

# NYSERDA Programs and Incentives

*Municipal Customers*

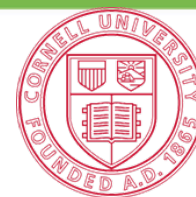


# NYSERDA Introduction & Updates



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**nyserda**  
Energy. Innovation. Solutions.  
Energy \$mart Communities Program



**Cornell University**  
Cooperative Extension  
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# What is NYSERDA?

New York State Energy Research and Development Authority

A non-for-profit public benefits corporation created in 1975

**SBC**

Serves all sectors – residential, low-income, small business, commercial

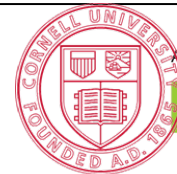


Promotes energy awareness, efficiency, and alternative resources

Funded by the System Benefits Charge (SBC) from utility bills across the state

**kW**

You and your residents have paid into the SBC since 1998!



# What is NYSERDA?

New York State Energy Research and Development Authority

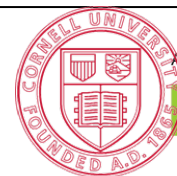
## Mission

Advance innovative energy solutions in ways that improve New York's economy and environment.

## Vision

To serve as a catalyst – advancing energy innovation and technology, transforming New York's economy, empowering people to choose clean and efficient energy as part of their everyday lives.

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# What is NYSERDA?

New York State Energy Research and Development Authority

## Responsibilities

Financing energy-related projects that reduce costs for ratepayers.

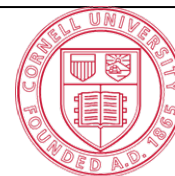
Conducting energy and environmental research and development program.

Making energy more affordable for residential households.

Helping industries, schools, hospitals, municipalities, not-for-profits, and the residential sector, including income eligible residents, implement energy efficiency measures.

Providing energy analysis and planning to guide energy decisions.

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# Why Energy Efficiency?

**Identify equipment that needs to be upgraded** – newer equipment has higher efficiency ratings so it lasts longer and uses less energy

**Maximize your equipment investment** – reduce emergency repairs or sudden replacements

**Save money!** Using energy efficient equipment will use less energy and save you money on your utility bills



# NYSERDA Programs

## Commercial and Industrial

FlexTech

Benchmarking Pilot

Existing Facilities

Pre-qualified Incentives

Performance-based Incentives

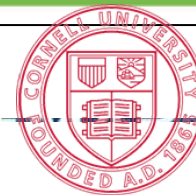
New Construction

Business Partners



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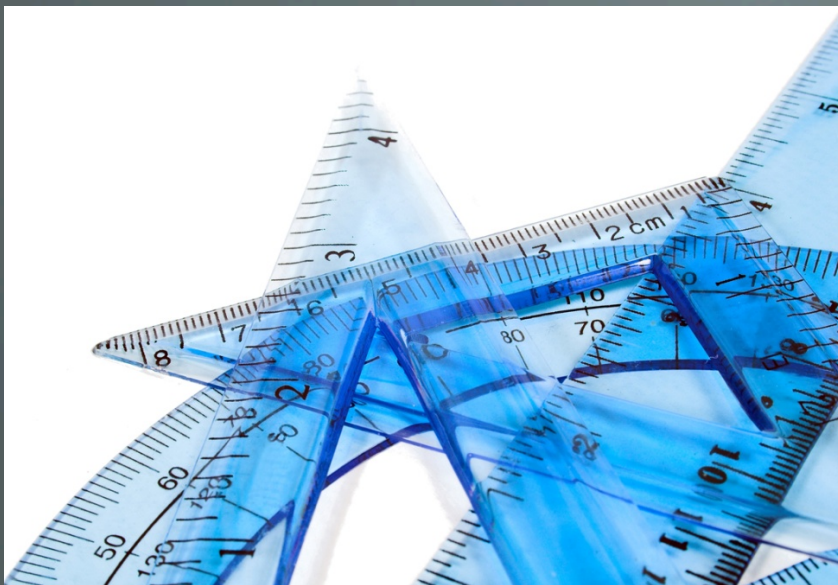
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# NYSERDA Programs and Incentives

## FlexTech Program



Gauge current energy usage and identify areas for improvement.

# Goals

Be familiar with:

The three types of energy assessment  
programs available for existing commercial  
buildings

How to apply for these programs

# Commercial Energy Assessments

Tells the customer:

- What to upgrade or replace right away
- What new equipment to plan to buy when ready to make an upgrade



Courtesy blog.makezine.com

# FlexTech

Assessments on where to reduce energy costs with:

Building envelope – windows, doors, insulation  
Heating and cooling equipment  
Lighting

FlexTech is the more comprehensive approach:

Machinery  
Processing  
Refrigeration  
Heat recovery

# FlexTech Study

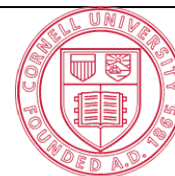
Provides comprehensive, customized cost-shared energy studies

- Engineering feasibility and technical assistance studies
- Detailed analyses of specific energy projects
- Coincident peak-load reduction
- Process improvement studies
- Implementation assistance
- Energy operations management
- Computer-assisted building modeling
- Sustainable design and green building assistance

*50% Cost-Sharing up to  
\$1,000,000 per project*

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# Benchmarking Pilot

## Energy Benchmarking and onsite assessments for facilities using the EPA Portfolio Manager

- Facilities with 50,000 SF or greater
- Provides the first \$7,000 of assistance per building
- Additional assistance over \$7,000 will be cost shared 50% by the applicant and NYSERDA
- Use a NYSERDA FlexTech consultant or your own

# Energy Audit

Facilities with an average electric demand of 100kW or less are eligible to participate in this program.

<u>Sector</u>	<u>Energy Audit Fee</u>
Small Business & Non-Profit:	FREE
State or Local Gov't :	
<i>10 employees or less</i>	\$100
<i>Greater than 10</i>	\$400

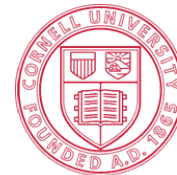
Note: Audit Fee is refundable if audit-recommended measures are implemented.

# Sample Energy Audit

Measure	Cost	Annual Savings	Demand Savings (in kW)	Electric Savings (kWh)	Fuel Savings ( mBTU )	Pay back (years)
UPGRADE FLUORESCENT LIGHTS	\$8,293	\$1,754	3.1	15,291	-34.8	4.9
REPLACE BULBS WITH CFLs	\$7,798	\$11,289	24.1	83,921	-179.1	0.7
INSTALL HIGH EFFICIENCY A/Cs – by attrition	\$35,000	\$5,892	40.0	18,127	0.0	5.9
INSTALL VENDING MISERS	\$179	\$569	0.0	3,798	0.0	0.0

# Existing Facilities Program & Pre-Qualified Incentives

Explore energy  
efficient investments  
to help increase your  
bottom line.



# Existing Facilities

NYSERDA's Existing Facilities Program provides incentives for high efficient measures and technologies

**Pre-Qualified Incentives** (\$30,000 cap) “Rebates” for energy efficient equipment

**Performance Based Incentives** (\$2,000,000 cap)  
Available for emerging technologies that can demonstrate verifiable energy savings

*Gas incentives are only available to National Fuel Gas customers who use less than 12,000 Mcf annually.*

# Pre-Qualified Incentives

Purchase and install more **energy-efficient equipment** for small-sized energy projects and equipment replacement projects

Incentives are available on a **\$/unit** basis for Pre-Qualified energy efficiency measures

Applicants can receive up to \$60,000 in Pre-Qualified Incentives (\$30,000 – Electric, \$30,000 – Natural Gas) per Facility per calendar year

*Gas incentives remain available for National Fuel Gas customers who use less than 12,000 Mcf annually*

# Pre-Qualified Incentives

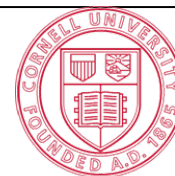
**Pre-Qualified** incentives are available for:

Lighting  
HVAC  
Motors  
Chillers  
Meters  
VFDs



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# Business Partners

Designed to promote the purchase and installation of energy efficient products and services by working with trade allies (Partners).

Building and systems contractors, distributors, vendors, designers and ESCOs.

Gain access to special training, tools, guidelines and performance incentives. Differentiate their businesses in a highly competitive marketplace, while assuring quality, proving vital to the growth of the energy efficiency industry.

The Business Partners Program is an integration of three prior programs:  
Heating, Ventilation and Air Conditioning  
Lighting  
Motor Systems

<http://www.nyserda.org/programs/hvac>

## Locate a Partner

**www.getenergysmart.com**

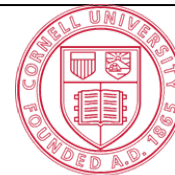
On left sidebar:

- click on Resources
- click Find a Partner
- click HVAC Business Partners
- click your county



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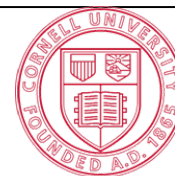


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# KEY REMINDERS

1. A customer has up to **90 days** to submit an application for a **pre-qualified** incentive.
2. If a commercial measure is labeled ENERGY STAR™, it may or may not qualify for a NYSERDA incentive.
3. Pre-qualified incentive applications require a general application and a form for the specific **measure, a cut sheet, a receipt**, and a recent **electric bill**.
4. Key NYSERDA commercial programs are all of these – New Construction Program, Flex Tech Program, Existing Facilities Program
5. NYSERDA energy audits assess – Lighting, Windows, Insulation, Heating, Cooling and Building Envelope

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# NYSERDA Performance-Based Commercial Incentives



Package multiple energy efficiency projects to earn higher incentives.

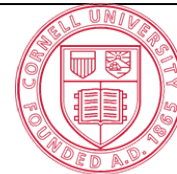
# Goals

Be familiar with:

How NYSERDA performance-based  
incentives work

Project strategies and ideas to apply for  
performance-based incentives

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# Existing Facilities Program

## Performance-based:

Meant for larger, comprehensive projects

Requires analysis to show forecasted annual savings

Incentives based on annual savings per kW, kWh, or BTU

\$30,000 minimum incentive amount required – varying maximums

May require pre- and post-project verification

# Performance-Based Incentives – Types

## Primary types

*Electric efficiency* – Reduce electric use

Upstate: 12 cents/kWh

*Gas efficiency* – Only for National Fuel customers that use less than 12,000 Mcf annually

## Others

Energy storage – Store energy for use during peak load hours

Combined heat/power – Generate own power

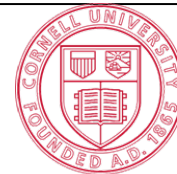
Demand response – Participation in demand response programs

Industrial and process efficiency – increase efficiency for manufacturing or data processing

Monitoring-based commissioning – continuous commissioning programs

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# Performance-Based Incentives-Eligibilities

Upstate utility customers who pay the System Benefits Charge on their utility delivery bill

*Electric and gas incentives* – NGRID, NYSEG, RG&E, CHG&E

*Gas incentives* – now only available for National Fuel Gas customers that use less than 12,000 Mcf annually

Bear in mind...

Municipal electric customers not eligible: ex. Solvay, Madison

Third party energy service companies do not matter:  
Eligibility based on the utility distribution company only

# Performance-Based Incentives Technologies

1. At least ENERGY STAR labeled or better
2. Lighting – specific rules for fluorescent and LED
3. Motors – NEMA premium efficiency motors
4. HVAC – Must exceed ASHRAE 90.1 2007 by 2% OR pre-qualified HVAC eligibilities, whichever is the most stringent test
5. Custom projects – contact NYSERDA to discuss

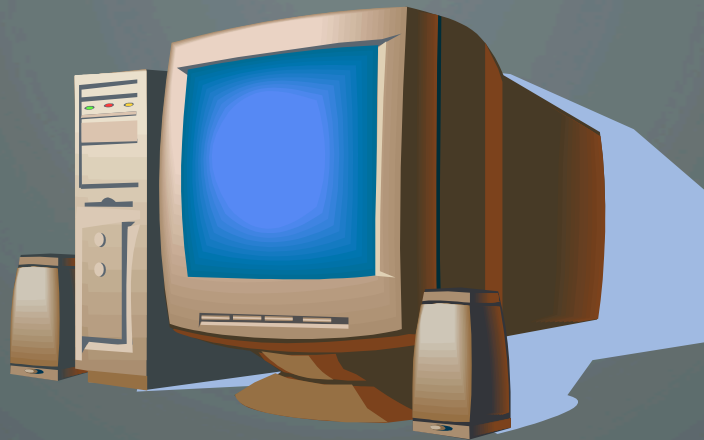
# Performance-Based Incentives –

## Pre-Project Process

1. Complete and submit required documentation:
  - a) General application
  - b) Proposed equipment specifications
  - c) Preliminary calculations that show savings forecast
2. NYSERDA evaluates project; notifies applicant for needed info if necessary; issues approval
3. Submit an engineering analysis
4. NYSERDA reviews analysis and conducts pre-installation inspection; notifies Applicant to proceed

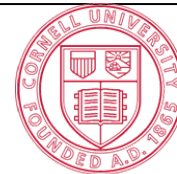
# Performance Based:

Compete and submit all required applications and materials **AT LEAST 90 days BEFORE projects start!**



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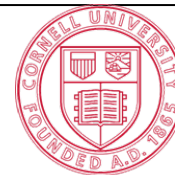
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# Application and Attachments



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# General Application

<http://nyworks.ny.gov>

Click **Consolidated Funding Application**

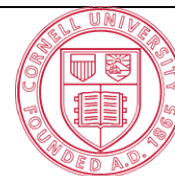
Use for :

- Existing Facilities Program
- New Construction Program
- FlexTech Program including Energy Audits and Benchmarking

The screenshot shows the New York State Open for Business website. At the top, there's a navigation bar with 'New York State' and 'State Agencies'. A large red 'Open FOR BUSINESS' logo is on the left. The main heading is 'Regional Economic Development Councils'. Below this is a navigation menu with 'HOME', 'REGIONAL COUNCILS', 'MEDIA', 'ABOUT', and 'MAP'. A search bar and a 'Contact' link are on the right. A banner for the 'Governor Andrew M. Cuomo REGIONAL COUNCIL STATEWIDE CONFERENCE September 27, 2011- Albany, NY' is displayed. The central part features a map of New York State divided into 10 regional councils: North Country, Capital Region, Mohawk Valley, Central New York, Finger Lakes, Western New York, Southern Tier, Mid-Hudson, New York City, and Long Island. To the right of the map, text explains that these councils represent the 10 regions across New York State and lists the regions. Below the map, a 'Welcome to New York Open for Business' section contains text about the transformative approach to economic development and a quote from Governor Cuomo. On the right side of the page, a vertical menu of blue buttons is shown, with 'Consolidated Funding Application' circled in red. The other buttons are 'Regional Council Manual', 'Regional Council Guide Book', and 'Resource Guide'.

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# Register Your Project

Click **Register Now** to register your project and proceed with the application process.

Click **CFA Application Process** for a complete application guide

New York State State Agencies Search all of NY.gov

**Open FOR BUSINESS**

Home Help Print

## WELCOME

As part of Governor Cuomo's transformative plan to improve the state's economic development model, a NYS Consolidated Funding Application (CFA) has been created that will streamline and expedite the grant application process. The CFA process marks a fundamental shift in the way state resources are allocated, ensuring less bureaucracy and greater efficiency to fulfill local economic development needs.

Utilizing the CFA serving as the single entry point for access to economic development funding, applicants will no longer have to slowly navigate multiple agencies and sources without any mechanism for coordination. Now, economic development projects will use the CFA as a support mechanism to access multiple state funding sources through one application, making the process quicker, easier, and more productive.

[CFA Application Process](#) [Available CFA Resources](#)

To proceed with your CFA, please use the links below.

**Note:** You will need to register separately for each project for which you are applying for funding. You will be given a different "token" for each project that uniquely identifies that project.

[REGISTER NOW](#) [LOGIN](#)

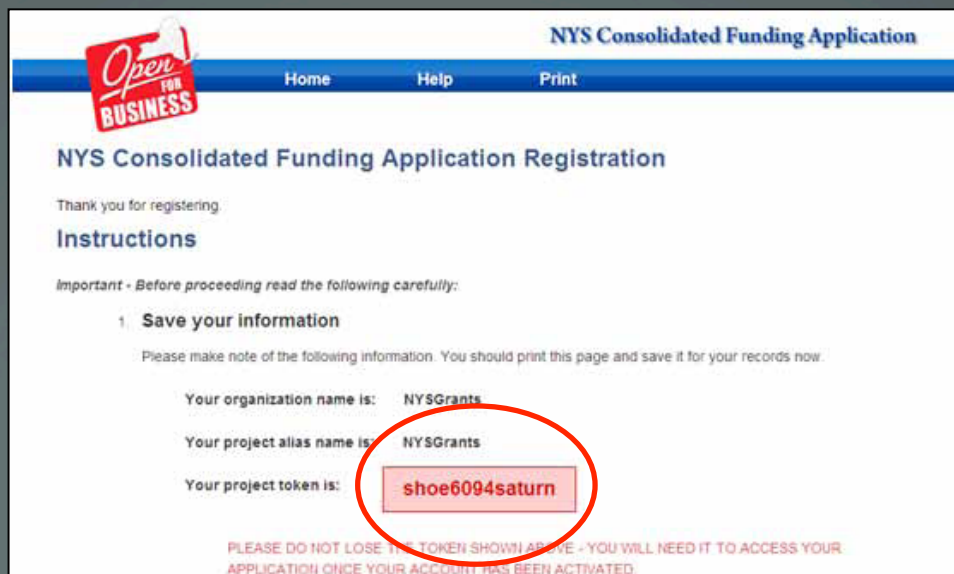
Contact | Disclaimer | Accessibility | Governor's Office

cpv

# Next Steps

Once you've entered the registration information, you'll receive a **project token** and an email with a link to **activate your account**.

Your registration is now complete and you can login to start the application process.



**NYS Consolidated Funding Application**

Home Help Print

**NYS Consolidated Funding Application Registration**

Thank you for registering.

**Instructions**

Important - Before proceeding read the following carefully:

- Save your information**

Please make note of the following information. You should print this page and save it for your records now:

Your organization name is: NYSGrants

Your project alias name is: NYSGrants

Your project token is: **shoe6094satur**

PLEASE DO NOT LOSE THE TOKEN SHOWN ABOVE - YOU WILL NEED IT TO ACCESS YOUR APPLICATION ONCE YOUR ACCOUNT HAS BEEN ACTIVATED.

**Thank you for registering with the NYS Consolidated Funding Application.**

*Please retain a copy of this email.*

**Your Application Number is xxxx**

Business Name: **CMSBL**

Project Name: **Baseball Field3**

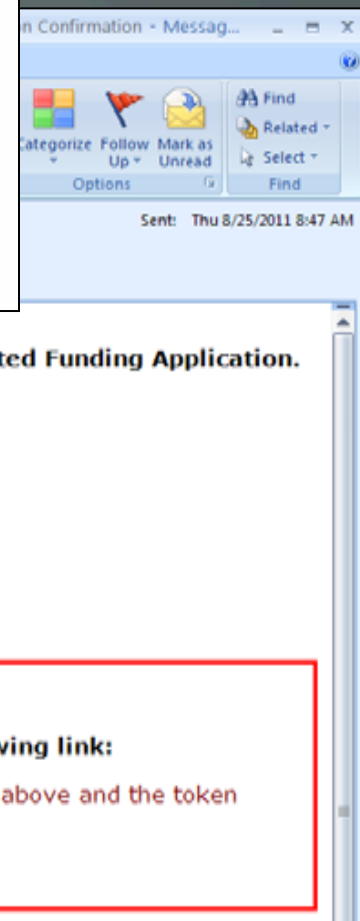
Email Address: **myemail@findme.com**

## **IMPORTANT**

**To continue the process you must use the following link:**

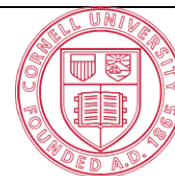
You will need to login using the email address shown above and the token displayed when you first registered.

**[CLICK HERE TO ACTIVATE YOUR ACCOUNT](#)**



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# Application

- Answer general questions about your business, your project and your budget.
- Once you've answered all of the required questions on the application, save it, and click FINALIZE.
- You can then complete and submit supporting documentation, such as measure worksheets, utility bills, and spec sheets.

# “Please Acknowledge”

You will be asked to acknowledge that your application is complete and ready for submission. Once submitted, you can no longer make changes to your application.

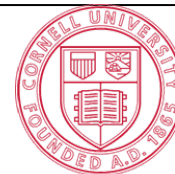
## Please Acknowledge

**PLEASE NOTE: BY CLICKING THE BUTTON BELOW YOU WILL NO LONGER BE ABLE TO MODIFY OR AMEND YOUR APPLICATION.**

**BY CLICKING HERE, I ACKNOWLEDGE THAT MY APPLICATION IS COMPLETE AND READY FOR SUBMISSION**

Receive confirmation email that your application has been submitted, receive follow up from NYSERDA within 2 days.

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## Pre-Qualified Commercial Refrigeration



# PQ Measure Worksheets

### Commercial Electric Refrigeration Equipment

Measure Description and Eligibility Criteria	Measure Code	Unit Size	Count
<b>High Efficiency Commercial Reach-in Refrigerators</b> <ul style="list-style-type: none"><li>Each eligible unit must meet or exceed ENERGY STAR requirements</li></ul>	COMM-REFER Solid Door	<19 cubic feet	
		19-30 cubic feet	
		31-60 cubic feet	
		61-90 cubic feet	
	COMM-REFER Glass Door	<19 cubic feet	
		19-30 cubic feet	
		31-60 cubic feet	
		61-90 cubic feet	
<b>High Efficiency Commercial Solid-door Reach-in Freezer</b> <ul style="list-style-type: none"><li>Freezer must be a reach-in, solid-door unit</li><li>Each eligible unit must meet or exceed ENERGY STAR requirements</li></ul>	COMM-FREEZ Solid Door	<19 cubic feet	
		19-30 cubic feet	
		31-60 cubic feet	
		61-90 cubic feet	
<b>Air- or Water-cooled Commercial Ice Maker</b> <ul style="list-style-type: none"><li>Each eligible unit must meet CEE Tier 2 requirements</li></ul>	ICE Tier 2	Capacity <500 lbs/day	
		Capacity >500 and <1000 lbs/day	
		Capacity >1000 and <1500 lbs/day	
		Capacity >1500 lbs/day	
<b>Air- or Water-cooled Commercial Ice Maker</b> <ul style="list-style-type: none"><li>Each eligible unit must meet CEE Tier 3 requirements</li></ul>	ICE Tier 3	Capacity <500 lbs/day	
		Capacity >500 and <1000 lbs/day	
		Capacity >1000 and <1500 lbs/day	
		Capacity >1500 lbs/day	
	(enter on page 1)	Total Commercial Electric Refrigeration Incentive	

## Pre-Qualified Commercial Kitchen Equipment and Commercial Washers



### Commercial Electric Kitchen Equipment

Measure Description and Eligibility Criteria	Measure Code
<b>Electric Steamer</b> • Unit can contain pressurized or pressure-less compartments • Each eligible unit must meet or exceed ENERGY STAR requirements	ELEC-STEAMER
<b>Commercial Combination Oven</b> • Unit must be a standard electric, commercial combination oven • Unit must maintain over 60% energy efficiency	COMBO-OVEN
<b>Commercial Convection Oven</b> • Unit must be a standard electric, commercial convection oven • Unit must maintain over 70% energy efficiency	CONVECT-OVEN
<b>Commercial Electric Griddle</b> • Single or double sided electric griddles are eligible • Unit must maintain over 70% energy efficiency	ELEC-GRIDDLE
<b>Commercial Electric Fryer</b> • Deep fat, open kettle, pressurized or flat bottom electric units are eligible • Unit must meet or exceed ENERGY STAR requirements	ELEC-FRYER
<b>Commercial Insulated Heating Cabinets</b> • Unit must meet or exceed ENERGY STAR requirements	HOLD CAB (FULL)
	HOLD CAB (1/2)

(enter on page 1) Total Commercial Kitchen Equipment and Commercial Washers Incentive

### Pre-Qualified Commercial Kitchen Equipment and Commercial Washers

## Pre-Qualified Lighting



### Lighting Systems

Measure Description and Eligibility Criteria	Measure Code
<b>LED Exit Signs</b> • 1 inch or less per face • Entire sign must be new, replacing an existing sign • Exit sign retrofit kits are not eligible • New construction projects are not eligible	EXIT
<b>High Performance T8 Ballasts and Ballast</b> • Lamps and ballasts must be listed on the CEE High Performance T8 List or must meet the CEE High Performance T8 Specification • 1 Unit = 1 to 4 lamps and 1 ballast • Must be an upgrade of an existing T12 fixture	HPTR-T8
<b>Reduced Wattage T8 Ballasts and Ballast</b> • Lamps and ballasts must be listed on the CEE Reduced Wattage T8 "Qualifying Products" List or must meet the CEE Reduced Wattage T8 Specification • 1 Unit = 1 to 4 lamps and 1 ballast • Must be an upgrade of an existing fluorescent fixture	RWTR-T8
<b>New Fluorescent Fixtures</b> • T5 and High Performance T8 systems are eligible • T8 lamps and ballasts must be listed on the CEE High Performance T8 List or must meet the CEE High Performance T8 Specification • 1 Unit = 1 new fixture with 1 to 4 lamps and 1 ballast • In replacement projects, new fixtures must replace existing T12 fixtures • 2-foot linear T8 lamps must have minimum efficacy of 75 Mean Lumens/Watt and must be driven by High Performance T8 ballasts • 4-foot U-shaped T8 lamps must have minimum efficacy of 75 Mean Lumens/Watt and must be driven by High Performance T8 ballasts	HPTR-T5
<b>High Efficiency Trough Fixtures</b> • Lamps and ballasts must be listed on the CEE High Performance T8 List or must meet the CEE High Performance T8 Specification • 1 Unit = 1 fixture with 2 lamps and 1 ballast • Overall fixture efficiency must exceed 80% for both prismatic, knurled and parabolic fixtures • In replacement projects, new fixtures and retrofit kits must replace T12 fixtures	HPTR-T8

The Consortium for Energy Efficiency maintains specifications and a list for High Performance T8 lamps and ballasts. The list is updated frequently and is available at <http://www.cee.energy.gov>. If a CEE qualifying product is not available for a specific application, please contact CEE.

### Pre-Qualified Lighting

## Pre-Qualified HVAC



### PTAC and PTHP Equipment Efficiency Levels and Incentive Amount

Measure Code	Unitary Equipment Size	Minimum Efficiency	Incentive
PTAC-1	Tons	11.7 EER / 3.3 COP Heating	\$450/ton
PTAC-2	Br/hk	11.3 EER / 3.2 COP Heating	
PTAC-3		10.7 EER / 3.1 COP Heating	
PTAC-4		9.6 EER / 3.0 COP Heating	

### PTAC and PTHP Equipment Incentive Calculation

Reason: A = New B = Replacement C = Fitted	Measure Code	Manufacturer and Model Number	A Unit Size (Tons)	B Unit Efficiency (EER or SEER/COP)	C Incentive \$/ton (Value)	D Quantity	E Total Incentive (\$ x C x D)
Example: A	PTAC-2	Airco AH123	0.75	11.5 EER/3.4 COP	\$45	20	\$6,750 x 45 x 20 = \$6,750
1.							
2.							
3.							
(enter on page 1) Total PTAC and PTHP Equipment Incentive Requested							\$

### Unitary HVAC and Split Air Systems Efficiency Levels and Incentive Amounts

Measure Code	Unitary Equipment Size	Minimum Efficiency	Incentive
UHAC-1	Tons	14.0 SEER	\$125/ton
UHAC-2	Split System < 5.4	14.0 SEER	\$125/ton
UHAC-3	Single Package < 5.4	11.5 EER	\$80/ton
UHAC-4	> 5.4 to < 11.25	11.5 EER	\$80/ton
UHAC-5	> 11.25 to < 20	10.5 EER	\$50/ton
UHAC-6	> 20 to < 63	9.7 EER	\$50/ton
UHAC-7	> 63	9.7 EER	\$50/ton

### Unitary HVAC and Split Air Systems Incentive Calculation

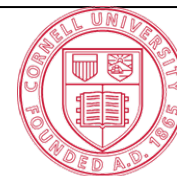
Reason: A = New B = Replacement C = Fitted	Measure Code	Manufacturer and Model Number	A Unit Size (Tons)	B Unit Efficiency (EER or SEER/COP)	C Incentive \$/ton (Value)	D Quantity	E Total Incentive (\$ x C x D)
Example: A	UHAC-2	CH 300	5	12.0 EER	\$125	1	\$625
1.							
2.							
3.							
(enter on page 1) Total Unitary HVAC and Split Air Systems Incentive Requested							\$

### Pre-Qualified HVAC

Incentives | page 2 of 4

### Pre-Qualified Commercial Refrigeration

Incentives | page 2 of 2



# Pre-Qualified Attachments

- Spec sheet of each product type submitted
- Copy of receipt that has the manufacturer and model number
- ONE copy of any recent electric bill

Features	
• Two Wire Operation	• <250µA Leakage
• Zero Minimum Loads	• ISO 9001 Quality System
• Slim 1" Height	• Extended Design Life

Applications	
• Networking	
• Notebooks	

Safety Approvals	
• cUL1950 [E127643]	
• CSA 22.2 234	
• CE	

Output Specification	
Model	DC
PSA15W-050 (P)*	V
PSA15W-090 (P)*	
PSA15W-120 (P)*	
PSA15W-150 (P)*	
PSA15W-240 (P)*	

\*Indicates center positive DC output  
(1) Measured at full load by using a  
(2) To receive product with T-mark

**Company Name**  
Company Name

Street Address  
City, ZIP Code  
Phone 111.123.1234 Fax 111.123.1234

DATE: November 20, 2011  
INVOICE # 100

Bill To: Name Ship To: Name

**INVOICE**

**nationalgrid**

www.nationalgridus.com

CUSTOMER SERVICE  
1-800-642-4272

AUTOMATED SERVICES  
1-888-932-0301

GAS OR ELECTRIC EMERGENCIES  
1-800-692-2345

(Does not replace 911 emergency medical service)

POWER OUTAGE OR DOWNED LINE  
1-800-667-5222

ADDRESS  
300 Erie Blvd West  
Syracuse, NY 13202

DATE BILL ISSUED  
Jan 6, 2010

SERVICE FOR  
JOHN DOE  
1919 ANY STREET  
ANYTOWN NY 13202

BILLING PERIOD  
Dec 7, 2009 to Jan 7, 2010

ACCOUNT NUMBER  
XXXXXX-XXXXX

PLEASE PAY BY  
Feb 5, 2010

PAGE 1 of 5

**ACCOUNT BALANCE**

Previous Balance	316.67
Payment Received on DEC 28 (Direct Deposit) THANK YOU	- 316.67
Current Charges	+ 389.53
<b>Amount Due</b>	<b>\$ 389.53</b>

**DO NOT PAY:** Your Automated Payment Transfer will occur on January 26, 2010.

**SUMMARY OF CURRENT CHARGES**

	DELIVERY SERVICES	SUPPLY SERVICES	TOTAL
Electric Service	123.04	95.54	219.58
Gas Service	51.21	118.44	169.65
<b>Total Current Charges</b>	<b>\$ 174.25</b>	<b>\$ 215.28</b>	<b>\$ 389.53</b>

**ELECTRIC USAGE HISTORY (kWh)**

Daily Averages: Jan 01: 919, Jan 15: 877, Jan 31: 877

**GAS USAGE HISTORY (Therms)**

Daily Averages: Jan 01: 1.1, Jan 15: 1.8, Jan 31: 1.47

Actual Estimated

**nationalgrid**

300 Erie Blvd West  
Syracuse NY 13202-0960

JOHN DOE  
1919 ANY STREET  
ANYTOWN NY 13202

02473

PLEASE PAY BY  
Feb 5, 2010

AMOUNT DUE  
\$ 389.53

Please do not mail payment  
Your account is set up for  
automatic payment. Thank you.

000036953 35251441179000036953034

# Renewables Overview

## On-site Technologies:

**Photovoltaic:** Most mature and applicable technology

**Solar thermal:** Effective if hot water load is used

**Wind:** Cost and site placement considerations

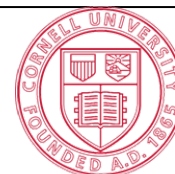
## Purchases:

**“Green Power”** ESCOs as a supplier choice



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Cooperative Extension  
Chautauqua County

# Renewables Overview

For each renewable type:

General fit for commercial uses

Current Funding Program Opportunity

Notice (PON) available

Resources for further research

# Energy Efficiency is First

Bear in mind:

Poor efficiency costs you as much whether you get power from the utility or make it yourself

An optimized, efficient building means you pay for a smaller renewable OR your renewable system covers MORE of your use

The *cleanest, greenest* kilowatt ever heeded is the one never needed

# Other programs

AFV - Alternative Fuel Vehicle Program

Water/Wastewater [water@nyserda.org](mailto:water@nyserda.org)

Self-help checklists

Water and Wastewater Benchmarking

Payback Analysis Tools

Case Studies are online:

North Tonawanda (Flex Tech Study)

\$711,000 capital cost with a 4 year payback

# Photovoltaic (PV)



# Photovoltaic (PV)

Initial considerations:

**Are all electric efficiencies satisfied in the building?**

**Plenty of southern sun exposure?**

Funding Source: **NYSERDA PON 2112** – “Solar PV Program Financial Incentives”

Grid-connected systems only

Applications submitted through an eligible installer; incentives paid to installer and passed through to owner

Information will be provided on building benchmarking and energy efficiency

System size must match building load not to exceed 110% of the demand – max. 50 kW/site for commercial 25 kW for Not for Profits

Incentives start at \$1.75/watt for all customers

# Solar Thermal



# Solar Thermal

Initial considerations:

**Significant, consistent hot water use?**

**Plenty of southern sun exposure?**

Funding Source: **NYSERDA PON 2149** – “Solar Thermal Incentive Program”

To off-set up to 80% of electrically-heated domestic hot water only;  
small funding available for gas, oil, or propane customers

Not applicable for heating water for pools

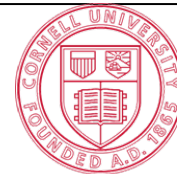
Applications submitted through an eligible installer; incentives paid to installer and passed through to owner

Information will be provided on building benchmarking and energy efficiency

Incentives are \$1.50 per kWh or mmBTU equivalent

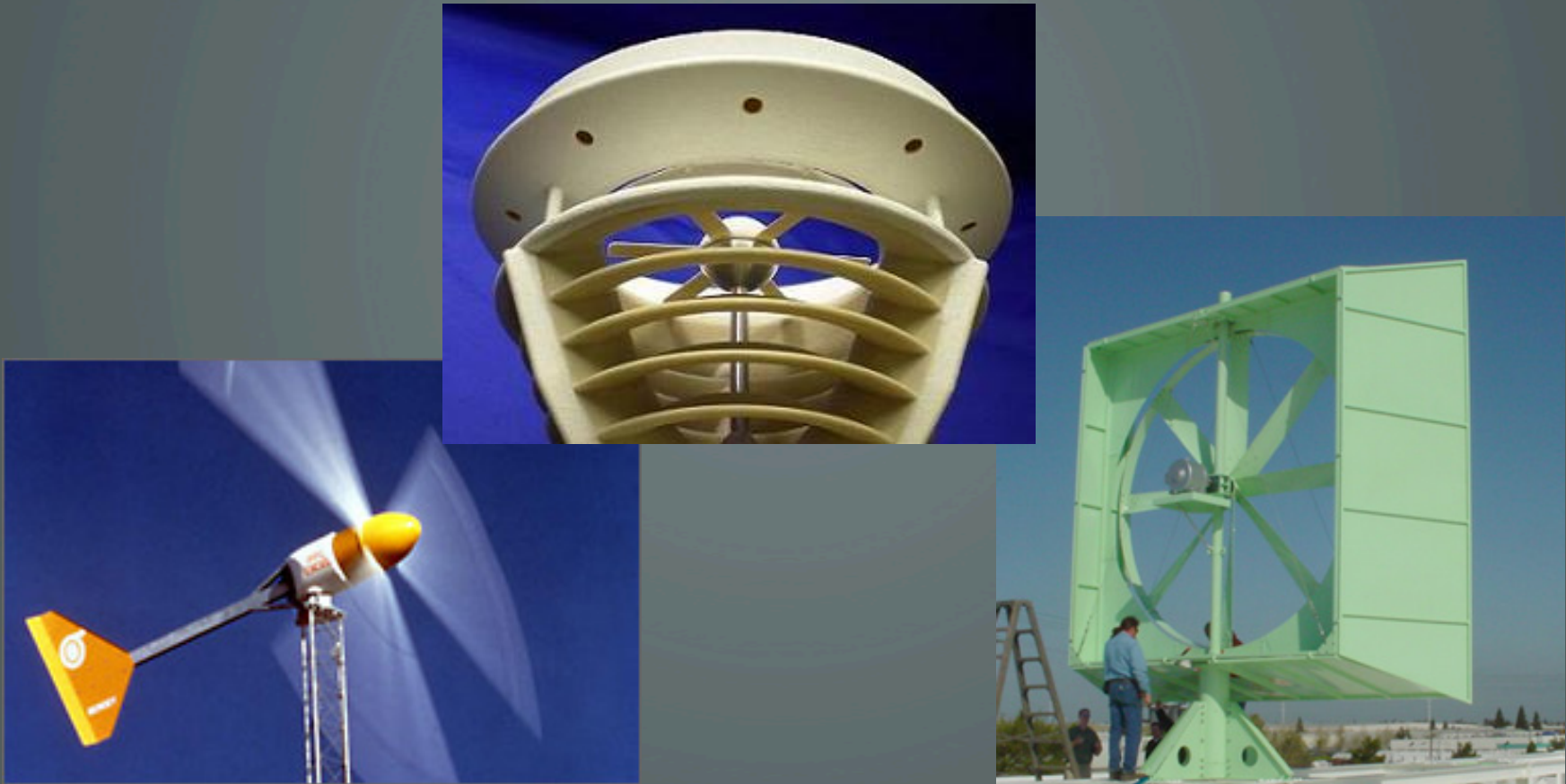
Incentive cap of \$25,000 per site/meter for non-residential

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# Wind



# Wind

Initial considerations:

**Steady, significant wind patterns?**

**Site issues – codes, view sheds, height**

Funding: **NYSERDA PON 2097** – “On-Site Wind Turbine Program”

For grid-connected customers to off-set utility purchases

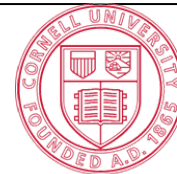
Applications submitted through an eligible installer; incentives paid to installer and passed through to owner

Information will be provided on building benchmarking and energy efficiency

Incentive cap of 50% project cost up to \$400K, maximum size of 600 kW

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# Beginner Steps

RESEARCH first

TALK to one or more eligible installers for initial assessments and recommendations

REVIEW your potential costs and benefits

COMPARE and CONSIDER first what a \$1 worth of energy efficiency upgrades will save you versus \$1 worth of new renewable systems

# Research Links

*ALL Renewables:*

NYSERDA's Power Naturally website:  
**[www.PowerNaturally.org](http://www.PowerNaturally.org)**

*Solar Thermal and PV:*

NYSERDA Clean Power Estimator: **<http://nyserda.cleanpowerestimator.com/nyserda.htm>**

*Wind:*

Wind Potential Estimator: **<http://nyswe.awstruepower.com>**

# Funding Links

NYSERDA PON 2112 – Photovoltaic

<http://www.nyserda.org/funding/2112pon.asp>

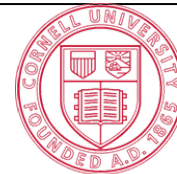
NYSERDA PON 2149 – Solar Thermal

<http://www.nyserda.org/funding/2149pon.asp>

NYSERDA PON 2097 – On-Site Wind Turbine <http://www.nyserda.org/funding/2097pon.asp>

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# Contact Us

## Energy \$mart Community Coordinators:

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### Finger Lakes Region

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lloomis@ceinfo.org

[www.nyserda.ny.gov](http://www.nyserda.ny.gov)

Region 1: Stephanie Simons

Western NY Point of Contact (POC)

[Region1POC@nyserda.org](mailto:Region1POC@nyserda.org)

716-408-7477