

P-12 Schools Initiative

Promoting and funding decarbonization & energy efficiency projects



NYSERDA

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Agenda

- NYSERDA Overview
- P-12 Schools Initiative - Program Updates
 - Benchmarking Program
 - Green and Clean Energy Solutions Program
 - Clean Heating and Cooling Screenings
- FlexTech Program – Indoor Air Quality Studies & Resources
- Additional NYSERDA Funding Programs
- Q&A and Discussion

• ***NYSERDA delivers market solutions that***

- **Increase** statewide energy efficiency and renewables
- **Deliver** energy savings due to reduced energy use
- **Reduce** greenhouse gas emissions
- **Reduce** reliance on fossil fuels
- **Increase** private investment in clean energy
- **Accelerate** growth and scale up New York's clean energy economy
- **Build** a clean energy workforce for the future

P-12 Schools Initiative Mission

The P-12 Schools Initiative promotes clean energy efforts by educating, guiding, and assisting school staff with clean energy projects and encouraging sustainability principles at facilities and in classrooms.

- Partnerships
- Workshops
- NYSERDA Consultants
- Energy awareness and opportunities

LOWER
operating costs

REDUCE
GHG emissions

CREATE
healthy environment

Benchmarking Program

- Provides up to three years of **free** energy benchmarking services and an operational assessment to eligible schools.

Energy benchmarking is a process of measuring and analyzing a building's utility costs, GHG emissions, and energy use over time or relative to other buildings.

An **Operational Assessment** is an on-site evaluation of building equipment and operations and maintenance procedures resulting in a report identifying areas of opportunity for improvement.

Why Participate?

Participating can help your school:

- Better understand the impacts of COVID-19 on building energy use and expenditures
- Lower operating costs and reduce GHG emissions
- Gain recognition for energy efficient and sustainable practices

Benchmarking reports will:

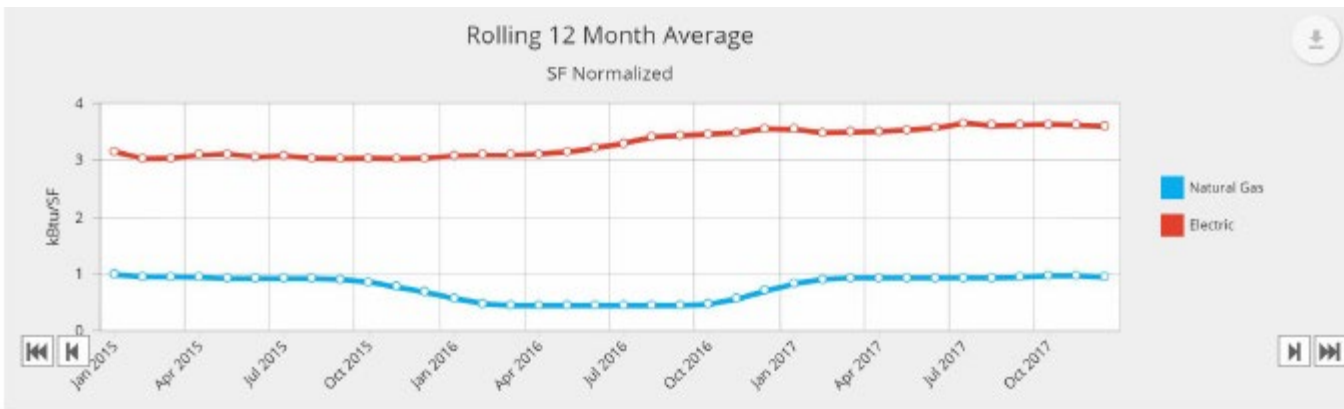
- Compare your school to other participating schools
- Summarize trends in energy use and costs
- Provide ENERGY STAR® scores

After six months of benchmarking, you are eligible for a *free* on-site Operational Assessment resulting in building-specific recommendations.

Biannual Benchmarking Reports



- **Every six months, your Benchmarking Consultant will issue a Benchmarking Report summarizing your energy use. The benchmarking report will help you:**
 - Summarize trends in monthly and annual energy use and costs
 - Assess potential energy and cost savings
 - Identify buildings with the greatest need for improvement

B3 Benchmarking Tool Visuals



How to Get Started

Contact the Benchmarking Consultant assigned to your region to get started:

Benchmarking Consultant	Counties Served
<p>Wendel Kurt Blemel kblemel@wendelcompanies.com</p> 	<p>Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Cortland, Erie, Genesee, Livingston, Monroe, Niagara, Onondaga, Ontario, Orleans, Schuyler, Seneca, Steuben, Tioga, Tompkins, Wayne, Wyoming, Yates</p>
<p>TRC Laura Giannini P-12Schools@trcsolutions.com</p> 	<p>Albany, Bronx, Chenango, Clinton, Columbia, Delaware, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Madison, Montgomery, New York, Oneida, Orange, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, St. Lawrence, Sullivan, Ulster, Warren, Washington, Westchester</p>

Green and Clean Energy Solutions Program

- Reduce annual energy expenditures
- Identify energy saving opportunities
- Use energy studies and project incentives in capital planning phase
- Increase student and teacher comfort, productivity, and health
- Bring schools in compliance with the aims and future requirements of the Community Leadership & Climate Protection Act (CLCPA)

Cost-Sharing: Energy Studies

- Cost-share eligible study costs (up to \$250,000 per project)
 - Most projects: up to 75%
 - High-Need schools: up to 100%
- Energy Study Examples:
 - Evaluation of energy efficiency measures
 - Carbon reduction studies
 - Central heating and cooling systems for conversion off fossil fuels
 - Peak load shedding and shifting
 - Renewable generation
 - Retro-commissioning
 - Strategic planning

Cost-Sharing: Energy Studies (cont.)

- Indoor Air Quality
 - Conduct a comprehensive evaluation of the air distribution systems and building controls
 - Analyze COVID-safe and effective building solutions balanced with energy efficiency
 - Focus on ventilation, filtration, building operation optimization, COVID-safe and effective air cleaning, and other appropriate strategies that will allow the building(s) to operate as energy efficiently as possible in a COVID-safe manner
 - Studies shall reference credible and objective third-party resources to support the evaluation, such as ASHRAE Building Reopening Guidelines.
 - IAQ Resources: NYSERDA's IAQ website shares the preliminary results from IAQ studies, in addition to links to the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) COVID Preparedness website. This website has valuable resources as it relates to guidance on reopening schools.

Cost-Sharing: Design

Clean Heating and Cooling and Net Zero Design Projects

- Cost-share eligible design costs (up to \$250,000 per project)
 - Most projects: up to 75%
 - High-need schools: up to 100%
- Clean Heating and Cooling:
 - Space and/or water heating or cooling without the use of fossil fuels
 - Eligible Projects: Ground Source Heat Pumps (GSHP), Air Source Heat Pumps (ASHP) and Variable Refrigerant Flow Systems (VRF)
 - Eligible Costs: Development of load calculations, equipment schedules, drawings, mechanical plans, and test boreholes
- Net Zero:
 - Evaluate reduced energy use of 20% better than current NYS energy codes and estimate the impact of the design against school's net zero potential
 - Eligible Projects: Energy efficiency improvements, clean energy projects, on-site renewable energy, battery storage
 - Eligible Costs: Design of clean energy and energy efficiency improvements, energy modeling and analysis, integrated project delivery and Net Zero design charrettes.

Direct Incentives

- Provides funding for projects that result in an energy load reduction through mechanical, equipment and building envelope efficiency efforts.
- List of Prequalified Direct Incentives on the GCES Program Website
- Custom Direct Incentives
 - For measures not included in the pre-qualified measure list, a custom incentive may be available.
 - Energy calculations are not required for custom measure submissions.
- Eligibility:
 - Projects eligible for existing investor owned utility incentives are ineligible for incentives through the Program.
 - New fossil fuel-based systems are ineligible.

Complimentary Service - Clean Heating and Cooling: Technology Screenings

- Schools can receive a FREE Clean Heating and Cooling Technology Screening
- How it works
 - NYSERDA consultants will evaluate the installation of ground source heat pumps (GSHP), air source heat pumps (ASHP), and variable refrigerant flow systems (VRF).
 - For each school building, a 4-5 page screening report will be provided that describes capital costs, annual energy consumption impacts, cost changes, investment payback period, and environmental outcomes.
 - Screenings will outline the benefits and potential savings of installing clean energy systems.

Eligibility Requirements

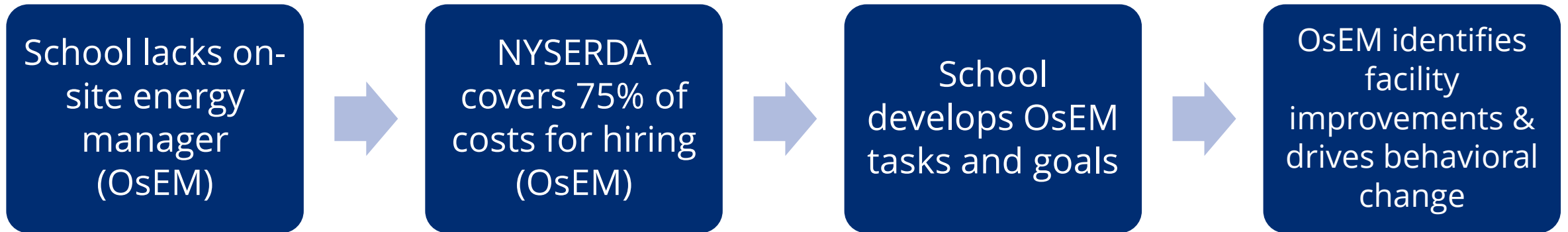
Applicants must be located in New York State and:

- Be a publicly or privately owned school
- Provide P-12 education
- Be solely occupied by P-12 students and staff
- Pay into the Systems Benefit Charge (SBC) on their electric utility bill

Energy Performance Contracting Assistance

- The P-12 Schools Initiative Programs can be used in combination with energy performance contracts:
 - Benchmarking Program –
 - The biannual benchmarking reports can be used to help your school measure the impact of the energy performance contract.
 - The program has a public dashboard where you can see how your school's energy use intensity (EUI) compares with your peers.
 - Green and Clean Energy Solutions Program -
 - The funding associated with the energy studies and design projects can be used to
 - Issue an RFP, oversee the EPC
 - Perform energy analysis
 - The direct incentive funding can reduce the cost of installing energy efficiency projects associated with the EPC.

On-site Energy Manager



- Applicants can opt for full or part time On-Site Energy Manager
- NYSERDA provides a **75%** cost share for the On-site Energy Manager, capped at **\$100,000 for small projects** (<\$1,000,000 annual energy spend) and **\$200,000 for large projects**.
- Two potential **bonus** payments of **\$5,000** for small projects and **\$7,000 for large projects** if:
 - OsEM is retained for one full year following conclusion of engagement/previous bonus period
 - Energy savings of at least 1% over previous year can be demonstrated

NYSERDA Programs - Available Opportunities

Energy Efficiency				
<p><u>FlexTech</u> Covers up to 50% of costs for energy studies identifying opportunities to reduce energy use and operating costs</p>	<p><u>On-Site Energy Manager</u> Covers up to 75% of costs for hiring an on-site energy manager to manage/identify energy and operation upgrades</p>	<p><u>Commercial New Construction</u> Offers financial and technical support for the construction of efficient buildings</p>	<p><u>Benchmarking</u> Provides free energy benchmarking services to P-12 schools for up to three years</p>	<p><u>GCES</u> Provides cost-sharing and direct incentives to help reduce energy loads and assist in the conversion to carbon free fuels</p>
Clean Energy Technologies & Resiliency				
<p><u>Renewable Heat NY</u> Incentives/support for installing large biomass boilers</p>	<p><u>NY-Sun</u> Incentives for installing solar panels</p>	<p><u>Retail Energy Storage Incentive Program</u> Provides funding for stand alone energy storage or systems connected to on-site generation</p>		
Training & Workforce Development				
<p><u>Building O&M Training</u> Provides funding to develop training for building operation and maintenance staff</p>		<p><u>Energy Efficiency & Clean Tech Training</u> Provides funding to training providers for energy efficiency and clean technology programs</p>		
Clean Transportation				
<p><u>New York Truck Voucher Incentive Program</u> Rebates for purchasing all electric buses</p>	<p><u>Drive Clean Rebate</u> Rebates for purchasing electric plug-in cars</p>	<p><u>Charge Ready NY</u> Incentives for installing electric vehicle charging equipment</p>		

Commercial New Construction

For new construction and substantial renovations, NYSERDA will support:

- Technical review of schematic design plans or proposed equipment selections for energy savings (NYSERDA provides at no cost)
- Energy modeling and analysis to identify potential energy saving opportunities (NYSERDA covers 60% of costs, up to \$75,000)
- Technical and financial support for **zero net energy, deep energy saving projects, or smart buildings**:
 - Technical support – NYSERDA covers 100% (up to \$200k) of consultant costs for energy modeling and analysis
 - Financial support – NYSERDA offers \$150/metric ton of CO² for first year GHG reduction and will cover 50% of costs for installing smart building equipment

Renewable Technology

- **NY-Sun** offers incentives and financing for purchasing and installing solar panels. Incentive amounts vary by system size and region across the state.
- **Renewable Heat NY** provides incentives toward installed costs of high efficiency, low-emission wood heating systems. New system must not be replacing natural gas system.

System	System Type	Installation Incentive
Large Biomass Boiler (>300 kBtu/h)	Large Pellet Boiler with Thermal Storage	65% installed cost (\$325,000 cap)
	Tandem Pellet Boiler with Thermal Storage	75% installed cost (\$450,000 cap)

Additional incentives available for thermal storage adders, recycling old equipment, and emission control systems.

Energy Storage

- **FlexTech** covers 75% of costs for studies assessing the feasibility of energy storage systems
- **Retail Energy Storage Incentive Program** provides an incentive or installing new, grid-connected:
 - Stand-alone energy storage systems OR
 - Energy storage systems paired with another on-site generation source like solar
- Retail Energy Storage incentive is based on installed storage capacity (kWh), and incentive rate assigned to your location

Building Operations and Maintenance

- Designed to assist with developing training programs to advance the skills of building operations and maintenance workers
- Eligible projects include:
 - Curriculum development
 - Career pathways training
 - Internships, apprenticeships, coaching/mentorships
 - Training trainers
- Proposals must be for buildings or groups of buildings with annual energy expenditure greater than \$1 million per year
- NYSERDA will cover up to 50% of project costs, capped at \$400,000

Energy Efficiency and Clean Technology Training

- Supports projects that develop and deliver training, provide hands-on experience, and job placement assistance to ensure that clean energy workers have the skills businesses need
- Eligible activities include:
 - Developing, modifying, or implementing curriculum
 - Delivering training (online, classroom, on-site, etc.)
 - Equipment purchase for hands-on training
 - Hiring and training instructors
 - Internships and apprenticeships
 - Job placement services
- Proposals must request between \$50,000 and \$250,000
- Proposer is required to cost-share 30% of project costs

Clean Transportation

Drive Clean Rebate

- Offers a rebate of up to \$2,000 for the purchase or lease of a new electric vehicle

New York Truck Voucher Incentive Program

- Offers incentives for the purchase or lease of all-electric heavy-duty vehicles, like buses, when replacing a similar diesel vehicle
- Incentives are based on vehicle size and cost

Charge Ready NY

- Offers rebate of up to \$4,000 for each eligible level 2 electric vehicle (EV) charging station you install
- You must install an eligible EV charging station and work with a qualified service provider

Thank you for your participation.

For more information on how NYSERDA can help your school, contact:

P12Schools@nyserda.ny.gov

www.nyserda.ny.gov/P-12-Schools

<https://twitter.com/NYSERDA>



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