



National Grid Commercial System Relief Program Overview and Guidelines

RELATED CASE 15-E-0189

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1. Introduction

Niagara Mohawk Power Corporation d/b/a National Grid (the “Company”) is an electric and gas investor-owned utility serving nearly 3.3 million electric and 3.5 million gas customers through its subsidiary companies in Massachusetts, New York, and Rhode Island. National Grid is committed to providing safe, reliable, and affordable energy to all customers throughout our service territory.

The Company has been offering demand response programs for both commercial and residential customers across its service territories for several years. Please visit <https://www.nationalgridus.com/Upstate-NY-Business/Energy-Saving-Programs/Demand-Response> for more information on the programs and available opportunities.

Disclaimer: This document contains only guidelines for the National Grid Demand Response (DR) programs. The National Grid Tariff prevails in any conflict. National Grid reserves the right to change any of the guidelines without notice if necessary, for operational purposes.

Purpose: This document is intended to provide additional clarification to Rules 61 and 62 of the Company’s PSC No. 220 Electricity – Schedule for Electric Service (“Tarriff”). It is not meant to provide a comprehensive overview of DR or National Grid’s programs to new participants.

2. Acroynms and Definitions

- **AMI** – Advanced Meter Infrastructure. Also known as smart meters.
- **Aggregator** – Also known as Curtailment Service Provider or CSP. Refers to a party other than the Company that represents and aggregates the load of eligible customers who collectively have a Load Relief potential of 50 kW or greater and is responsible for the actions of the customers it represents, including performance and, as applicable, performance adjustments, penalties, and repayments to National Grid.
- **Capability Period** – The period in which National Grid may request Load Relief, the summer capability period for CSRP runs May 1 through September 30.
- **CBL** – Customer Baseline Load. Average hourly energy consumption used to determine the level of load relief that is provided. [The CBL calculation details are located here.](#)
- **Contracted Hours** – The four-hour period within a weekday, Monday through Friday, during the Capability Period, excluding Holidays, during which the Direct Participant or Aggregator contracts to provide Load Relief whenever the Company designates a Planned Event.
- **CSP** – Curtailment Service Provider (*See: “Aggregator”*)
- **CSRP** – Commercial System Relief Program
- **Direct Participant** – A customer who enrolls in CSRP directly with the Company for a single account and agrees to provide at least 50 kW of Load Relief.
- **DR** – Demand Response – load relief upon request. Also known as Smart Usage Rewards.
- **DRMS** – Demand Response Management System. System used to administer the DR programs.
- **Interval Meter** – An electric meter capable of measuring electric usage in intervals of 60 minutes or less. Required for DR program participation.
- **kW** – Kilowatt
- **kWh** – Kilowatt-hour

- **Load Relief** – Refers to power (kW) and energy (kWh): (a) ordinarily supplied by the Company that is displaced by use of Electric Generating Equipment and/or reduced by the Direct Participant or Aggregator at the Customer’s premises; or (b) produced by use of Electric Generating Equipment and delivered by that Customer to the Company’s distribution system during a Load Relief Period.
- **Load Relief Period** – the hours for which the Company requests Load Relief during an Event, typically a four-hour window after 2:00 PM.
- **NYS DEC** – New York State Department of Environmental Conservation
- **PSC** – Public Service Commission
- **Planned Event** – A Load Relief Event scheduled with 21 or more hours’ advance notice, for Load Relief during the Contracted Hours. Planned Events may be called when the Company’s day-ahead forecasted load level is at least 92 percent of the Company’s forecasted summer system-wide peak.
- **Reservation Payment Option** – Customers may enroll under this option if they agree to provide a specified amount of load reduction during demand response events. Under this option customers receive a set dollar amount per kilowatt (kW) payment per month for the summer capability period, regardless of whether there are any Demand Response Events called during the Capability Period.
- **Test Event** – National Grid may request Direct Participants and Aggregators to provide one hour of Load Relief within the Contracted Hours, on no less than 21 hours advance notice.
- **Unplanned Event** – A Load Relief Event for which customers do not receive day-ahead notification, typically called due to unforeseen circumstances. Participation is optional and compensated at a higher rate than planned events.
- **Voluntary Participation Option** – The payment option the customer will be enrolled in if they do not elect to participate under the “Reservation Payment Option.” Customers will only receive payment for actual load reductions during Demand Response Events under this option.

3. Program Summaries

The Commercial System Relief Program (CSRP) aims to reduce peak demand at the network level by calling on customers to reduce energy use during a Load Relief Period.

Load Relief Periods for a Planned CSRP Event can be requested during the Capability Period, Monday-Friday, excluding federal holidays. For a Planned CSRP Event, a day-ahead advisory notice (21 hours or more prior to dispatch) is triggered when the day-ahead system peak demand forecast reaches 92% of the overall summer peak demand forecast. The forecast must remain at 92% or higher on the day of the event or the event can be cancelled. A day-of notification is sent at least two hours ahead of each respective customer’s call window. Less than 21 hours of notice may be provided for an Unplanned CSRP Event, and participation is voluntary.

Aggregators are responsible for communicating event notices to their respective customers; direct participants receive event notices directly from National Grid. This program is typically called system-wide (i.e., all enrolled customers are called for an event).

4. Program Enrollment

There are many factors to consider prior to enrolling in National Grid’s Demand Response programs. End-use customers or facility owner/managers should consider enrolling through a [National Grid-approved aggregator for assistance](#). Each customer can only participate in the Reservation or Voluntary option for each program, but not both. The sections below describe important enrollment requirements, deadlines, and processes.

4.1 Eligibility Requirements

A communicating interval meter is required for all participants, National Grid interval meter data is required for measurement and verification of program performance and associated settlement payments. Customers participating in residential or small business Dynamic Load Control programs (e.g. ConnectedSolutions) may not dual-enroll for participation in CSRP.

Aggregators must enroll a minimum of 50 total kW (in aggregate) of load reduction to participate in any National Grid Commercial DR program. A direct participant enrolling a single account must provide a minimum of 50 kW of load reduction. A direct participant may self-aggregate multiple individual accounts if the organization is not also acting as a third-party aggregator. If a direct participant self-aggregates, then the performance factors and payments will be handled as they are for third-party aggregators.

All customers enrolled in the Reservation programs must provide load relief during non-voluntary events. Aggregators must provide customer contact information to National Grid, if requested. National Grid may request contact information for various reasons, including: an account being enrolled by multiple aggregators, or for an administrative review.

4.2 Enrollment Deadlines and Interval Metering

The seasonal enrollment deadlines for CSRP participants are by 11:59 PM EDT on the first business day in April for a May 1 start, and 11:59 PM EDT the first business day in May for a June 1 start. Participants who choose the Voluntary Participation Option may apply at any time, provided they satisfy the metering requirements.

If the Company does not bill the participant monthly using interval metering at the time of application, participation in the Reservation Payment Option will not commence unless both interval metering and communications are operational. If the Company receives a completed application by April 1, service can commence on May 1 if the interval metering is installed by April 1 and meter communications are operational by April 30. If the Company receives a completed application by May 1, service can commence on June 1 if the interval metering is installed by May 1 and meter communications are operational by May 31. If the application is received by May 1, but the above deadlines for installation of interval metering and meter communications are not met, service will commence on July 1 provided the interval metering is installed by June 1 and meter communications are operational by June 30.

4.3 Inactive Accounts

Enrollments that are accepted into the program but are associated with accounts that go inactive during the course of the Capability Period may remain in the program if the account holder and aggregator still have an agreement in place to provide Load Relief and a new active account is located at the same premise. Inactive accounts may not be replaced with new accounts at other locations.

Aggregators shall have 30 days from the establishment of the new account to provide National Grid with notice of the account change, including the effective date and new account number. The new account in this scenario will replace the inactive account for all purposes related to Measurement, Verification, and Performance.

Failure to provide National Grid with notice of an account change within 30 days of the account change will result in the enrolled customer's performance being set to zero for the remainder of the Capability Period. Any previous payments for the inactive account will be subject to administrative review by National Grid.

4.4 Approved Aggregators

National Grid publishes a list of [National Grid-approved aggregators](#) on our DR website. If you are a new aggregator that wishes to be added to the list, or an existing aggregator that wishes to update information, please send an email to DR@nationalgrid.com with your request.

4.5 Public Service Commission DER Oversight

On October 19, 2017, the PSC published Uniform Business Practices for Distributed Energy Resource Suppliers (UBP-DERS). Aggregators are considered DER suppliers and these rules apply to those aggregating in National Grid's DR programs. Further, DR payments are considered ongoing transactions. The following categories are addressed and elaborated on in the [UBP-DERS](#).

- Sales Agreements
- General Marketing Standards
- Customer data authorization
- Responsibility for contractors and other third party agents
- Customer Inquiries and Complaints
- Consequences for violations
- Oversight requirements

It is the responsibility of aggregators to be familiar with DER Oversight and ongoing changes.

4.6 Required Documents

The first enrollment process step for any potential direct participant is to fill out and submit the Demand Response Program Application. Individual participants must annually submit this document prior to the enrollment deadline for the Capability Period, regardless of past participation. Aggregators may contact DR@nationalgrid.com for additional information on bulk-registration of their participants for the coming Capability Period.

National Grid pays DR participants via ACH bank wire transfer, mailed check, or electric on-bill credit. New aggregators or direct participants must select a payment method and submit the associated required documents listed below prior to the start of the DR capability period. National Grid may periodically request updated documents. Any information that is repeated in the below documents (address on W-9 and Remittance Letter) must match exactly across documents.

If you would like to change your payment method or payment details, please email updated documentation to DR@nationalgrid.com before the end of enrollments. Failure to do so may result in a delay of incentive payments. If your financial information needs to be changed after the capability period has already started, you must notify National Grid immediately. Any change to payment information after the capability period has started may result in a delay of incentive payments.

To receive payments via check, the aggregator or direct participant must submit:

- W-9
- Remittance Letter

To receive payments via wire transfer, the aggregator or direct participant must submit:

- W-9
- Remittance Letter
- ACH Form
- Bank letter or copy of a voided check

Aggregators are required to have sales agreements with customers they enroll in CSRP. These agreements should explicitly name the National Grid CSRP program as applicable and be agreed to by an authorized representative of the customer. The agreements must be dated. Aggregators should reconfirm participation with customers annually to avoid enrolling a customer who has switched to a different aggregator.

All DR aggregators are required to sign the Data Security Agreement (DSA) and pass National Grid's Vendor Risk Assessment (VRA). These documents are required to receive customer data from National Grid in accordance with the Uniform Business Practices for Distributed Energy Resource Suppliers.

4.7 Generator Permits

Any direct participant or aggregator that is providing DR via generation in the CSRP DR program must ensure that all generators meet local, state, and federal requirements, including, but not limited to, all permitting requirements.

The following is required for each account with a generator:

1. For all generating equipment that is used to provide load relief in the CSRP DR program:
New York State Department of Environmental Conservation (NYS DEC) permits or registrations.
2. For diesel-fired and natural gas lean-burn generating equipment with a model year older than 2000 that is used to provide load relief in the CSRP DR program:
Written certification by a professional engineer (PE) attesting to the accuracy of all generation-related information contained in the application, including the NOx emission level. The NOx emission level for these engines must be no more than 2.96 lb/MWh.¹

City (or other) permits will not be accepted in lieu of NYS DEC permits/registrations.

The deadlines for submitting NYS DEC permits and PE letters are:

1. If a NYS DEC permit or registration has already been issued by the enrollment deadline (see Section 3.2), the relevant documents must be submitted with the CSRP enrollment, or within 7 days of the enrollment deadline.
2. If the NYS DEC permit has not yet been issued by the enrollment deadline (see Section 3.2), a copy of the NYS DEC permit/registration application must be submitted with the CSRP enrollment or within 7 days of the enrollment deadline. The NYS DEC permit and PE letter (if applicable) must be submitted before commencing service under CSRP. The latest a permit can be submitted in this scenario is May 31st.

If the relevant documents are not all submitted by the above deadlines, the enrollment will be rejected. Please submit all permits and PE letters as early as possible so that National Grid can review them before the deadline. This will allow adequate time for mistakes to be corrected.

If enrolling a battery in the program, please email the interconnection number and enrollment ID to DR@NationalGrid.com.

For more information on generator permitting, please visit this NYS DEC website and direct all clarifying questions to NYS DEC staff.

5. Meter Data and Communications

A communicating interval meter is required for each National Grid DR program participant. If a customer is not billed at the time of enrollment with interval data, the customer is responsible for interval meter purchase and communications. National Grid is not responsible for notifying an aggregator or direct participant when a meter is not communicating. Aggregators and Direct Participant customers can review meter data via the National Grid Customer Website.

CSRP customers who are unable to obtain communications service prior to the start of the Capability Period are provisionally allowed to participate in the program until communications service is established. Customers participating under these circumstances may have their event performance set to zero and calculated after the fact if communications are not established before a Load Reduction Event. National Grid will follow guidelines for rectifying meter data issues in order to calculate performance in the event a provisional participant does not have communications service established. See Section 4.2 for additional details on Metering Installation Deadlines.

6. DR Event Forecasting and Notification

When National Grid has a day-ahead forecasted load level that reaches at least 92% of the forecasted seasonal system-wide peak, a Planned CSRP event may be called. For Planned Events the company will provide no less than 21 hours advance notice to participants. A second notification, confirming or cancelling the event, will be sent at least two hours prior to the event start time. An Unplanned Event may be called fewer than 21 hours prior to the start of the event, participation in these events is compensated, but is also voluntary and does not impact a participant's performance factor.

Notifications for National Grid DR events are sent via phone and/or email. Notifications are sent automatically and rely on aggregators and direct participants to provide at least two contacts at registration for the purpose of notification during events. To confirm proper event notification setup, National Grid will issue one or more communications tests before or during the capability period.

7. Settlements

7.1 Settlement Timeline

Payments will be made for Reservation Option payment customers for each capability period month, within 75 days after the end of the month (to coincide with billing cycle corrections), unless there are operational constraints. For example, the payment for May 2020 participation would be on or before 8/14/2020.

If you would like to change your payment method or payment details, please email updated documentation to DR@nationalgrid.com before the end of enrollments. Failure to do so may result in a delay of incentive payments. If your financial information needs to be changed after the capability period has already started, you must notify National Grid immediately. Any change to payment information after the capability period has started may result in a delay of incentive payments.

7.2 Performance Payments

If DR resources are called for a test event, performance (kWh) payments are paid out as in a Planned Event. Performance payments cannot be less than zero. Aggregators are paid based on the performance of the entire aggregation. While customers within an aggregation can have negative performance, the aggregation's Performance Payment cannot be less than zero.

Below is a sample performance payment result for an aggregation in a month with a single four-hour planned event.

Aggregator-Customer	kW Pledge	Event kWh Reduction	Average kW Reduction
Agg 1- Customer 1	100	440	110
Agg 1- Customer 2	75	280	70
Agg 1- Customer 3	50	120	50
Aggregator 1 Total	225	840	210

The aggregator in the above example would be paid \$726.64 based on the following calculations (see section on Performance Factor for additional details on Reservation Payment Calculation):

$$\text{Reservation Payment} = \text{kW Pledge} * \$2.75 * (\text{Average kW Reduction} / \text{kW Pledge})$$
$$\$575.44 = 225 \text{ kW} * \$2.75 * .93$$

$$\text{Performance Payment} = \text{Actual kW Performance} * \$0.18/\text{kWh}$$
$$\$151.20 = 840\text{kWh} * \$0.18$$

7.3 Mandatory and Voluntary Events

Mandatory participation means that actual Load Relief will be measured and will impact performance factor and therefore reservation payments. Performance factors are determined based on average hourly load relief across mandatory load relief hours, and they are used as a multiplier to determine reservation payments.

Voluntary participation means that performance payments (kWh) will be made, but that load relief will not impact performance factor or reservation payments, as there are no reservation payments and thus no performance factor for voluntary participants.

Unplanned Events are Voluntary, even for customers that are not otherwise voluntary program participants. Unplanned Events maybe announced fewer than 21 hours prior to the event start time. Customers are paid a slightly higher rate per kW performed in an Unplanned Event, and participation in these events does not impact Performance Factor calculations.

7.4 Performance Factors

Performance Factors are calculated on a monthly basis when Test Events, Planned Events, or Unplanned Events occur. Event Performance Factors are calculated for every individual event. In months with multiple events, the Performance factor is the average of all Event Performance Factors in the month. The performance factor for an event is the total average kW Reduction divided by the total Pledged kW, represented as a percentage rounded to the nearest whole number.

For new aggregations or new direct participants:

50% performance factor is assumed for the capability period in months preceding a test or actual DR event. Once an actual or test event occurs, the performance factor achieved at that time will be carried forward and prior reservation payments will be trued-up to reflect the achieved performance factor

For existing aggregations or direct participants:

The previous year’s final aggregation or direct participant performance factor is assumed to start the current capability period. This performance factor remains in effect until either a planned or test event occurs; at that point the performance factor will be calculated and carried forward.

Performance Factor Floor and Ceiling:

Average kW reduction may be either negative or well in excess of pledged kW for an event, but the event performance factor cannot be lower than 0% or greater than 100%

The following table represents an aggregation performing outside the floor/ceiling for performance factors for the second and third events of a month where multiple events occurred. The monthly performance factor for this example is 0.64, the average of the Performance Factors for the three events (.93; 1.00; and 0.00)

Aggregator-Customer	kW Pledge	Event 1 - Average Event kW Reduction	Event 2 – Average Event kW Reduction	Event 3 – Average Event kW Reduction
Agg 1- Customer 1	100	110	108	10
Agg 1- Customer 2	75	70	78	0
Agg 1- Customer 3	50	30	45	-20
Aggregator 1 Total	225	210	235	-10
Performance Factors		.93	1.00 (Actual 1.05)	0.00 (Actual -0.05)

Month’s Performance Factor = Average of Event Performance Factors (minimum 0.00, maximum 1.00)

$$0.64 = (0.93 + 1.00 + 0.00) / 3$$

If a Direct Participant or an Aggregation has an average Performance Factor less than or equal to 25% for a given month, they are assigned a Performance Factor of 0%. The Reservation Payment for any month with a 0% performance factor will be \$0, however all Actual kWh reduction will be paid as described in 7.2 above. The following is an example of an Aggregation performing below 25% for the month and the resulting payment calculations.

Aggregator-Customer	kW Pledge	Event 1 - Average Event kW Reduction	Event 2 – Average Event kW Reduction	Event 3 – Average Event kW Reduction	Monthly total kWh Reduction
Agg 1- Customer 1	100	30	40	10	960
Agg 1- Customer 2	75	20	20	0	160
Agg 1- Customer 3	50	15	25	-20	320
Aggregator 1 Total	225	65	85	-10	1,265
Performance Factors		0.28	0.31	0.00	

Performance Factor = $(0.28 + 0.31 + 0.00) / 3 = 20\%$

Performance Factor <25% = 0%

Reservation Payment = kW Pledge * \$ per kW capacity rate * Performance Factor

Reservation Payment = $225 * \$2.75 * 0.00 = \0.00

Performance Payment = kWh Reduction * \$0.18

Performance Payment = $1,265 \text{ kWh} * \$0.18 = \227.70

7.5 Weather Adjustment Factor

Direct Participants and Aggregators must select at time of enrollment whether an Average Day or Weather Adjusted CBL methodology should be used to assess demand (kW) and energy (kWh) Load Relief. Aggregators must specify the methodology to be used for each account number enrolled. Aggregators must specify the methodology to be used for each account number they are enrolling. If no selection is made, the Weather Adjusted CBL verification methodology will be applied by default.

CBL Load Verification Methodology is [available on the National Grid Website here.](#)