

Commercial Building Energy Performance, Improvements, and Incentives

Incentives and Assistance to
lower your energy and utility cost

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What is NYSERDA?

- Public Benefit Corporation
- Established by the New York State Legislature in 1975
- **NYSERDA** is tasked to address the State's energy & environmental challenges



Mission

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

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Potential

For Owners and Managers

- **Buildings account for over 40% of total energy use and over 70% of electricity use in the United States.**
- **The commercial and industrial sectors account for 32% of the net energy consumption in New York State.**
- **A typical energy project can result in a Return On Investment (ROI) of between 15% and 30%.**
- **Energy use is the single largest operating expense in commercial office buildings, representing approximately 1/3 of typical operating budgets and accounting for almost 20% of the nation's annual greenhouse gas emissions.**

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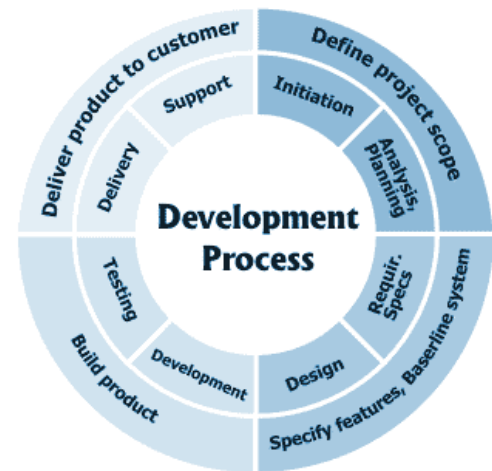
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Project Development Assistance

Steps

- Evaluation
- Planning/ Project Scope Development
- Incentive Identification
- Financing
- Implementation



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Energy Efficiency Programs

Existing Buildings

- **FlexTech Program**
- **Existing Facilities Program**

New Buildings/ Substantial Renovation

- **New Construction Program**



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Energy Efficiency Programs

Existing Buildings

**Project
Identification/
Energy Study**



**Project
Implementation**

Phase 1: FlexTech

- Identify the changes you could make

Phase 2: Implementation Incentives

- Making the changes
 - Existing Facilities Program

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FlexTech Program

Objective:

To help customers make informed energy decisions

Eligible applicants include:

- NYS Industrial and Commercial Facilities
- State and Local Governments
- Not-for-profit and Private Institutions
- Public and Private K-12 Schools
- Colleges and Universities
- Health Care Facilities.

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FlexTech Energy Audits

NYSERDA Small Commercial Audit Program

- **Eligibility:** Average annual electric demand: $\leq 100\text{kW}$
- **Offer:** Fuel-neutral energy walk-through
- **Cost:** FREE for Small Businesses and Not for profits
- **Process:** Fill out Consolidated Funding Application (CFA)
 - Yourself or assistance from:
 - Small Business Development Center
 - NYSERDA Small Business Auditor for this region – CJ Brown Energy

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FlexTech Program

- **Fuel Neutral**
- **Cost Share**
 - **50/50** – energy related portion
- **FlexTech Consultant** or **use your own**
 - **Except small businesses / not-for-profits**
- **Incentive Cap**
 - **\$1,000,000** per project
 - **≤ 10%** annual energy bills

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FlexTech Program

Projects Categories:

- General Feasibility Studies
- Retrocommissioning
- Long-Term Energy Management and Master Planning
- Data Center Efficiency
- Peak Load Management Strategies
- Energy Procurement
- Combined Heat and Power/Renewable Generation
- Performance Contract Evaluation and RFP Assistance

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FlexTech Program

THE PROCESS (Large customers/projects)

- Customer chooses from **FlexTech Consultant** list or uses their **own consultant**
- Consultant and in some cases **NYSERDA Project Manager** **site visit**
- Develop **scope of work**: site-specific, customized proposal
- **NYSERDA Final Report** close out meeting

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Energy Efficiency Programs

Existing Buildings

**Project
Identification/
Energy Study**



**Project
Implementation**

Phase 1: FlexTech

- Identify the changes you could make

Phase 2: Implementation Incentives

- Making the changes
 - Existing Facilities Program

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Pre-Qualified Incentives

- **Small-scale projects**
 - Electric equipment: \$30,000 cap
 - Gas equipment: \$30,000 cap
- Applicants can receive incentives (\$/unit) for pre-qualified equipment/systems
- **Easy participation process:**
 - Check efficiency requirements to determine eligible equipment.
 - Apply within 90 days of project purchase and installation.
 - **NYSERDA** will review for eligibility and provide payment.

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Pre-Qualified Incentives

Pre-Qualified Incentives are available for:

- Lighting
- HVAC
- Chillers
- Motors
- VFD' s
- Refrigeration
- Commercial Kitchen Equipment
- Interval Meters
- Boilers/Furnaces
- Water & Space Heating

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Performance-Based Incentives

Base Incentive	Upstate	Downstate
Electric Efficiency	\$0.12/kWh	\$0.16/kWh
Energy Storage	\$300/kW	\$600/kW
Natural Gas	\$15/MMBtu	\$20/MMBtu
Demand Response	\$100/kW	\$200/kW
Monitoring-Based Commissioning	\$0.05/kWh	\$0.05/kWh

Minimum \$30,000 up to \$2,000,000 Incentive. Performance-Based incentives must meet minimum energy saving thresholds, and require an Engineering Analysis to substantiate energy savings after project completion.

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Performance-Based Incentives

Process

- Engineering Analysis Required
- Pre- and Post-installation Site Visits
- Incentive Payment after Savings Verified

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New Construction Program

Objective:

Transform the way buildings are designed and built

Technical Assistance

Green Buildings Services

Bonus Incentives for LEED Certification

Capital Cost Incentives

Note: Baseline is **ASHRAE 90.1-2007** for commercial buildings (CODE in NY)

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New Construction Program

Two types of building projects are eligible:

- **New Construction:** Defined as a new building, or space within a new building, for which a licensed professional architect or engineer has prepared and certified building plans.
- **Substantial Renovation:** Defined as one of the following types of projects for which a licensed professional architect or engineer has prepared and certified building plans.

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New Construction Program

Technical Assistance (TA)

NYSERDA pays the first \$5,000 of the cost of TA services and cost shares up to 50 percent of the balance, up to a maximum of \$75,000. NYSERDA will increase the maximum funding amount for technical services by an additional \$25,000 to a total of \$100,000 to identify Demand Response Opportunities.

For green building technical services on projects that achieve **LEED®** or **NY-CHPS certification**, NYSERDA will pay an additional amount equal to NYSERDA's share of energy analysis TA services, up to a total additional NYSERDA contribution of **\$25,000**.

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Program Access

- Consolidated Funding Application (CFA)
- As part of Governor Cuomo's transformative plan to improve the state's economic development model, a New York State Consolidated Funding Application (CFA) has been created that will streamline and expedite the grant application process.
- Customers seeking funding in select NYSERDA programs must apply through the CFA.

<http://nyworks.ny.gov/>

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Tax incentives

179 d Tax Deduction

Internal Revenue Code Section 179d allows for an immediate deduction of up to \$1.80/s.f. for existing or newly constructed commercial buildings that achieve a 50% reduction in total energy and power costs **versus baseline.**

- Building Envelope
 - HVAC
 - Interior Lighting
-
- Must be placed in service or retrofitted before **1/1/14**
 - Includes **residential** business use if building **taller than 3 stories.**

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Tax incentives

179 d Tax Deduction

- **Use approved IRS software** – e.g., Trane's TRACE 700 (13 total as of today)
- Compare building to baseline: **Baseline is 2001 ASHRAE 90.1-2001**
- Overall **50% or more reduction**: full \$1.80 per SF deduction.
- **Partial deductions available if 50% threshold is not reached.**

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Tax incentives

179 d Tax Deduction

Three qualifying subsystems

- HVAC = \$.60 per SF
- Building Envelope = \$.60 per SF
- Interior Lighting = \$.60 per SF

Interim Lighting Provision

- Simpler than full modeling (just a spreadsheet)
- May qualify for deduction from \$.30 - \$.60 per SF, based on reduction in lighting power density of **25% to 40% over ASHRAE Standard 90.1-2001 (pro-rata)**

In 35 states commercial properties will qualify for the \$0.60 per square ft. lighting portion of the deduction simply by meeting minimum building code including NY!

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Tax incentives

179 d Tax Deduction

Special Rule: Government Owned Buildings

- Municipality may allocate 179D deduction to the designer(s) = architect, engineer, or other professional who creates technical specifications that incorporate energy efficiency, not just installer.
- Municipality has discretion to allocate to primary designer or among several designers.

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Financing Option 1

NYSERDA Commercial Loan GJGNY (All customer sizes)

Max \$100,000 loan (\$50,000 NYSERDA)

NYSERDA Interest Rate	0%
Lender Interest Rate	5%
Blended Interest Rate	2.5%

- NYSERDA provides \$10,000 at 0% interest
- The lender provides \$10,000 at 5% interest

Result: Borrower receives a \$20,000 loan at 2.5% interest.

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Financing - On-Bill Recovery

For Small Business and Not for Profit Organizations

Max \$50,000 loan for qualifying energy efficiency measures with less than 15-year payback

2.5% interest rate (subject to change)

Term is \leq 10 years, but payment and interest must be less than expected energy savings.

Borrower works with a participating lender to secure a NYSERDA loan up to \$50,000.

Borrower repays the NYSERDA loan through a charge on their monthly utility bill.

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Participating OBR Lenders

Bank Name	Loan Officer Name	Address	City	State	Zip Code	Loan Officer Phone	Lending Region (by County)	On-Bill Recovery	Participation
The Bank of Greene County	Perry Lasher	288 Main Street, PO Box 470	Catskill	NY	12414	518-943-1424	Albany, Columbia, Delaware, Dutchess, Fulton, Greene, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Ulster, Warren, Washington	X	X
Barrett Capital Corporation	Barry Korn	422 East 72th Street, 18th Floor	New York	NY	10021	917-434-3000	All Counties	X	X
Chautauqua Opportunities, Inc.	Robin Smith	17 West Courtney Street	Dunkirk	NY	14048	716-366-3333	Chautauqua	X	
Community Loan Fund of the Capital Region	Joseph Landy	255 Orange Street	Albany	NY	12210	518-436-8586	Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington	X	X
Pathstone Enterprise Center, Inc.	Albert Hartsig	400 East Avenue	Rochester	NY	14607	585-340-3304	Allegany, Cattaraugus, Cayuga, Chautauqua, Chemung, Erie, Genesee, Livingston, Monroe, Niagara, Onondaga, Ontario, Orleans, Oswego, Schuyler, Seneca, Steuben, Wayne, Wyoming, Yates	X	X
SEFCU	Matthew Dahl	700 Patroon Creek Boulevard	Albany	NY	12206	518-451-2949	Albany, Broome, Erie, Onondaga, Rensselaer, Saratoga, Schenectady	X	X

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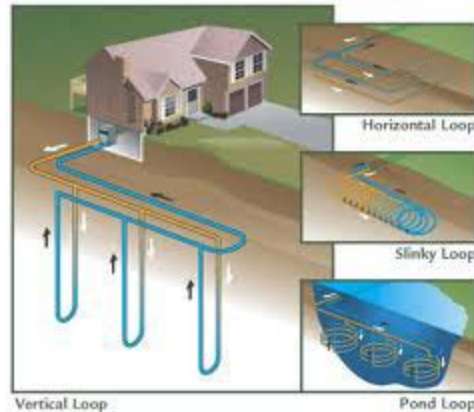
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Renewable Energy

Other Funding Available For:

- Solar PV
- Solar Thermal
- Small Wind
- Geothermal
- CHP
- R&D



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Renewable Energy

- NYSERDA Incentives Available for Solar PV, Solar Thermal, and Customer Cited Wind.
 - 12-18% based on size of the system
 - Incentive available through qualified installers
- 30% Federal Investment Tax Credit (ITC)
 - 30% for solar, fuel cells and small wind;
 - 10% for geothermal, micro turbines and CHP
- 25% NY State Tax Credit up to \$5,000 for solar photovoltaic (PV) and solar thermal systems

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