 Day 5	Jul 5 Day 4
Jul 6 Day 3	Jul 7 Day 2	Jul 8 Day 1	Jul 9 EDRP Event	Jul 10	Jul 11	Jul 12

Average Day CBL – Weekday

1. Establish CBL Window

Select 10 days prior to event from a 30 day period immediately before the event (based on specific exclusions)



2. Establish CBL Basis

Select 5 highest ranked days, based on average daily event period usage, from the 10 day CBL window



3. Calculate CBL

For each hour of the event, calculate CBL as the average hourly usage for the 5 days in the CBL Basis

Average Day CBL - Weekday

1. Establish the CBL Window for weekdays:

Step 1: Determine resource's peak load for the last 30 days that corresponds to the hours that cover the event

Average Day CBL - Weekday

SUN	MON	TUE	WED	THU	FRI	SAT
Jun 8 Day 30 9	Jun 9 Day 29 9	Jun 10 Day 28 8	Jun 11 Day 27 8	Jun 12 Day 26 10	Jun 13 Day 25 7	Jun 14 Day 24 5
Jun 15 Day 23 8	Jun 16 Day 22 9	Jun 17 Day 21 10	Jun 18 Day 20 13	Jun 19 Day 19 11	Jun 20 Day 18 6	Jun 21 Day 17 5
Jun 22 Day 16 10	Jun 23 Day 15 7	Jun 24 Day 14 8	Jun 25 Day 13 8	Jun 26 Day 12 12	Jun 27 Day 11 7	Jun 28 Day 10 5
Jun 29 Day 9 11	Jun 30 Day 8 8	Jul 1 Day 7 12	Jul 2 Day 6 9	Jul 3 Day 5 5	Jul 4 Day 4 6	Jul 5 Day 3 5
Jul 6 Day 2 11	Jul 7 Day 1 11	Jul 8 EDRP Event	Jul 9	Jul 10	Jul 11	Jul 12

Maximum Load
Value during
Event hours

Peak Load
hour = 13
(Day 20)

Average Day CBL - Weekday

Step 2: Within the chosen 30 days prior to the event for which CBL is being calculated, beginning with the day prior to the event, exclude:

- Any holidays, as specified by the NYISO
- Days and the days prior when NYISO declared as SCR, EDRP or a TDRP event for which the resource was eligible for payment for a curtailment
- Days and the days prior in which the resource's DADRP curtailment bid was accepted in the DAM, whether or not the resource actually curtailed

Average Day CBL - Weekday

SUN	MON	TUE	WED	THU	FRI	SAT
Jun 8	Jun 9 Day 30	Jun 10 Day 29	Jun 11 Day 28	Jun 12 Day 27	Jun 13 Day 26	Jun 14 Day 25
	9	9	8	8	10	7
Jun 15 Day 24	Jun 16 Day 23	Jun 17 Day 22	Jun 18 Day 21	Jun 19 Day 20	Jun 20 Day 19	Jun 21 Day 18
5	8	9	10	13	11	6
Jun 22 Day 17	Jun 23 Day 16	Jun 24 Day 15	Jun 25 Day 14	Jun 26 Day 13	Jun 27 Day 12	Jun 28 Day 11
5	10	7	8	8	12	7
Jun 29 Day 10	Jun 30 Day 9	Jul 1 Day 8	Jul 2 Day 7	Jul 3 Day 6	Jul 4 Day 5 Holiday	Jul 5 Day 4
5	11	8	12	9	5	6
Jul 6 Day 3	Jul 7 Day 2	Jul 8 Day 1 Ineligible Day (Day Before)	Jul 9 EDRP Event	Jul 10	Jul 11	Jul 12
5	11	11				

Maximum Load
Value during
Event hours

Peak Load
hour = 13
(Day 20)

Average Day CBL - Weekday

Step 3: Calculate the initial seed value:

$$\begin{aligned}\text{Initial seed value} &= 25\% \times \text{Maximum peak load hour value} \\ &= 25\% \times 13 \\ &= 3.25\end{aligned}$$

Step 4: For each remaining weekday that is not excluded, within the last 30 days, calculate Average Daily Event Period Usage (simple average of resource's usage over hours defining the event)

If Average Daily Event Period Usage < Initial Seed Value, exclude that day

Average Day CBL - Weekday

Step 5: After all exclusions, establish the CBL window (reverse order selection of the last 10 days prior to the event for which CBL is being calculated)

- After all exclusions, if there are fewer than 10 days, but no less than 5 days, establish those days as part of the CBL window
- If fewer than 5 days remain, contact NYISO Stakeholder Services

Average Day CBL - Weekday

SUN	MON	TUE	WED	THU	FRI	SAT
Jun 8	Jun 9	Jun 10	Jun 11	Jun 12	Jun 13	Jun 14
Jun 15	Jun 16	Jun 17	Jun 18	Jun 19	Jun 20	Jun 21
Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
	CBL Day 10 For July 9	CBL Day 9 For July 9	CBL Day 8 For July 9	CBL Day 7 For July 9	CBL Day 6 For July 9	
Jun 29	Jun 30	Jul 1	Jul 2	Jul 3	Jul 4	Jul 5
	CBL Day 5 For July 9	CBL Day 4 For July 9	CBL Day 3 For July 9	CBL Day 2 For July 9	Holiday	
Jul 6	Jul 7	Jul 8	Jul 9	Jul 10	Jul 11	Jul 12
	CBL Day 1 For July 9	Ineligible Day (Day Before)	EDRP Event			

Average Day CBL - Weekday

CBL Window Selection- Single Weekday Event Example

Event date	Day 1	Day 2	Day3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
9-July	7-July	3-July	2-July	1-July	6/30	6/27	6/26	6/25	6/24	6/23

Average Day CBL - Weekday

- Example of CBL Window selection if there are multiple events

SUN	MON	TUE	WED	THU	FRI	SAT
Jun 8	Jun 9	Jun 10	Jun 11	Jun 12	Jun 13	Jun 14
Jun 15	Jun 16	Jun 17	Jun 18	Jun 19 CBL Day 10 for July 9	Jun 20 CBL Day 9 for July 9	Jun 21
Jun 22	Jun 23 CBL Day 8 for July 9	Jun 24 CBL Day 7 for July 9	Jun 25 CBL Day 6 for July 9	Jun 26 CBL Day 5 for July 9	Jun 27 CBL Day 4 for July 9	Jun 28
Jun 29	Jun 30 Ineligible Day (Day Before)	Jul 1 DADRP Schedule	Jul 2 CBL Day 3 for July 9	Jul 3 CBL Day 2 for July 9	Jul 4 Holiday	Jul 5
Jul 6	Jul 7 CBL Day 1 for July 9	Jul 8 Ineligible Day (Day Before)	Jul 9 EDRP Event	Jul 10	Jul 11	Jul 12

Average Day CBL- Weekday

CBL Window Selection- Multiple Weekday Event Example										
Event date	Day 1	Day 2	Day3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
9-July	3-July	2-July	2-July	27-June	26-June	25-June	24-June	23-June	20-June	19-June

Average Day CBL-Weekday

2. Establish the CBL Basis:

CBL window	HB 12	HB 13	HB 14	HB 15	Total Event Period usage	Avg Event Period usage	Rank
CBL DAY 1	10	11	7	5	33	8.33	4
CBL DAY 2	8	6	9	6	29	7.25	7
CBL DAY 3	9	12	10	7	38	9.5	1
CBL DAY 4	7	8	6	6	27	6.75	8
CBL DAY 5	10	11	9	7	37	9.25	2
CBL DAY 6	12	8	9	7	36	9.00	3
CBL DAY 7	5	8	8	6	27	6.75	8
CBL DAY 8	7	8	8	7	30	7.50	6
CBL DAY 9	7	6	6	5	24	6.00	10
CBL DAY 10	8	10	9	6	33	8.25	5

Step 1: Rank the days from the CBL window according to the Average Daily Event period usage level

- The EDRP event on July 9 was from 12 noon to 4 pm (HB 12 to HB 15)

The MWh consumption for those 4 hours for the days that form the CBL window are given above

Average Day CBL-Weekday

Step 2: Select the top 5 ranked days. These days will form the CBL basis

CBL window	HB 12	HB 13	HB 14	HB 15	Total Event Period usage	Avg Event Period usage	Rank
CBL DAY 1	10	11	7	5	33	8.33	4
CBL DAY 3	9	12	10	7	38	9.5	1
CBL DAY 5	10	11	9	7	37	9.25	2
CBL DAY 6	12	8	9	7	36	9.00	3
CBL DAY 10	8	10	9	6	33	8.25	5

Average Day CBL-Weekday

3. Calculate CBL for each hour:

Using the 5 highest ranked days selected (simple average for each hour)

CBL window	HB 12	HB 13	HB 14	HB 15
CBL DAY 1	10	11	7	5
CBL DAY 3	9	12	10	7
CBL DAY 5	10	11	9	7
CBL DAY 6	12	8	9	7
CBL DAY 10	8	10	9	6

Time	HB 12	HB 13	HB 14	HB 15
Avg day CBL	9.8	10.4	9	6.5

Weather Adjusted CBL- Weekday

- For weather adjusted CBL calculation, the CBL would be adjusted upward or downward based on the actual usage for 2 hours, starting 4 hours prior to start of event
 - CBL is adjusted using the Gross Adjustment Factor

$$\text{Gross Adjustment Factor} = \frac{\text{Adjustment Basis Average Usage}}{\text{Adjustment Basis Average CBL}}$$

Adjustment Basis Average Usage : Average of actual usage for 2 hours, starting 4 hours prior to start of Event
Adjustment Basis Average CBL: Average of CBL calculated for 2 hours, starting 4 hours prior to start of Event

Weather Adjusted CBL- Weekday

Hours used for Weather Adjustment

Event duration

CBL Basis Days

	HB 8	HB 9	HB 10	HB 11	HB 12	HB 13	HB 14	HB 15
CBL DAY 1	5	5	7	8	10	11	7	5
CBL DAY 2	4	5	6	8	9	12	9	7
CBL DAY 3	3	4	5	7	10	11	9	7
CBL DAY 4	6	2	5	8	12	8	9	7
CBL DAY 5	4	4	5	7	8	10	9	6

Weather Adjusted CBL- Weekday

Adjustment Basis Average CBL: Average of the MWh for HB8 and HB9 over the 5 days chosen for CBL calculation (CBL basis)

		HB 8	HB 9	HB 10	HB 11	HB 12	HB 13	HB 14	HB 15
CBL Basis Days	CBL DAY 1	5	5	7	8	10	11	7	5
	CBL DAY 2	4	5	6	8	9	12	9	7
	CBL DAY 3	3	4	5	7	10	11	9	7
	CBL DAY 4	6	2	5	8	12	8	9	7
	CBL DAY 5	4	4	5	7	8	10	9	6
Avg. Adjustment hours		4.4	4.0						

$$\text{Adjustment Basis Average CBL} = (4.4 + 4.0) / 2 \\ = 4.2$$

Weather Adjusted CBL- Weekday

Adjustment Basis Average Usage : Average of actual load MWh in HB8 and HB9 on the day of the event (2 hours prior to event notification)

	HB 8	HB 9
Event Day-Actual Load	4	5

$$\begin{aligned}\text{Adjustment Basis Average Usage} &= (4+5)/2 \\ &= 4.5\end{aligned}$$

Weather Adjusted CBL-Weekday

$$\begin{aligned}\text{Gross Adjustment Factor} &= 4.5/4.2 \\ &= 1.07\end{aligned}$$

The CBL is weather adjusted upward by 7%

Time	HB 12	HB 13	HB 14	HB 15
Avg day CBL	9.8	10.4	8.6	6.5
Weather Adjusted CBL	10.5	11.1	9.2	7.0

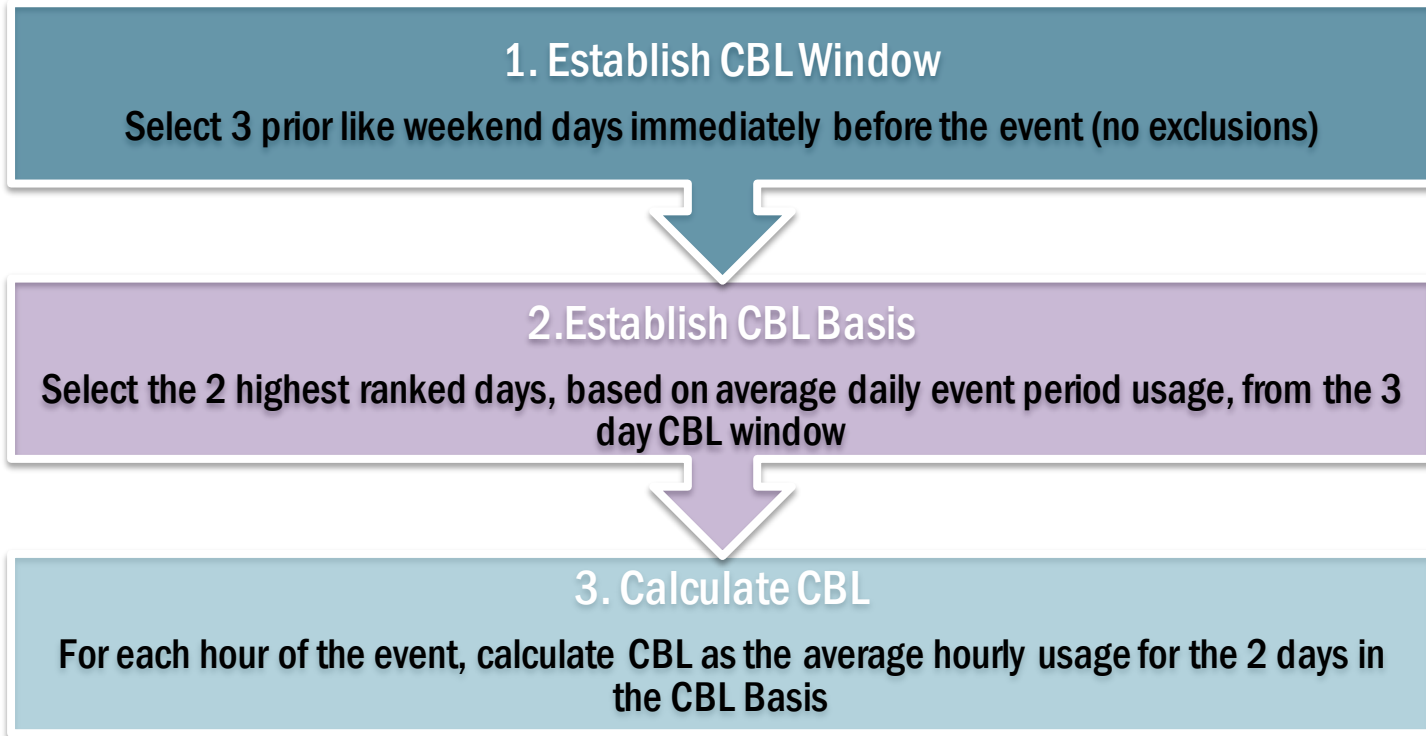
Note: If the average of actual usage in the 2 specified hours is lower than the Adjustment Basis Average CBL, the ratio will be less than 1, and therefore CBL would be adjusted downward

* Up to $\pm 20\%$

Average Day CBL- Weekends

SUN	MON	TUE	WED	THU	FRI	SAT
Jun 8	Jun 9	Jun 10	Jun 11	Jun 12	Jun 13	Jun 14
Jun 15	Jun 16	Jun 17	Jun 18	Jun 19	Jun 20	Jun 21
Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Jun 29	Jun 30	Jul 1	Jul 2	Jul 3	Jul 4	Jul 5
						EDRP Event
Jul 6	Jul 7	Jul 8	Jul 9	Jul 10	Jul 11	Jul 12

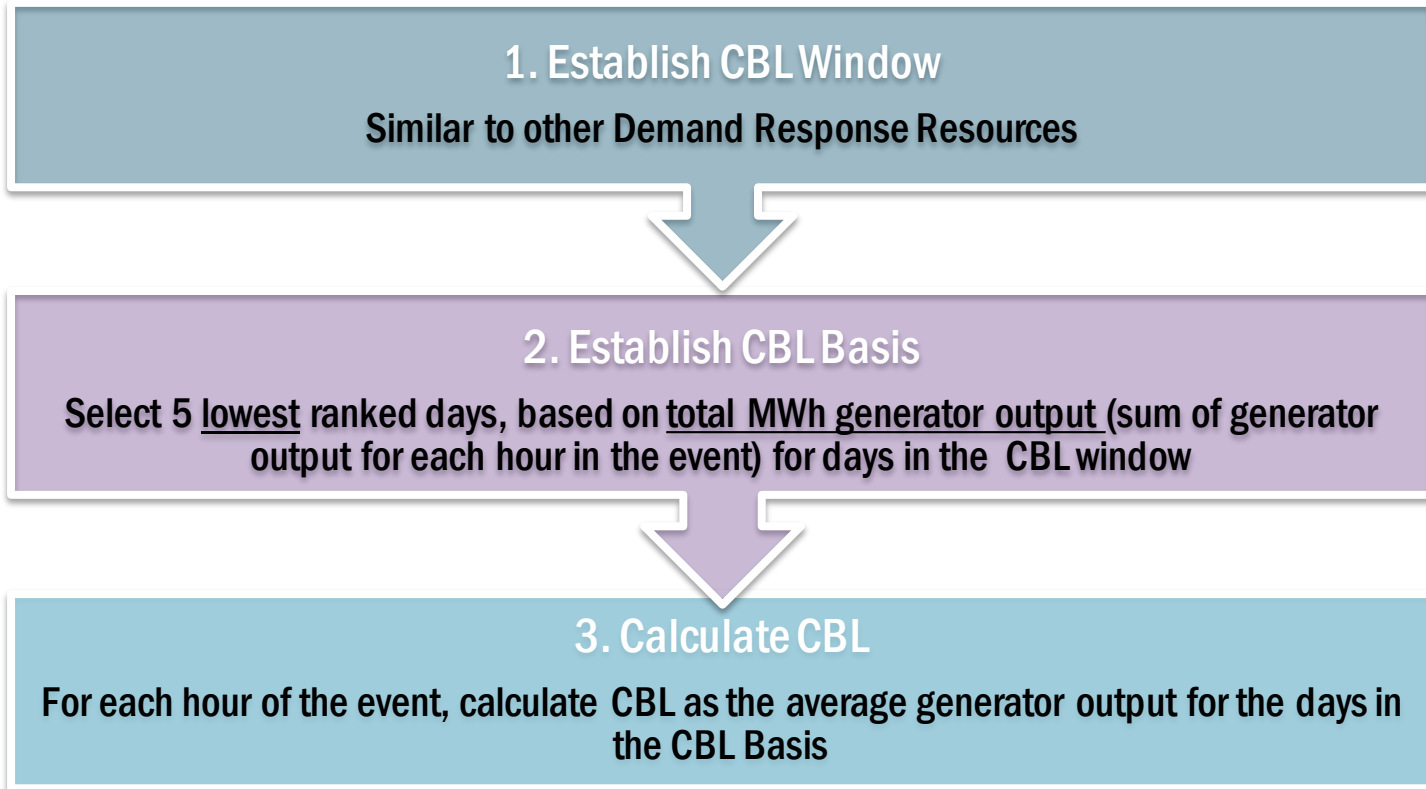
Average Day CBL - Weekend



Average Day CBL- Weekends

SUN	MON	TUE	WED	THU	FRI	SAT
Jun 8	Jun 9	Jun 10	Jun 11	Jun 12	Jun 13	Jun 14 CBL Day 3 For July 5
Jun 15	Jun 16	Jun 17	Jun 18	Jun 19	Jun 20	Jun 21 CBL Day 2 For July 5
Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28 CBL Day 1 For July 5
Jun 29	Jun 30	Jul 1	Jul 2	Jul 3	Jul 4	Jul 5 EDRP Event
Jul 6 Day 3	Jul 7 Day 2	Jul 8	Jul 9	Jul 10	Jul 11	Jul 12

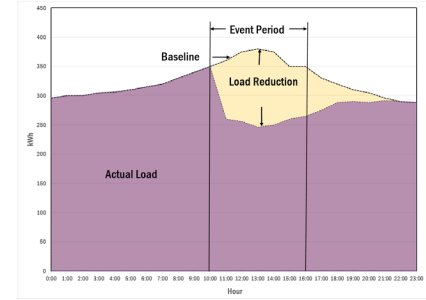
CBL Calculation Method - Local Generator Resources



Topic 5:

Method for measuring and reporting performance

Performance Measurement for Energy Payments



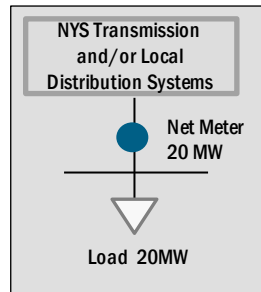
Resource Response Type	Performance Measurement for each hour
Response Type C (Curtailment only)	$\text{CBL} - \text{Actual Net Load}_{\text{using net meter}}$
Response Type G (Local Generator only)	$\text{Metered Generator Output} - \text{CBL}_G$
Response Type B (Both)	$\text{CBL} - \text{Actual Load}_{\text{using Net meter}}$ Or $[\text{Metered Generator Output} - \text{CBL}_G] + [\text{CBL} - \text{Actual Load}_{\text{using load meter}}]$

Note: Average Day or Weather adjusted CBL based on resource enrollment
 Weekday or weekend CBL calculation based on actual event day

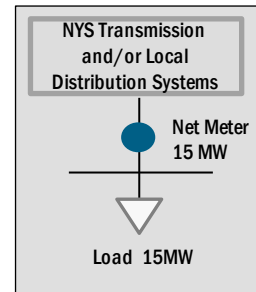
Performance Measurement - Examples

■ Response Type C: (Curtailment Only)

* For 1 example hour



Normal Day
CBL = 20 MW



During an EDRP Event

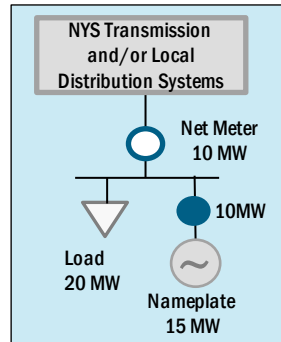
● Meter(s) used to report meter data into DRIS for Load Reduction

$$\begin{aligned}
 \text{Performance measurement (for this hour)} &= \text{CBL} - \text{Actual Net Load} \\
 &= 20 \text{ MW} - 15 \text{ MW} \\
 &= 5 \text{ MW}
 \end{aligned}$$

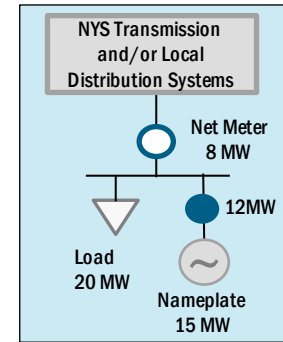
Performance Measurement Examples

■ Response Type G (Local Generation only)

* For 1 example hour



Normal Day
 $CBL_G = 10 \text{ MW}$



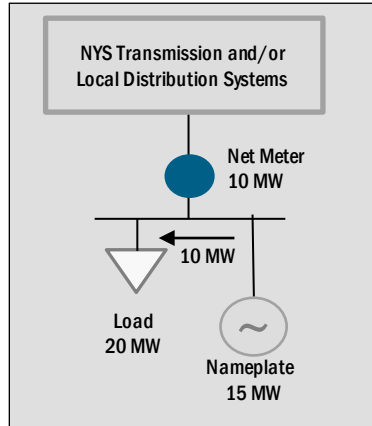
During an EDRP Event

● Meter(s) used to report meter data into DRIS for Load Reduction

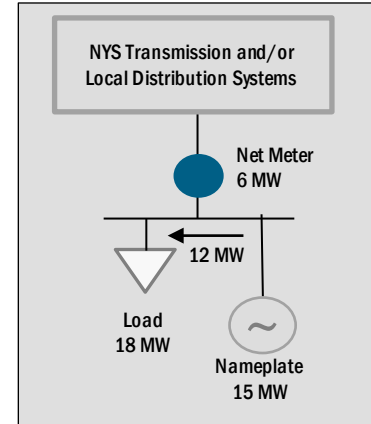
$$\begin{aligned}
 \text{Performance measurement (for this hour)} &= \text{Metered Generator Output} - CBL_G \\
 &= 12 \text{ MW} - 10 \text{ MW} \\
 &= 2 \text{ MW}
 \end{aligned}$$

Performance Measurement - Examples New York ISO

- Response Type B (Curtailment and Local Generator)




Normal Day
CBL = 10 MW



During an EDRP Event

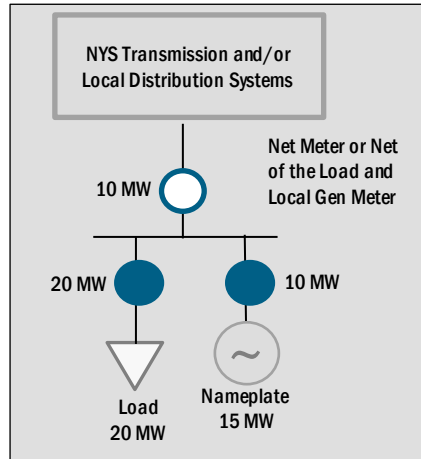
* For 1 example hour

 Meter(s) used to report meter data into DRIS for Load Reduction

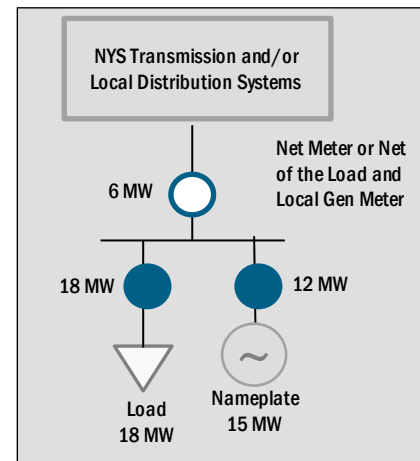
$$\begin{aligned}\text{Performance measurement (for this hour)} &= \text{CBL} - \text{Actual Net Load} \\ &= 10 \text{ MW} - 6 \text{ MW} \\ &= 4 \text{ MW}\end{aligned}$$

Performance Measurement - Examples

■ Response Type B (Curtailment and Local Generator)



Normal Day
 $CBL = 20 \text{ MW}$
 $CBL_G = 10 \text{ MW}$



During an EDRP Event

$$\begin{aligned}
 \text{Performance Measurement} &= [\text{Metered Generator Output} - CBL_G] + [CBL - \text{Actual Load}_{\text{using load meter}}] \\
 &= [12 \text{ MW} - 10 \text{ MW}] + [20 \text{ MW} - 18 \text{ MW}] \\
 &= 2 \text{ MW} + 2 \text{ MW} \\
 &= 4 \text{ MW}
 \end{aligned}$$

Topic 6:

Event notification process and customer response to an event

EDRP Event Deployment

- An EDRP event activation is one of the emergency procedures in response to an Operating Reserve Forecast Shortage
- EDRP resources may be deployed in conjunction with SCR resources, as part of a NYISO activated Reliability Demand Response
- Responsibilities of EDRP resources during a Demand Response Event:
 - Receiving Event Notifications
 - Reporting expected curtailment values by zone
 - Voluntarily performing load reduction during the event

Event Notification

- **Notification types:** Notification types include but are not limited to:
 - Day-Ahead Advisory
 - In-day advisory
 - Activation (2-hour Notice)
 - Immediate activation
 - Extension of Event or
 - Early termination of Event
- **Notification from the NYISO will take place via two communications media:**
 - Burst e-mail messages to all CSP Event-Responder e-mail contacts specified in DRIS
 - Automated phone call to all CSP Event-Responder phone contacts specified in DRIS

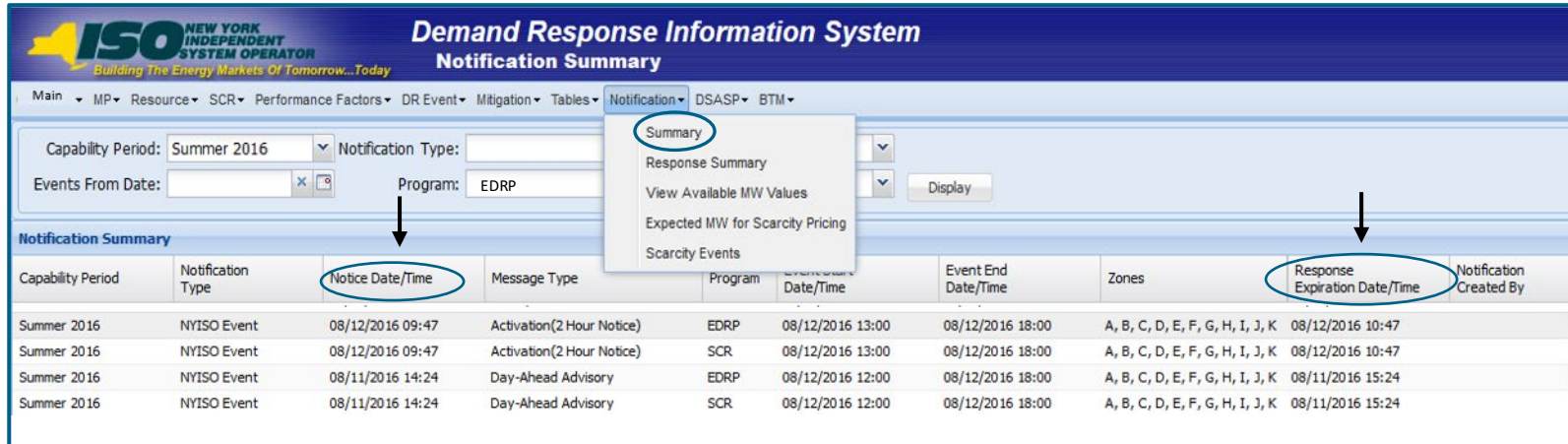
Event Notification

- Both e-mail and automated phone Event Notifications contain the following parameters:
 - Notification Type: NYISO Event, Targeted Demand Response Program Event, Performance Test 1 or 2
 - Program: EDRP or SCR
 - Message type: Notification type as listed in previous slide
 - Zone(s) or Subload Pocket(s)
 - Start Time of Event
 - End Time of Event
- E-mail notification will indicate the “From” address as edrp-scr@nyiso.com

Event Notification- CSP Response

- **After receiving an EDRP Notification, the CSP shall take the following steps:**
 1. Assess whether or not the CSP has resources that can respond, and the kW level of the response by zone
 2. Provide the expected kW response (expected curtailment value) by load zone in accordance with the instructions in the notification into DRIS
- **If CSP has missed the deadline to enter the expected curtailment value, they can provide the information to NYISO's Stakeholder Services**
- **If the NYISO does not receive the response before the Response expiration date/time, it may call upon additional CSP contact numbers to make a connection**

Viewing Event Notification Response Deadline in DRIS



Demand Response Information System
Notification Summary

Main ▾ MP ▾ Resource ▾ SCR ▾ Performance Factors ▾ DR Event ▾ Mitigation ▾ Tables ▾ Notification ▾ DSASP ▾ BTM ▾

Capability Period: Summer 2016 ▾ Notification Type: ▾
Events From Date: ▾ X ▾ Program: EDRP

Notification Summary

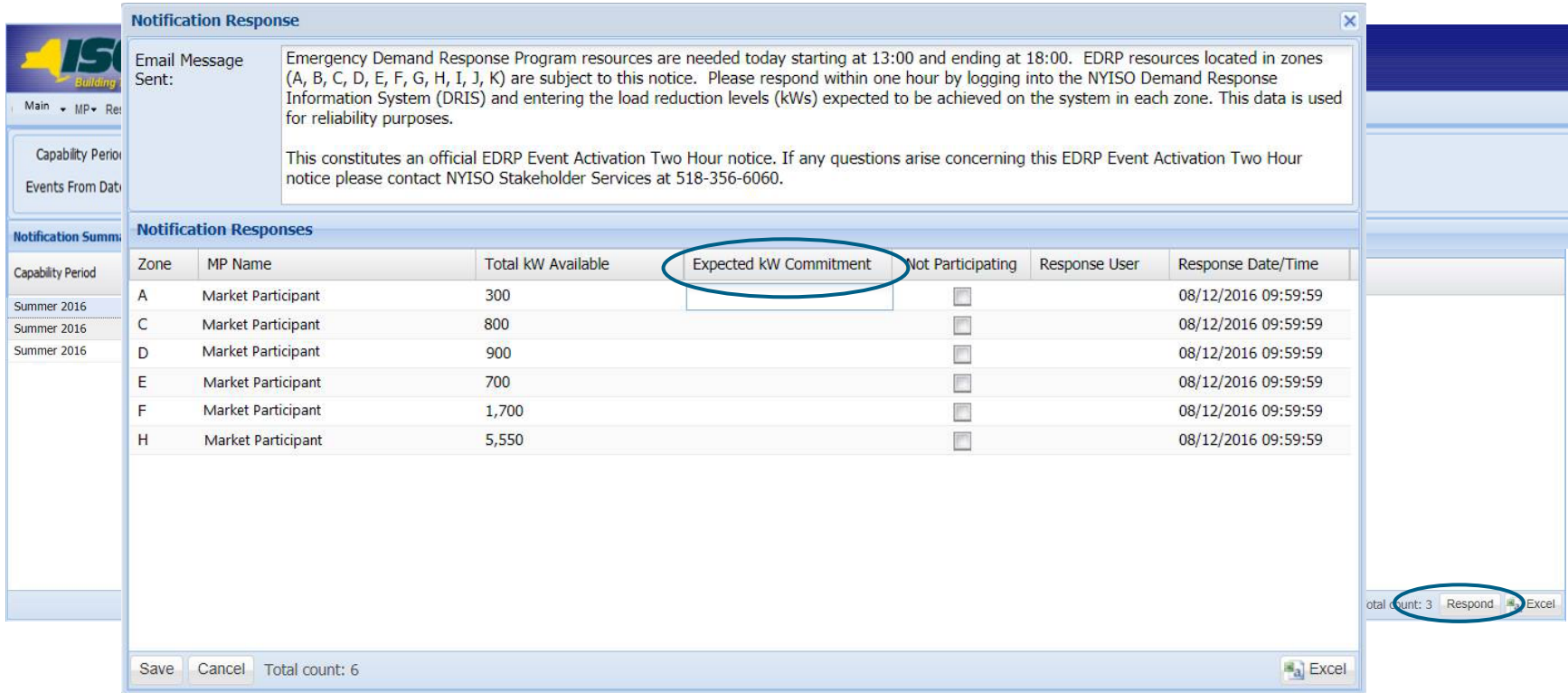
Capability Period	Notification Type	Notice Date/Time	Message Type	Program	Date/Time	Event End Date/Time	Zones	Response Expiration Date/Time	Notification Created By
Summer 2016	NYISO Event	08/12/2016 09:47	Activation(2 Hour Notice)	EDRP	08/12/2016 13:00	08/12/2016 18:00	A, B, C, D, E, F, G, H, I, J, K	08/12/2016 10:47	
Summer 2016	NYISO Event	08/12/2016 09:47	Activation(2 Hour Notice)	SCR	08/12/2016 13:00	08/12/2016 18:00	A, B, C, D, E, F, G, H, I, J, K	08/12/2016 10:47	
Summer 2016	NYISO Event	08/11/2016 14:24	Day-Ahead Advisory	EDRP	08/12/2016 12:00	08/12/2016 18:00	A, B, C, D, E, F, G, H, I, J, K	08/11/2016 15:24	
Summer 2016	NYISO Event	08/11/2016 14:24	Day-Ahead Advisory	SCR	08/12/2016 12:00	08/12/2016 18:00	A, B, C, D, E, F, G, H, I, J, K	08/11/2016 15:24	

***Note: The Summer 2016 date was selected as an example as it offered robust information.

Event Notification- CSP Response

- CSPs should respond with the expected curtailment values for each zone indicated in the Event Notification for which the resources are enrolled in DRIS, according to instructions provided in the DRIS user's Guide (Section 11.3)
- CSPs may provide multiple updates to the expected curtailment value; the value with the most recent submittal time will be saved in DRIS

Event Notification – CSP Response



Notification Response

Email Message Sent: Emergency Demand Response Program resources are needed today starting at 13:00 and ending at 18:00. EDRP resources located in zones (A, B, C, D, E, F, G, H, I, J, K) are subject to this notice. Please respond within one hour by logging into the NYISO Demand Response Information System (DRIS) and entering the load reduction levels (kW) expected to be achieved on the system in each zone. This data is used for reliability purposes.

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

Notification Responses

Zone	MP Name	Total kW Available	Expected kW Commitment	Not Participating	Response User	Response Date/Time
A	Market Participant	300		<input type="checkbox"/>		08/12/2016 09:59:59
C	Market Participant	800		<input type="checkbox"/>		08/12/2016 09:59:59
D	Market Participant	900		<input type="checkbox"/>		08/12/2016 09:59:59
E	Market Participant	700		<input type="checkbox"/>		08/12/2016 09:59:59
F	Market Participant	1,700		<input type="checkbox"/>		08/12/2016 09:59:59
H	Market Participant	5,550		<input type="checkbox"/>		08/12/2016 09:59:59

Save Cancel Total count: 6

Excel

total count: 3 Respond Excel

****Note: The Summer 2016 date was selected as an example as it offered robust information.*

Load Reduction during EDRP Event

- EDRP Resources can reduce load during the hours of the Event, even if CSP has not entered the expected curtailment values before the Response Expiration Date/Time
- CSPs will receive a separate Event Notification for Events that are either extended or terminated early from original event end time for one or more zones or sub load pockets on the original Event Notification
- The expected curtailment kW values for the original Event Notification will be used as the value for extended Events

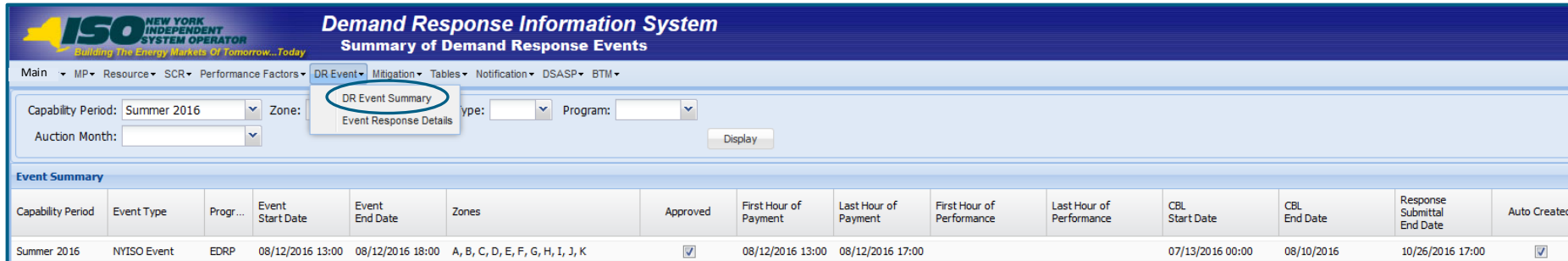
Sample Load Reduction Plan for an EDRP Resource

Sample Load Reduction Plan for a resource enrolled as Response Type B, with an expected curtailment value of 300 kW:

Time with respect to the EDRP Event	Action	Load Reduction Achieved (kW)
2 hours prior	Pre-cool the office area from 70 degrees to 65 degrees	
15 minutes prior	Turn off the HVAC	150 kW
15 minutes prior	Transfer critical load to backup generator	100 kW
At the start	Dim the office lights	50 kW
15 minutes post	Return to normal operations	

Event Summary

- After the Event has taken place, event details can be found in DRIS
 - DR Event Summary has information about proper resource data that needs to be reported for the event



Demand Response Information System
Summary of Demand Response Events

Main ▾ MP ▾ Resource ▾ SCR ▾ Performance Factors ▾ DR Event ▾ Mitigation ▾ Tables ▾ Notification ▾ DSASP ▾ BTM ▾

Capability Period: Summer 2016 ▾ Zone: DR Event Summary type: ▾ Program: ▾

Auction Month: ▾ Display

Event Summary

Capability Period	Event Type	Progr...	Event Start Date	Event End Date	Zones	Approved	First Hour of Payment	Last Hour of Payment	First Hour of Performance	Last Hour of Performance	CBL Start Date	CBL End Date	Response Submittal End Date	Auto Created
Summer 2016	NYISO Event	EDRP	08/12/2016 13:00	08/12/2016 18:00	A, B, C, D, E, F, G, H, I, J, K	<input checked="" type="checkbox"/>	08/12/2016 13:00	08/12/2016 17:00			07/13/2016 00:00	08/10/2016	10/26/2016 17:00	<input checked="" type="checkbox"/>

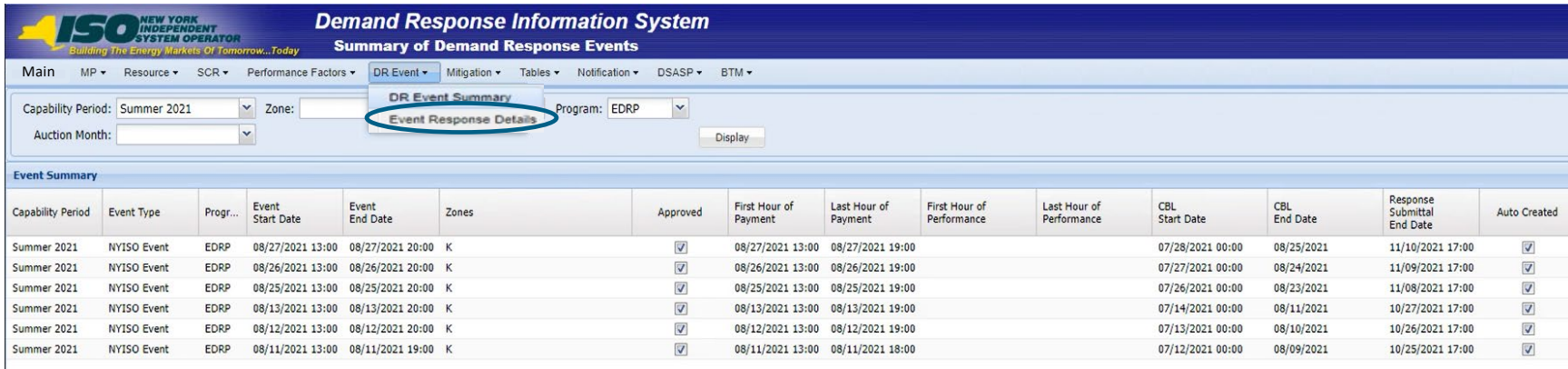
****Note: The Summer 2016 date was selected as an example as it offered robust information.*

Topic 7:

Reporting Process for Event Response details

Event Response

- Resources submit Event Response data through DRIS within a pre-established time frame
 - Format specified in the DRIS User's Guide
- The Response submittal End date/time is 5:00 P.M., 75 days after Event deployment
 - Response submittal end date can be found in the Event Summary page under DR Event in DRIS, and in the DR event calendar



Capability Period	Event Type	Progr...	Event Start Date	Event End Date	Zones	Approved	First Hour of Payment	Last Hour of Payment	First Hour of Performance	Last Hour of Performance	CBL Start Date	CBL End Date	Response Submittal End Date	Auto Created
Summer 2021	NYISO Event	EDRP	08/27/2021 13:00	08/27/2021 20:00	K	<input checked="" type="checkbox"/>	08/27/2021 13:00	08/27/2021 19:00			07/28/2021 00:00	08/25/2021	11/10/2021 17:00	<input checked="" type="checkbox"/>
Summer 2021	NYISO Event	EDRP	08/26/2021 13:00	08/26/2021 20:00	K	<input checked="" type="checkbox"/>	08/26/2021 13:00	08/26/2021 19:00			07/27/2021 00:00	08/24/2021	11/09/2021 17:00	<input checked="" type="checkbox"/>
Summer 2021	NYISO Event	EDRP	08/25/2021 13:00	08/25/2021 20:00	K	<input checked="" type="checkbox"/>	08/25/2021 13:00	08/25/2021 19:00			07/26/2021 00:00	08/23/2021	11/08/2021 17:00	<input checked="" type="checkbox"/>
Summer 2021	NYISO Event	EDRP	08/13/2021 13:00	08/13/2021 20:00	K	<input checked="" type="checkbox"/>	08/13/2021 13:00	08/13/2021 19:00			07/14/2021 00:00	08/11/2021	10/27/2021 17:00	<input checked="" type="checkbox"/>
Summer 2021	NYISO Event	EDRP	08/12/2021 13:00	08/12/2021 20:00	K	<input checked="" type="checkbox"/>	08/12/2021 13:00	08/12/2021 19:00			07/13/2021 00:00	08/10/2021	10/26/2021 17:00	<input checked="" type="checkbox"/>
Summer 2021	NYISO Event	EDRP	08/11/2021 13:00	08/11/2021 19:00	K	<input checked="" type="checkbox"/>	08/11/2021 13:00	08/11/2021 18:00			07/12/2021 00:00	08/09/2021	10/25/2021 17:00	<input checked="" type="checkbox"/>

Importing Event Response Details for an EDRP Resources



About Us Grid of the Future Careers Calendar Support Login

MARKETS LIBRARY PLANNING COMMITTEES TRAINING

REAL-TIME DATA DASHBOARD
SYSTEM CONDITIONS

ENERGY MARKET & OPERATIONAL DATA

Pricing Data
Power Grid Data
Load Data
Reports & Info
Postings by Date
Custom Reports
Ancillary Services

INSTALLED CAPACITY MARKET (ICAP)

TRANSMISSION CONGESTION CONTRACTS (TCC)

DISTRIBUTED ENERGY RESOURCES (DER)

Demand Response
Behind-the-Meter Net Generation

MARKET ACCESS LOGIN



About Us Grid of the Future Careers Calendar Support Login

MARKETS LIBRARY PLANNING COMMITTEES TRAINING

MARKETS / DISTRIBUTED ENERGY RESOURCES (DER) / DEMAND RESPONSE

DEMAND RESPONSE

NYISO's demand response programs pay qualifying participants to reduce their consumption ("load") for discrete periods of time at the NYISO's direction.

DEMAND RESPONSE INFORMATION SYSTEM (DRIS) LOGIN

Contact Customer Support
stakeholder_services@nyiso.com 518-356-6060

Useful Links

NYISO Registration Information
DRIS Users Guide
ICAP Manual
EDRP Manual
DADRP Manual

Markets

Real-Time Dashboard

System Conditions

Energy Market & Operational Data

Installed Capacity Market (ICAP)

Transmission Congestion Contracts (TCC)

Distributed Energy Resources (DER)

Demand Response

Behind-the-Meter Net Generation (BTMNG)

Market Access Login

Demand Response

Demand Response (DR) is the act of reducing energy consumption from the grid at the direction of the NYISO.

Demand Response is provided by Demand Side Resources, which are electricity consumers located in New York State that enroll to take part in a specific DR program. These resources are capable of reducing the power consumed from the grid for discrete periods of time as directed by the NYISO.

NYISO's Demand Response programs pay qualifying participants to reduce their consumption ("load") for discrete periods of time.

Reliability-Based Programs - NYISO determines activation
SCR
EDRP

Economic-Based Programs - Resource determines when to participate (through supply offers)

DSASP

DADRP

For further details, please see NYISO Demand Response Programs: Frequently Asked Questions or contact NYISO Stakeholder Services.

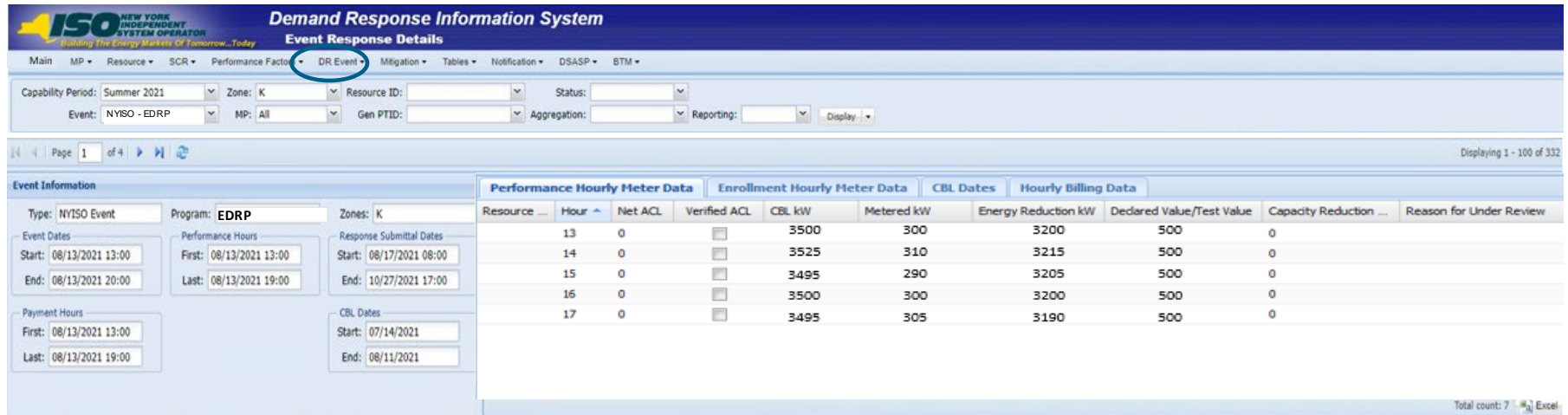
Demand Response		
Name	Published	Type
DR02 - Special Case Resource ICAP Program		
DR03 - Emergency Demand Response Program		
DR03 EDRP Event Response Import Template - xls format	2012/09/05	
DR03 EDRP Event Response Import Template - csv format	2012/09/05	
DR04 - Demand Side Ancillary Service Program		
DR05 - Day Ahead Demand Response Program		
DR06 - Demand Response Activations		
DR07 - Monthly Net Benefit Offer Floor		

Event Response Import Template

- **Header data:**
 - Event type
 - DR program
 - Event start date and time
- **Resource data required in the Event Response file includes:**
 - CBL Dates (1-10) – Customer baseline calculation date (1-10)
 - CBL Include Indicator (1-10) – Field to indicate if the CBL date will be included in the CBL calculation
 - CBL kW (HB0-HB23) – Resource hourly CBL calculation for each Event hour
 - Metered kW (HB0-HB23) – Resource hourly metered load for each Event hour
- **Instructions to import the Event Response file can be found in the DRIS User's Guide (Section 11.7)**

Viewing Event Response Details

- Once the CSP has submitted the Event Response file, details can be viewed on the Event Response Details page in DRIS



Demand Response Information System
Event Response Details

Main MP Resource SCR Performance Factor **DR Event** Mitigation Tables Notification DSASP BTM

Capability Period: Summer 2021 Zone: K Resource ID: Status:
Event: NYISO - EDRP MP: All Gen PTID: Aggregation: Reporting: Display

Page 1 of 4

Displaying 1 - 100 of 332

Event Information

Type: NYISO Event Program: EDRP Zones: K

Event Dates: Start: 08/13/2021 13:00 End: 08/13/2021 20:00

Performance Hours: First: 08/13/2021 13:00 Last: 08/13/2021 19:00

Response Submittal Dates: Start: 08/17/2021 08:00 End: 10/27/2021 17:00

Payment Hours: First: 08/13/2021 13:00 Last: 08/13/2021 19:00

CBL Dates: Start: 07/14/2021 End: 08/11/2021

Resource	Hour	Net ACL	Verified ACL	CBL kW	Metered kW	Energy Reduction kW	Declared Value/Test Value	Capacity Reduction	Reason for Under Review
13	0			3500	300	3200	500	0	
14	0			3525	310	3215	500	0	
15	0			3495	290	3205	500	0	
16	0			3500	300	3200	500	0	
17	0			3495	305	3190	500	0	

Total count: 7 Excel

Topic 8:

Verification process for CBL after an event

EDRP Verification

- Curtailment Service providers must report load reduction data to the NYISO on or before the 75th day after deployment
- EDRP resource performance is validated by hourly interval metering data or non-revenue interval metering devices that meet an overall accuracy of $\pm 2\%$
- Load reductions for which all required settlement and performance data is not entered into DRIS by 75 days after the date of deployment will not be compensated pursuant to the EDRP
- Load reduction settlement and performance data is subject to NYISO audit and Market Mitigation and Analysis review and verification
- For any erroneous payments made to the CSP, NYISO has the right to recover it either by reducing other payments to the CSP or by other lawful means

Historical Operating Data

- Upon request, CSPs must provide historical metering, meter information and operating data for each resource enrolled that is consistent with the enrolled meter configuration
- CSPs must retain all interval meter readings upon which it bases its certification of compliance for a period of three years

Topic 9:

Settlement for EDRP Event Response

EDRP Settlement Procedures

- Upon deployment of an EDRP event by the NYISO, CSPs are eligible to be paid for verified Load reductions made during each hour of the payment eligibility period
- The first hour of the payment eligibility period will begin at the top of the hour within which the deployment event is to start as identified by NYISO
 - For immediate deployment events, the NYISO-identified start time is the time of the deployment message
- The payment eligibility period ends at the later of:
 - The third consecutive hour following the first hour of the payment eligibility period or
 - The deployment event end time identified in the deployment message, if longer than four hours
- The end time of a deployment event may be adjusted by the NYISO after the initial deployment message

EDRP- Settlement Structure

Program Deployment Duration (Hours)	Applicable Hours	Calculation	Hourly Settlement (\$)
≤ 2 Hours (Starts at the top of the hour)	1 st 2 hours	Step1: Verified Load Reduction per hour (MWh) x Max[\$500/MWh, Real Time Zonal LBMP(\$)]	Step 1 +Step 2
	Next 2 hours	Step2: Verified Load Reduction per hour (MWh) x RTD Zonal LBMP (\$)	
≤ 2 Hours (Starts after the top of the hour)	1 st 3 hours	Step1: Verified Load Reduction per hour (MWh) x Max[\$500/MWh, Real Time Zonal LBMP (\$)]	Step 1+Step 2
	Remaining hours	Step2: Verified Load Reduction per hour (MWh) x RTD Zonal LBMP (\$)	
> 2 and ≤ 3	1 st 3 hours	Step1: Verified Load Reduction per hour (MWh) x Max[\$500/MWh, RTD Zonal LBMP(\$)]	Step 1+Step 2
	Remaining hours	Step2: Verified Load Reduction per hour (MWh) x Real Time Zonal LBMP (\$)	
> 3	All hours		Verified Load Reduction per hour (MWh) x Max[\$500/MWh/ Real Time Zonal LBMP (\$)]

Settlement for EDRP Resources

Participating in other DR Programs

- EDRP resources that are scheduled to perform in either the DADRP or DSASP during an EDRP event will have their Load Reduction payments adjusted to reflect the payments made for performance under DADRP or DSASP
- The EDRP resource will be paid for the response to the program only if and to the extent that the resource performed above its commitment to the DADRP or DSASP DAM schedule

$$\text{Resource's performance eligible for EDRP payment (kWh)} = \text{Verified Load Reduction reported by resource (kWh)} - \text{DADRP or DSASP DAM contribution (kWh)}$$

Hourly Billing Data-DRIS

ISO NEW YORK INDEPENDENT SYSTEM OPERATOR
Building The Energy Markets Of Tomorrow... Today

Demand Response Information System
Event Response Details

Main MP Resource SCR Performance Factors **DR Event** Mitigation Tables Notification DSASP BTM

Capability Period: Summer 2021 Zone: K Resource ID: Status: Event: NYISO - EDRP 0 MP: All Gen PTID: Aggregation: Reporting: Display

Page 1 of 4

Displaying 1 - 100 of 332

Event Information

Type: NYISO Event Program: EDRP Zones: K

Event Dates
Start: 08/13/2021 13:00
End: 08/13/2021 20:00

Performance Hours
First: 08/13/2021 13:00
Last: 08/13/2021 19:00


Response Submittal Dates
Start: 08/17/2021 08:00
End: 10/27/2021 17:00

Payment Hours
First: 08/13/2021 13:00
Last: 08/13/2021 19:00

CBL Dates
Start: 07/14/2021
End: 08/11/2021

Performance Hourly Meter Data

Resource	Hour	Net ACL	Verified ACL	CBL kW	Metered kW	Energy Reduction kW	Declared Value/Test Value	Capacity Reduction	Reason for Under Review
	13	0	<input type="checkbox"/>	3500	300	3200	500	0	
	14	0	<input type="checkbox"/>	3525	310	3215	500	0	
	15	0	<input type="checkbox"/>	3495	290	3205	500	0	
	16	0	<input type="checkbox"/>	3500	300	3200	500	0	
	17	0	<input type="checkbox"/>	3495	305	3190	500	0	

Total count: 7 

Event Information

Type: NYISO Event Program: EDRP Zones: K

Event Dates
Start: 08/13/2021 13:00
End: 08/13/2021 20:00

Performance Hours
First: 08/13/2021 13:00
Last: 08/13/2021 19:00

Response Submittal Dates
Start: 08/17/2021 08:00
End: 10/27/2021 17:00

Payment Hours
First: 08/13/2021 13:00
Last: 08/13/2021 19:00

CBL Dates
Start: 07/14/2021
End: 08/11/2021

Performance Hourly Meter Data

Resource	Hour	Status	Settlements kW	Zonal LBMP	Net Energy Payment	Adjusted for Market...
	13	Invoiced	3200	100	1600	<input type="checkbox"/>
	14	Invoiced	3215	95	1607.50	<input type="checkbox"/>
	15	Invoiced	3205	105	1602.50	<input type="checkbox"/>
	16	Invoiced	3200	90	1600	<input type="checkbox"/>
	17	Invoiced	3190	102	1595	<input type="checkbox"/>

EDRP Settlement Related Reports

- DRIS:

DR Event

↳ Event Response Details

- Customer Settlements Interface (CSI):

Consolidated Invoice

↳ Invoice Summary Report

↳ Invoice Detail Report

- Decision Support System (DSS):

Corporate Reports

↳ Hourly and Daily Advisory files

EDRP Summary

- Define the purpose of Emergency Demand Response Program (EDRP)
- Identify program eligibility requirements
- Summarize the process for enrollment
- Define and explain how Customer Baseline Load (CBL) is calculated
- Describe method for measuring and reporting performance
- Explain the event notification process and customer response to an event
- Describe the reporting process for Event Response details
- Describe verification process for CBL after an event
- Describe settlement for an EDRP Event Response

References

- **Market Services Tariff (MST)**
- **Emergency Demand Response Program Manual**
- **Emergency Operations Manual**
- **Ancillary Services Manual**
- **Market Participant User's Guide**
- **Demand Response Information System (DRIS) User's Guide**