

# Custom Application

**The Retrofit Program is designed for Commercial and Industrial (C&I) customers to help replace aging and inefficient equipment and systems with more energy efficient technologies. Tailored to a customer's specific needs, under this Custom application, National Grid offers incentives to help customers target unique energy efficiency opportunities not covered by our prescriptive applications. If a project saves energy, National Grid will work with you to quantify the benefits and potentially help fund a portion of the project. Custom incentives are generally designed to cover up to 50% of the project costs which include labor and materials.**

## Custom Application Process

1. All applications for incentives under the Custom program require sound documentation of the proposed cost, projected electricity savings and the related non electric savings. To be eligible for National Grid's Custom program, a customer must be an Upstate New York Commercial electric account holder and pay into the System Benefits Charge (SBC). IRS recognized farms and religious organizations may also be eligible if they pay into the SBC. Please verify with a copy of the National Grid electric utility bill.
2. Before commencing the application process, check with your National Grid representative to determine eligibility of the proposed project and to establish requirement for detailed savings projections and cost estimates.
3. This information will be submitted to National Grid's Technical Representative for review and evaluation of potential incentives.
4. The Technical Representative will develop a Minimum Requirements Document which describes the minimum equipment specifications and operational requirements of the proposed system. Customer will be required to sign and comply with requirements outlined in this document.
5. For projects requiring Commissioning (Cx), a preliminary Cx plan and schedule will be a required as part of the MRD.
6. After successful review and project approval, the National Grid representative will notify customer in writing of the project approval, the incentive value and the terms and conditions required to receive final incentive payment.

**The following is a guide to the level of technical information and documentation that is typically required.**

### Project Description:

- General description of facility and the facility's use and typical operation (include occupancy schedules).
- Overall project description including operating schedules and parameters.

### Existing Materials and Equipment:

- Detailed description of equipment and operations.
- Cut sheets with equipment performance ratings (BHP, CFM, kW, etc.) (Provide nameplate data if cut sheets unavailable)
- Part load performance data where applicable.
- Description of controls & sequence of operations.

### Proposed Materials and Equipment:

- Detailed description of equipment and operations.
- Cuts sheets for the materials or performance ratings for equipment being installed (BHP, CFM, PSI, Efficiency rating, U-value, Lumens, etc.)
- Description of controls & sequence of operations.

### Load Profile:

- Equipment hours of operation (operating schedule per day, week, year).
- Provide operating load profiles showing how equipment load and operating parameters vary over time due to changes in: occupancy, weather, production, etc. Where there are existing systems involved, metering kW and kWh of major equipment loads is recommended.
- If metered information is not available, provide other documentation used to estimate loads and operating hours.

### Saving Calculations:

- Show calculations used to determine electricity savings including:
  - Existing Consumption (kWh)
  - Proposed Consumption (kWh)
  - kWh Savings shall be broken down into the appropriate electric time-of-day rate categories to determine average \$/kWh saved.
  - Existing Summer Demand (kW) (typical 24 hour load profile(s) for July and August)
  - Proposed Equipment Summer Demand (kW) (typical 24 hour profile(s))
  - Document customer's actual billed kW savings if different from equipment kW savings
- The calculations should clearly show all the details of how the energy savings were estimated. This includes all engineering formulas and documentation of all the factors, values and assumptions used in the formulas.
- Spreadsheets (Excel preferred) must be submitted showing all energy and demand savings calculations.
- In cases where energy modeling is used to determine savings, approved modeling software must be used. Input and output data from the model must be provided.

### Program Details:

- This Retrofit program covers applications created on or after January 1, 2020. Details of this program, including incentive levels, are subject to change without prior notice. This application and all required documents must be provided to your NG representative in one complete package. Otherwise the application will be put on hold and be sure to include a copy of all paid invoice(s) on company letterhead indicating the type, size, make, model and quantity of all equipment and include burdened project labor costs.

Custom 2020 Retrofit Program UNY

# Custom Application

**ALL FIELDS ON THIS PAGE ARE REQUIRED.**

## CUSTOMER/ACCOUNT HOLDER INFORMATION (Customer must submit a W-9 Form)

Customer Facility Name	Contact Person	Application Date																															
Phone	Fax	Customer Federal Tax ID Number																															
Install Site	Email Address	Square Feet (Covered by this application)																															
Street Address	City	State	Zip																														
Mailing Address (If different)	City	State	Zip																														
Company Type <input type="checkbox"/> Incorporated <input type="checkbox"/> Exempt <input type="checkbox"/> Not Incorporated	Classification Type <input type="checkbox"/> ≥2MW (Large) <input type="checkbox"/> <2MW (Mid-size) <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial *≥2MW Large Commercial use the <2MW Classification																																
Customer of Record: Billing Account Number (Required)	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>																																
Building Type (Select one) <table border="0" style="width:100%"> <tr> <td><input type="checkbox"/> Assembly</td> <td><input type="checkbox"/> Fast Food</td> <td><input type="checkbox"/> Hospital</td> <td><input type="checkbox"/> Multifamily High-rise</td> <td><input type="checkbox"/> Single Family Residence</td> </tr> <tr> <td><input type="checkbox"/> Auto Repair</td> <td><input type="checkbox"/> Food &amp; Beverage</td> <td><input type="checkbox"/> Hotel</td> <td><input type="checkbox"/> Multifamily Low-rise</td> <td><input type="checkbox"/> Small Office</td> </tr> <tr> <td><input type="checkbox"/> Big Box</td> <td><input type="checkbox"/> Full Service Restaurant</td> <td><input type="checkbox"/> Large Office</td> <td><input type="checkbox"/> Refrigerated Warehouse</td> <td><input type="checkbox"/> Small Retail</td> </tr> <tr> <td><input type="checkbox"/> Community College</td> <td><input type="checkbox"/> Grocery</td> <td><input type="checkbox"/> Large Retail</td> <td><input type="checkbox"/> Pharmaceutical</td> <td><input type="checkbox"/> University</td> </tr> <tr> <td><input type="checkbox"/> College Dormitory</td> <td><input type="checkbox"/> Heavy Industrial</td> <td><input type="checkbox"/> Light Industrial</td> <td><input type="checkbox"/> Primary Metals</td> <td><input type="checkbox"/> Warehouse</td> </tr> <tr> <td><input type="checkbox"/> Elementary School</td> <td><input type="checkbox"/> High School</td> <td><input type="checkbox"/> Motel</td> <td><input type="checkbox"/> Religious</td> <td><input type="checkbox"/> Other_____</td> </tr> </table>				<input type="checkbox"/> Assembly	<input type="checkbox"/> Fast Food	<input type="checkbox"/> Hospital	<input type="checkbox"/> Multifamily High-rise	<input type="checkbox"/> Single Family Residence	<input type="checkbox"/> Auto Repair	<input type="checkbox"/> Food & Beverage	<input type="checkbox"/> Hotel	<input type="checkbox"/> Multifamily Low-rise	<input type="checkbox"/> Small Office	<input type="checkbox"/> Big Box	<input type="checkbox"/> Full Service Restaurant	<input type="checkbox"/> Large Office	<input type="checkbox"/> Refrigerated Warehouse	<input type="checkbox"/> Small Retail	<input type="checkbox"/> Community College	<input type="checkbox"/> Grocery	<input type="checkbox"/> Large Retail	<input type="checkbox"/> Pharmaceutical	<input type="checkbox"/> University	<input type="checkbox"/> College Dormitory	<input type="checkbox"/> Heavy Industrial	<input type="checkbox"/> Light Industrial	<input type="checkbox"/> Primary Metals	<input type="checkbox"/> Warehouse	<input type="checkbox"/> Elementary School	<input type="checkbox"/> High School	<input type="checkbox"/> Motel	<input type="checkbox"/> Religious	<input type="checkbox"/> Other_____
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HVAC System Type (For custom lighting apps only – select one)

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> AC with Electric Heat | <input type="checkbox"/> Electric Heat Only                | <input type="checkbox"/> H2O Cooled Ammonia Screw Compressor |
| <input type="checkbox"/> AC with Gas Heat      | <input type="checkbox"/> Fan Coil with Chiller and Hot H2O | <input type="checkbox"/> Steam Heat Only                     |
| <input type="checkbox"/> CV ECON               | <input type="checkbox"/> Gas Heat Only                     | <input type="checkbox"/> VAV ECON                            |
| <input type="checkbox"/> CV No ECON            | <input type="checkbox"/> Heat Pump                         | <input type="checkbox"/> Other_____                          |

Is this an exterior/non-conditioned space installation?       Yes       No

## INCENTIVE PAYMENT

<input type="checkbox"/> Customer Address Above <input type="checkbox"/> Installation Contractor / Equipment Vendor/ Project Expediter <input type="checkbox"/> Other (Fill out below)			
Business Name	Contact Person		
Street Address	City	State	Zip
Phone	Email Address		
Company Type	Federal Tax ID Number (Required if receiving incentive)		

# Custom Application

INSTALLATION CONTRACTOR/PROJECT EXPEDITER INFORMATION			
Installation Company	Project Expediter	Contact Person	
Street Address	City	State	Zip
Phone	Email Address		
Company Type	Federal Tax ID Number <i>(Required if receiving incentive)</i>		

EQUIPMENT VENDOR INFORMATION			
Equipment Vendor Company	Contact Person		
Street Address	City	State	Zip
Phone	Email Address		
Company Type	Federal Tax ID Number <i>(Required if receiving incentive)</i>		

ADDITIONAL APPLICATION INFORMATION	
Expected Completion Date of Project	
<b>Total Cost Of Labor And Materials For Installed Equipment*</b> An actual invoice on company letterhead is required to be submitted to National Grid before final payment of incentive.	\$

CUSTOMER ACCEPTANCE OF TERMS				
<input type="checkbox"/> I certify that all statements made in this application are correct to the best of my knowledge and that I have read and agree to the terms and conditions of National Grid's Retrofit Program.				
By (Authorized Signature)	Printed Name	Title	Company	Date

# Custom Application

The following form may be filled out for preliminary project submittal and review, but a final Custom Project information package must also be submitted in electronic format. Contact a National Grid Technical Support Consultant for details.

## PROPOSED EQUIPMENT SPECIFICATION (FACILITY DETAIL)

BUILDING, ROOM AND EQUIPMENT IDENTIFICATION (INSTALLATION SITE):

DESCRIPTION OF PROJECT:

## EXISTING SYSTEM

MEASURE DESCRIPTION

## PROPOSED SYSTEM

MEASURE DESCRIPTION

Manufacturer Incentives, Manufacturer Discounts, Taxes, and /or Salvage Values

*Internal Use Only:* **MEASURE CODE:**  **MEASURE DESCRIPTION:**

**DOES THIS PROJECT INCLUDE A VARIABLE FREQUENCY DRIVE (VFD)?**  YES  NO *(if yes – see information below)*

VFD's can be sensitive to over-voltages that occur when power factor correcting capacitor banks on utility power systems are switched on. To help increase operating reliability, it is highly recommended, but not mandatory to qualify for an incentive, to have each VFD drive be equipped with a series line reactor (inductor, choke) in its AC input connections. The minimum suggested requirement is a 3% impedance reactor, based on the horsepower of the VFD to be installed. In some instances it may be necessary to install 5% reactors or additional filtering devices on the output side of the drive to meet acceptable current and voltage harmonic distortion requirements. Customer should always verify specific requirements with the manufacturer of the drive for optimum results.

If your power factor is less than 0.8 (80%), National Grid recommends that you consider power fact or correction concurrent with the installation of drives.

The use of VFDs which incorporate pulse width modulation (PWM) may produce over-voltages which may cause premature failure of AC induction motors not rated for use with an inverter. We recommend that when installing PWM drives, you consider utilizing inverter rated motors.

# Custom Application

**Table 1: Energy And Demand Reduction**

Please provide the Demand (kW) Reduction that occurs during the time periods listed below and the Annual kWh savings:

TIME PERIOD	AVERAGE REDUCTION
June - 4 pm - 5 pm	kW
July - 4 pm - 5 pm	kW
August - 4 pm - 5pm	kW
Annual kWh Savings	kWh

- Average Demand reduction is for the summer Peak kW savings that occurs during summer peak load conditions. It is calculated as the demand savings during the hottest weekday non-holiday hour between 4 pm and 5 pm in the months of June through August. For buildings which may only be partially occupied during this peak hour, the kW savings should be reduced in relation to the % reduction during that operating periods (i.e.: if the lights are only on 50% of the time during that hot summer day, kW savings would be reduced by ~50%). Some measures may provide little or no peak demand savings i.e. if a manufacturer turns off his lighting at 3 pm on all days during the summer then the peak demand savings for a lighting measure during the peak period is zero.
- The kW savings is the average load reduction during the high cooling period.

**Table 2: Cost Estimates**

Please provide back-up documentation for all material and labor costs, broken down by major pieces of equipment and project components. Sales tax may not be included. Adjust for salvage/resale value of equipment being replaced. Enter summarized costs in the table below.

MEASURE	COST (\$\$\$)
Estimated Material Cost	
Estimated Labor Cost	
Estimated Total Cost	

**Table 3: Non Electric Benefits And Effects**

Installing the proposed measure may result in significant savings or possibly increased costs for the owner beyond electric savings. Examples include water, sewer, fossil fuel and labor costs. These costs are to be assessed and quantified in the support documentation. These Effects are to be combined and reported in the categories laid out in Table 3.

NON-ELECTRIC BENEFITS	
Gas - Space Heating	_____ Therms
Gas - Non Heating	_____ Therms
Oil	_____ Gallons
Water	_____ Gallons
Wastewater (Sewer)	_____ Gallons
O & M (\$/yr) (Labor & Materials)	\$ _____
Site Environmental	\$ _____
Other _____	\$ _____

# Custom Application

## MINIMUM REQUIREMENTS DOCUMENT

Customer Name		EI or D2 (TOR)	
Location		Application #:	
ECM:			

This document is to be completed by a National Grid Technical Support Consultant or designated Technical Assistance Contractor to specify herein minimum equipment specifications and operational requirements of the proposed system. These requirements shall address the criteria necessary to be met to achieve the demand and energy savings estimated in the engineering analysis for this project. Testing and submittals may be required as further verification of system compliance. (Use additional sheets if necessary). These requirements must be met before the Company's incentives are paid.

Post Inspection	<b>EQUIPMENT DESCRIPTION:</b> Provide a list of equipment or materials installed as part of this project. Include mfr, model, HP, kW, efficiency ratings, etc.
<input type="checkbox"/> YES <input type="checkbox"/> NO	
Post Inspection	<b>SEQUENCE OF OPERATION:</b> Provide a description of equipment operating sequences, set points, operating schedules, balancing requirements (flow, velocity, head, etc) or any other required operating parameters.
<input type="checkbox"/> YES <input type="checkbox"/> NO	
Post Inspection	<b>DOCUMENTATION:</b> List written documentation required to train, verify, operate, or maintain the equipment being installed or controlled. This may include specification sheets, test reports, construction drawings, etc.
<input type="checkbox"/> YES <input type="checkbox"/> NO	
Post Inspection	<b>POST INSTALLATION M&amp;V or COMMISSIONING:</b> Provide a list of Trending Requirements required to verify proper system operation. Trends should document operational sequences, setpoints and scheduling of equipment as described in TA Study
<input type="checkbox"/> YES <input type="checkbox"/> NO	
Post Inspection	<b>OTHER REQUIRMENTS:</b> Describe any requirements for demolition, removal, etc of existing equipment.
<input type="checkbox"/> YES <input type="checkbox"/> NO	

The pre-approved incentive is subject to National Grid's post installation inspection of final specifications, drawings and operation of the proposed equipment. In the event the proposed system is altered from the above description, notify the Company of the change prior to the equipment purchase and installation as the change in design and operation may impact the available incentive.

NG Technical Support Consultant	Date	Customer Signature	Date
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-----**POST INSPECTION ACKNOWLEDGEMENT**-----

NG Representative	Date	Customer Signature - Post Inspection	Date
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