

# Building Your Workforce for the Clean Energy Economy

Davetta Thacher, Senior Project Manager, NYSERDA

Adam Romano CEM, Senior Building Systems Consultant, Steven Winter Associates

Joe Berman, Senior Advisor, Market Development, NYSERDA

Joe Foskett, Director of Government Affairs, Business Council of New York State

October 6, 2020



# Clean Energy Workforce Development and Training



**NYSERDA**

[Davetta Thacher](#)

Senior Project Manager

October 6, 2020

# Clean Energy Workforce Development Overview

In the 2020 State of the State, Governor Cuomo announced a \$100 million commitment to change the landscape of New York's workforce through clean energy and energy efficiency workforce development and training.

## **Funding will provide opportunities for activities as diverse as:**

- > Training building and operations staff to properly operate and maintain building systems
- > Providing on-the-job training for new clean energy workers
- > Supporting internships for students looking to gain hands-on skills at a clean energy company
- > Enhancing curricula to meet the demands of clean energy employers
- > Establishing a talent pipeline that can reduce the business cost of hiring new workers

# Workforce Development – Program Overview

- NYSERDA provides funding to develop and implement sustainable clean energy training that meets business needs and addresses market gaps. Currently:
  - 24 organizations are training over 7,000 new and existing workers to design, sell, manufacture, install, inspect or operate clean energy technologies; electrification & energy efficiency highest priorities
    - 12 of these projects will serve 1,200 individuals from priority populations, preparing them for new clean energy careers
  - 46 projects have been awarded over \$10 million in funding to train 6,000 building operations and maintenance staff that work in a total of 244 million sf of commercial buildings; \$422 million in annual energy expenditures

# PON 3981 Energy Efficiency and Clean Technology Training



# PON 3981 – Energy Efficiency & Clean Technology Training

**Goal:** Develop and deliver training, provide hands on experience and job placement assistance to ensure new and existing clean energy workers have skills businesses need.

## Participants

- Unions, colleges and universities, manufacturers, distributors, trade associates, community-based organizations, technical high schools, training and job placement intermediaries

## Program Funding

- \$4 million, multiple due dates
- Funding up to \$250,000 per proposal, 30% cost share required
- Preference for projects that provide training and job placement services to workers with barriers to employment (priority populations)

# PON 3982

On-the-Job Training for Energy  
Efficiency and Clean Technology



# PON 3982 - On-the-Job Training

## **Goals:**

- To reduce the costs associated with recruiting, hiring, and training new workers
- To teach new workers occupational skills to help clean energy businesses succeed

## **Program Resources:**

- \$14 million in incentives available, including limited funding for Long Island businesses
- Funding provided to offset wages for new hires; higher incentives for priority populations

## **Target Audience:**

- “Workers” include those who design, manufacture, specify, sell, distribute, install, operate, maintain, repair, inspect energy efficiency and clean energy technologies and systems

# PON 3982 - On-the-Job Training Incentives

Categories	Number of Employees	Reimbursement Rate (up to \$16/hr)	Reimbursement Period	
			Traditional Worker	Priority Population Worker
Energy Efficiency & Clean Energy	2 - 100	50%	16 Weeks	24 Weeks
	101 or more	50%	Not Eligible	24 Weeks
Solar	2 employees or more	50%	Not Eligible	24 Weeks
Heat Pumps	2 employees or more	75%	16 Weeks	24 Weeks

Funding is capped at \$150,000 per business for traditional workers.

No maximum cap for businesses of any size hiring priority populations.

**Average Hourly Rate**

\$18.17

**Average Wage Subsidy  
for 4 – 6 Months**

\$7,000

# PON 4000 New York State Clean Energy Internship Program



# PON 4000 – Clean Energy Internship Program

## Goals

- To provide clean energy businesses with a pool of young, skilled professionals, and to provide relevant clean energy career experiences to people entering the workforce

## Program Resources

- \$7.5 million available on a first-come, first-served basis
- Intern wage reimbursement: 75-90% of intern wages, depending on company size
- Internships: minimum of 8 weeks/80 hours up to 960 hours completed within a 12-month period.
- Businesses can bring their own intern or choose from a directory of interns who apply to the program

# PON 4000 – Clean Energy Internship Program

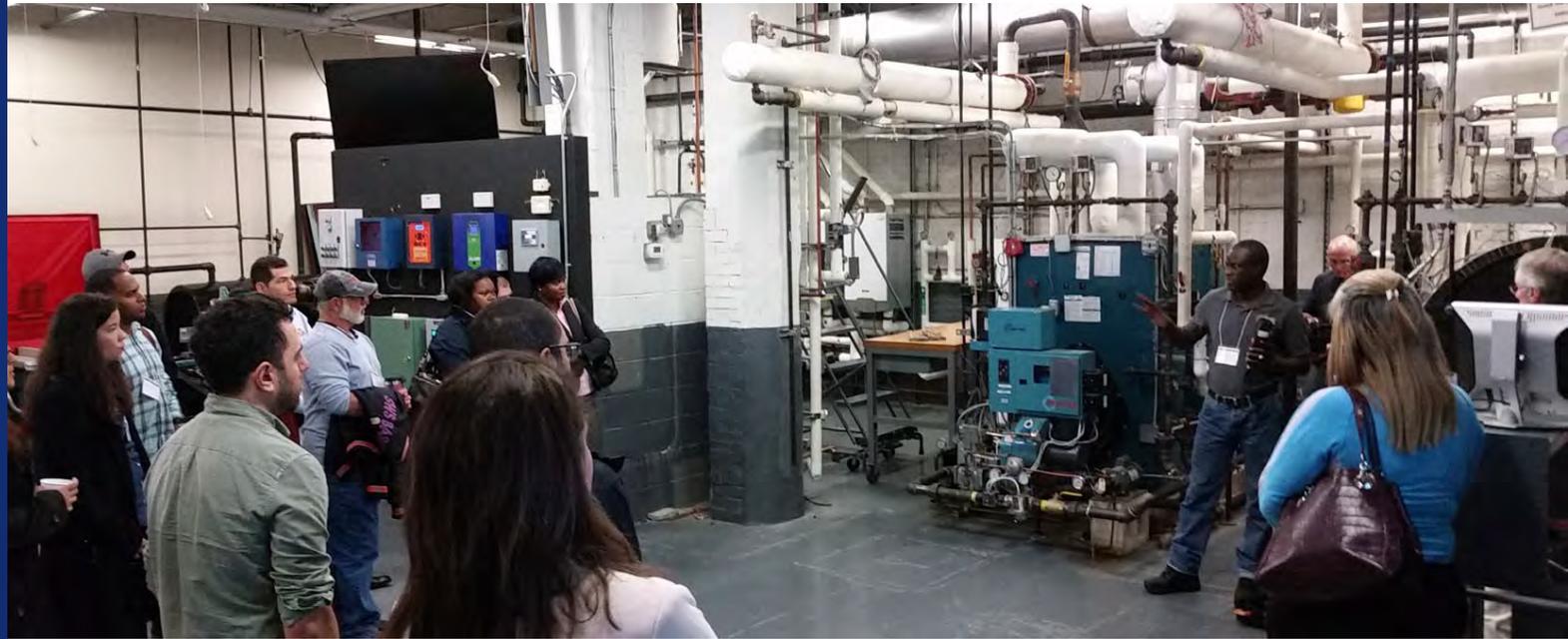
## **Eligible businesses must:**

- Provide services related to research, manufacture, design, procurement, installation, operation, commissioning, technical sales, in the following areas:
  - Energy Efficiency, Renewable Electric Power Generation, Grid Modernization and Energy Storage, Alternative Transportation, and Renewable Fuels
- Have an office in SBC territory

## **Eligible interns must be:**

- A NYS resident attending or having attended any college or university
- An out-of-state student attending or having attended a college or university located in NY
- A 16- to 24-year-old participating in a work preparedness training program, or a veteran, or a member of a priority population

# PON 3715 Building Operations and Maintenance Program



# PON 3715 – Building Operations and Maintenance Program

## Goals

- To train building operations and maintenance (O&M) staff to optimize building energy performance, saving owners money while reducing carbon emissions

## Program Resources

- \$8 million in funding available to CEF ratepayers statewide
- NYSERDA will provide cost share of up to 50% with a cap of \$400,000 per application. Cost share can include cash or in-kind services like employees' wages during training, equipment from manufacturers that will be used exclusively for training purposes, training fees offset by a third party, etc.

# PON 3715 – Building Operations and Maintenance Program

## Eligibility Requirements:

- Facilities that are New York State *electricity* customers and pay into the System Benefits Charge (SBC)/Clean Energy Fund (CEF)
- Building owners, facility managers, property management companies, business associations/trade groups or training providers may be the lead proposer
- Proposals must be for buildings or groups of buildings with total annual energy expenditures of \$1 million or more

## Targeted Building Types:

- Multifamily housing
- Office buildings
- Retail
- Educational institutions including colleges/universities and K-12
- Hospitals and healthcare facilities
- State and local governments
- Not-for-profit and private institutions
- Other building types, evaluated on a case-by-case basis

# PON 3715 – Building Operations and Maintenance Program

## Targeted Systems/Infrastructure:

- HVAC systems, including heat pumps
- Domestic hot water
- Economizer/ventilation controls
- Pneumatic systems
- Building diagnostics
- Building energy management
- Controls
- Other energy consuming systems

## Eligible Activities:

- On-site training laboratories
- Curriculum development or revision
- Career pathways training
- Coaching and mentorship
- Apprenticeships and internships
- Training trainers with a company (training partner)
- Partnerships with manufacturers
- Planning for training replicability and sustainability

# List of Training Partners

32BJ Training Fund  
AKF Engineers  
Association for Energy Affordability (AEA)  
Prestige Management  
Erie Community College (SUNY Erie)  
SUNY Erie  
Erie County  
FS Energy, LLC (Financial Services Energy)  
Solar One  
Steven Winters  
Video Production and Editing Company  
Housing Works  
Solar One  
Interstate Renewable Energy Council (IREC)  
WinnCompanies  
Lefrak Estates LP  
Steven Winters  
Memorial Sloan Kettering Cancer Center  
The Refrigeration Institute  
CUNY Building Performance Lab  
Montefiore  
NYC College of Technology  
Enhanced Building Solutions  
Gotham 360  
The Partnership for Quality Care  
NYS School Facilities Association  
School Facilities Management Institute  
Northwest Energy Efficiency Council  
NYU Medical Center  
EME Consulting Engineering Group  
Onondaga Community College  
Cayuga CC  
Jefferson CC  
Tompkins-Cortland CC  
Sustainable Building Operations Training  
Related Management  
Steven Winters  
CUNY BPL

RiseBoro Community  
Solar One  
RPI (Rensselaer Polytechnic Institute)  
Smith Engineering (5 projects with 4 different partners)  
10 Hudson Yards/Related Hudson Yards  
20 Hudson Yards/Ery Retail Podium LLC  
RXR Realty Workforce Training  
30 Hudson Yards/Legacy Yard Tenant LLC  
55 Hudson Yards/Legacy Yard Tenant LLC  
Steven Winter Associates (10 projects with 9 different partners)  
A&E Real Estate  
Century Portfolio Training  
Douglass Elliman Property Management Training  
Dunn Development Corp  
St. Nicks  
Catholic Charities  
Urban American Training  
Harlem Greenfit  
Douglas Elliman Property Management  
New York University  
Robert E. Hill  
The Feil Organization  
SUNY Brockport  
NYPA  
The Cooper Union  
Cooper Union Facilities Best Practices and Optimization Training  
The Cooper Union  
Smith Engineering  
Urban Green Council  
SUNY ESF  
Urban Green Council  
Weill Cornell Medicine  
Seimens  
Matrix Mechanical Corporation  
Pearl Street LED Lighting Systems

# Current Workforce Funding Opportunities

**\*\*NEW\*\*** Searchable directory of free clean energy training resources available on [NYSERDA Workforce Development Training Page](#)

## PON 3981

- **Energy Efficiency & Clean Technology Training**, \$4 million, proposal due dates 10-1-20, 1-14-21

## PON 3982

- **On-the-Job Training for Energy Efficiency & Clean Technology**, \$14 million

## PON 4000

- **New York State Clean Energy Internship Program**, \$9 million

## PON 3715

- **Workforce Training – Building Operations & Maintenance**, \$8 million, proposal due dates 11-19-20, 2-25-21, 5-20-21



# THANK YOU!



Davetta Thacher  
Senior Project Manager  
[Davetta.Thacher@nysesda.ny.gov](mailto:Davetta.Thacher@nysesda.ny.gov)  
518.862.1090 x3603



# SWA Workforce Development Project Highlights



Adam Romano C.E.M.

Senior Building Systems Consultant

Since 1972, Steven Winter Associates, Inc. has been providing research, consulting, and advisory services to improve the built environment for private and public sector clients.

Our services include:

- Energy Conservation and Management
  - Sustainability Consulting
  - Green Building Certification
  - Accessibility Consulting
- 

We have over 125 staff across four office locations:  
New York, NY | Washington, DC | Norwalk, CT | Boston, MA

For more information, visit  
[www.swinter.com](http://www.swinter.com)





**Building Operator Training**

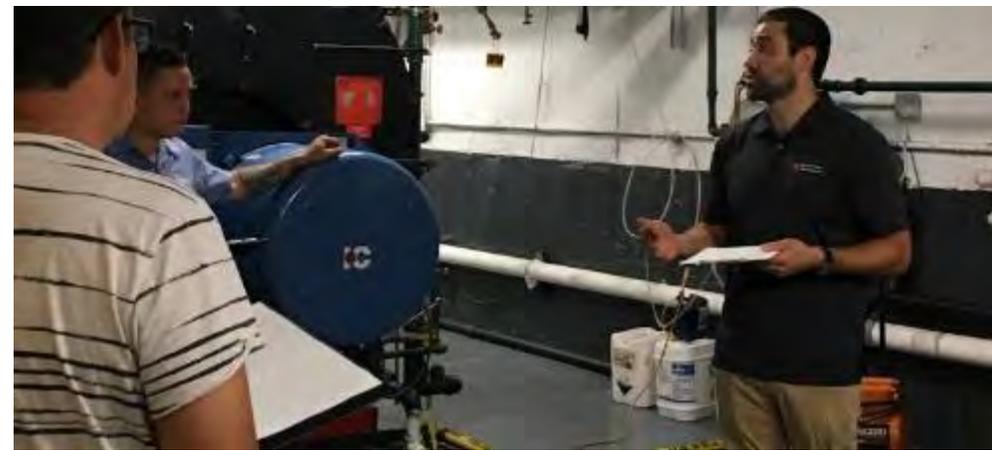
**Building Electrification Training Series**



**Building Operator Training**







**12** Portfolios

**128** Mil. Sqft



**918** Buildings

**2500** Operators

A row of white Fujitsu air conditioning units is mounted on a rooftop. The units are arranged in a line, receding into the distance. Each unit has a large, rectangular condenser coil with a grid pattern. The Fujitsu logo is visible on the side of the units. The background shows a clear blue sky with some white clouds. An orange banner with white text is overlaid on the lower part of the image.

# Building Electrification Training Series

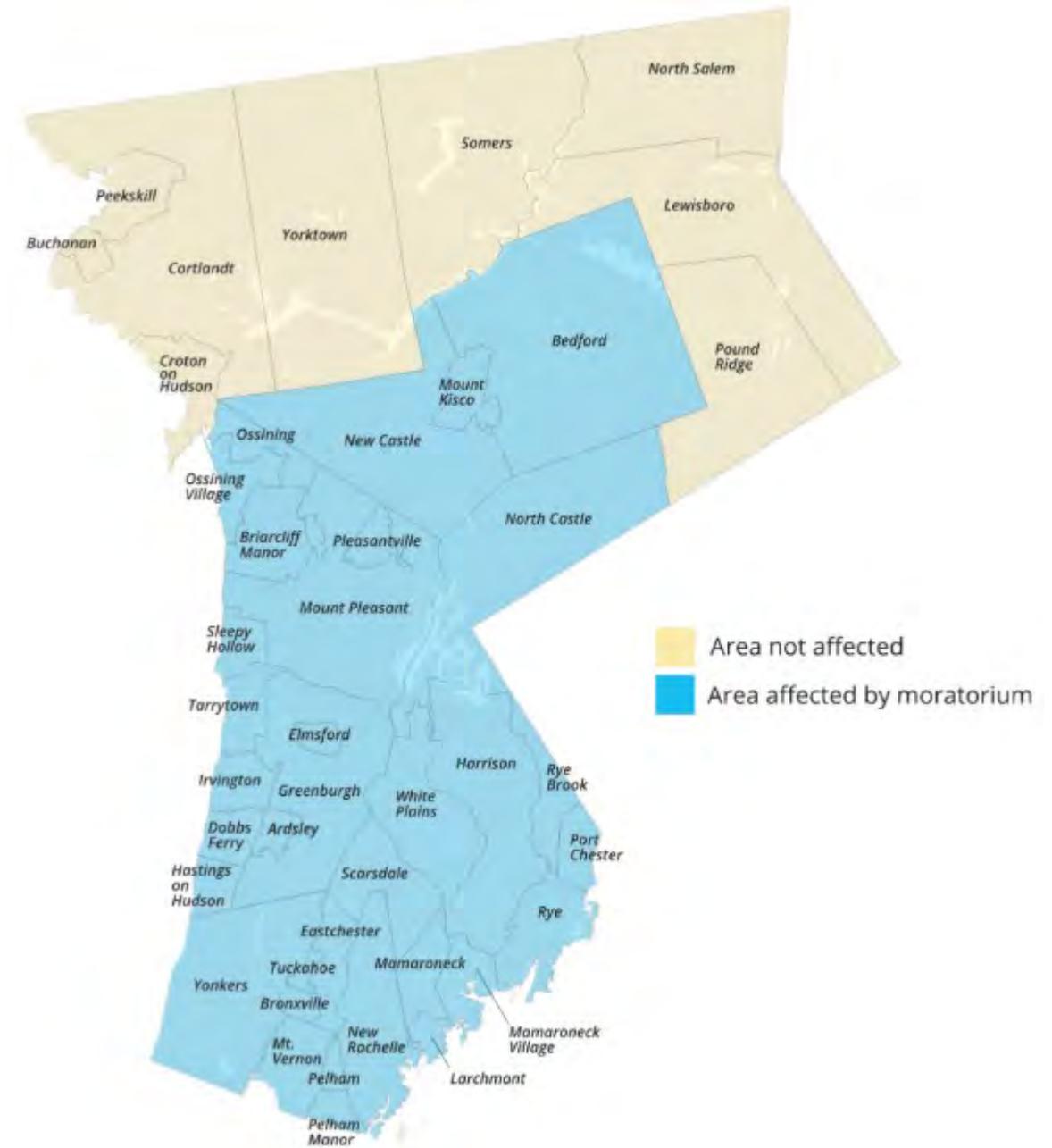
electrification

dhw heating  
central plant strategies  
water low gwp refrigerants current trends  
heat pumps heating pumps dhw control  
rise hotwater backup high  
controls domestic advance slide  
hot heat pump dhw systems passive  
allow "free" real costs multideep-retrofits  
pumps net-zero-ready electric options  
balancing hvac efficient systems  
central plants

district geo  
designs density/high  
heating/cooling  
coordinating efforts  
cold-climate  
synergies

# Gas Moratoria

- ConEdison moratorium on firm gas in Westchester (15 March 2019)
- National Grid gas moratorium in parts of Brooklyn and Queens (15 May 2019)
  - **Temporarily** ended in late 2019
- Looking for non-pipeline solutions

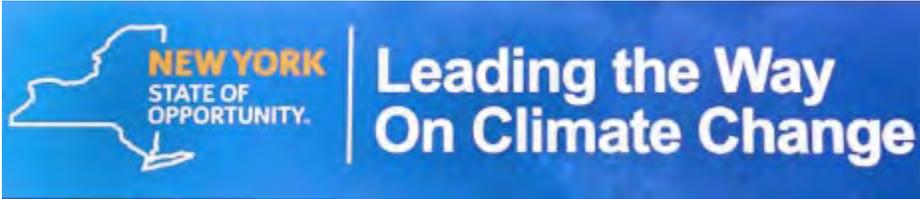
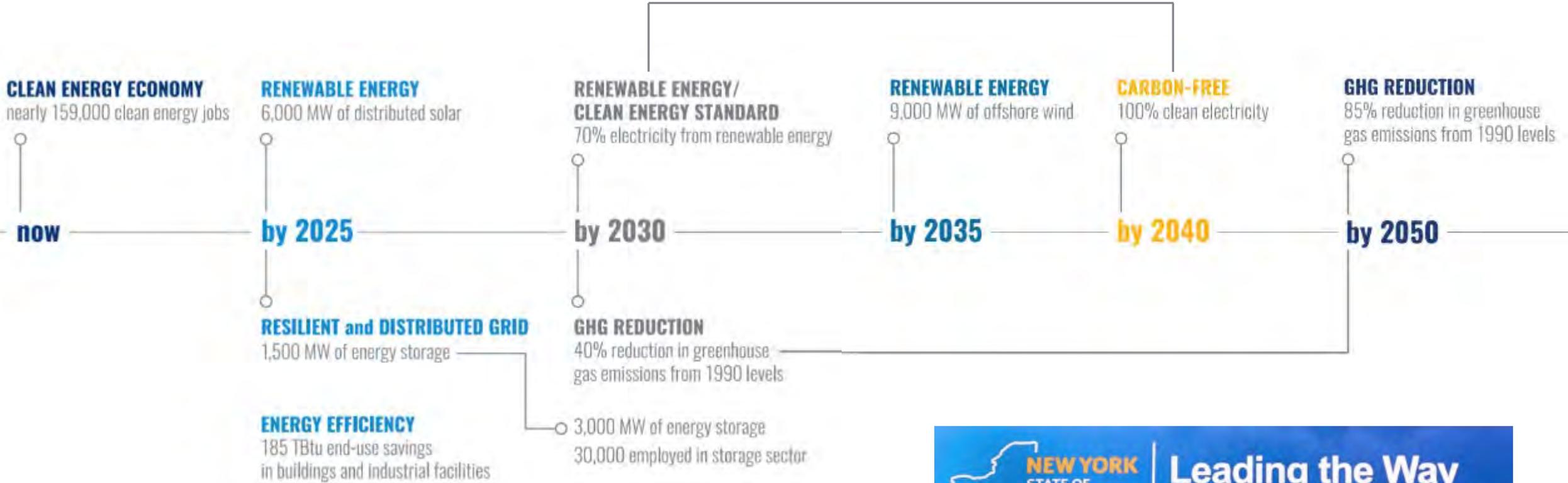


# NYC Local Law 97

## Decarbonizing NYC's Buildings



# Climate Leadership and Community Protection Act (CLCPA)



# Carbon Reduction

- Burning conventional fuel = emitting CO<sub>2</sub>
- Using clean electricity = no CO<sub>2</sub> emissions

# Health Benefits

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- Improved Local Air Quality
- Improved Indoor Air Quality
- Reduced Risk of CO Exposure



# Comfort Benefits

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- Localized delivery of heating and cooling
- Customizable temperature settings by room or zone

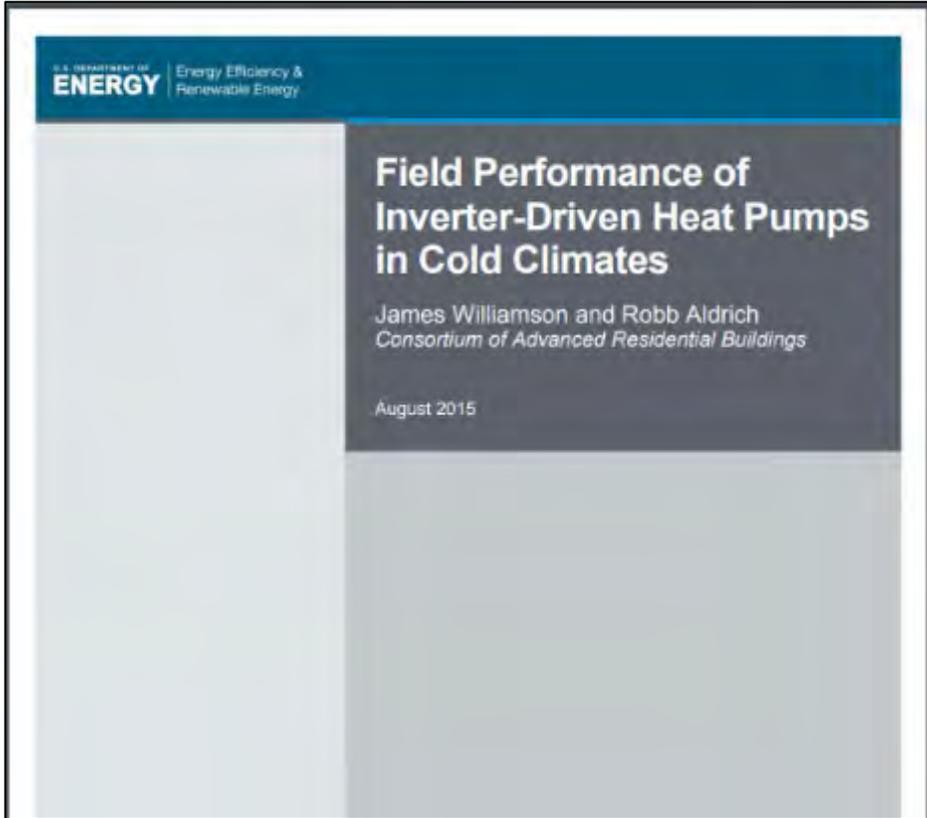
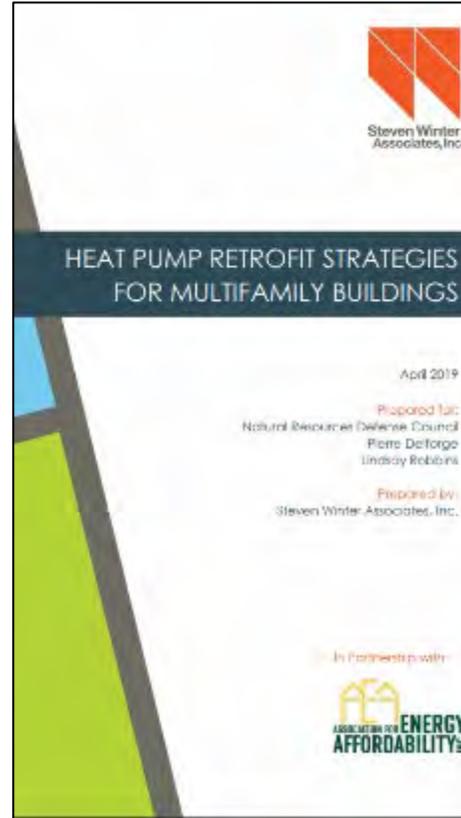
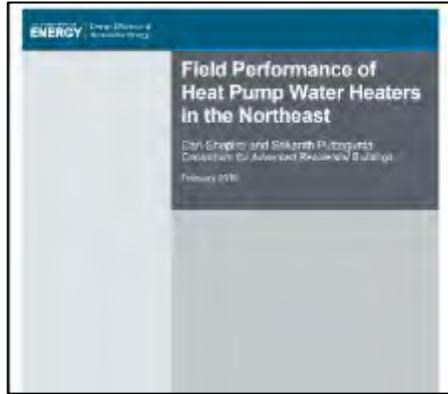


# Cost Savings

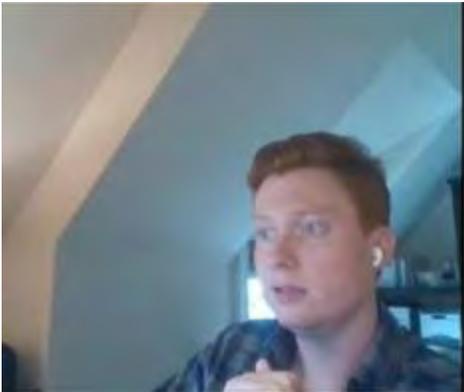
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- Compared to propane and fuel oil

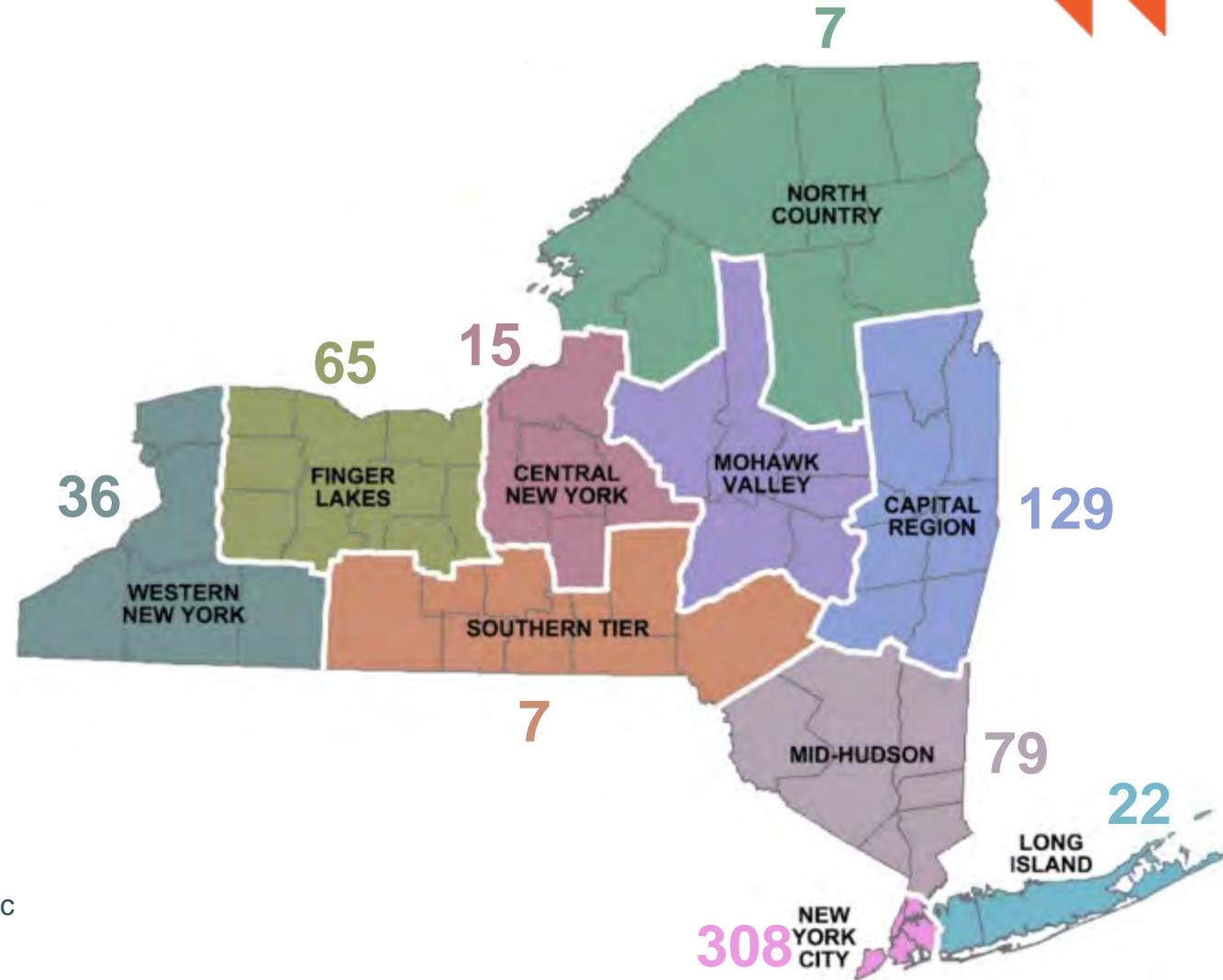
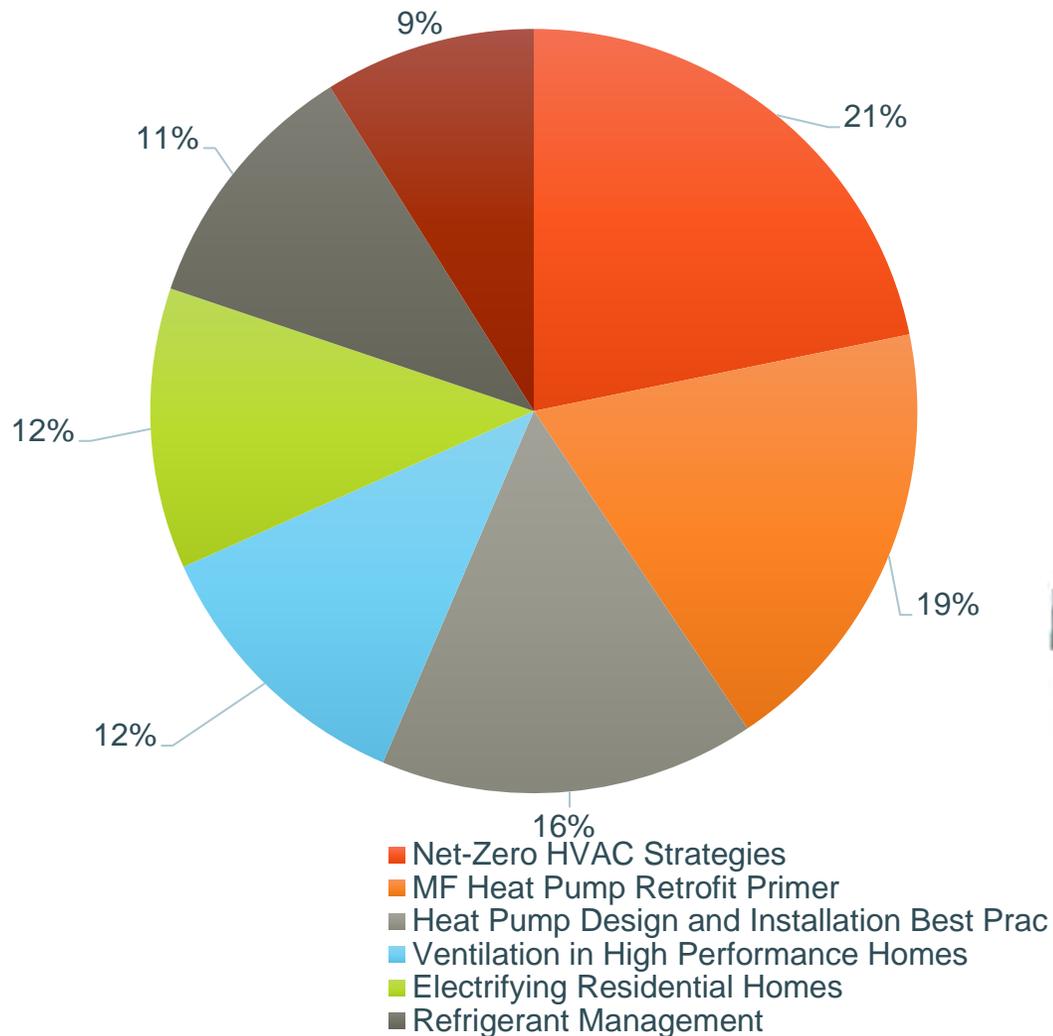




May 27<sup>th</sup> We Went Live!



# Total Sessions: 43 Total Attendees: 744

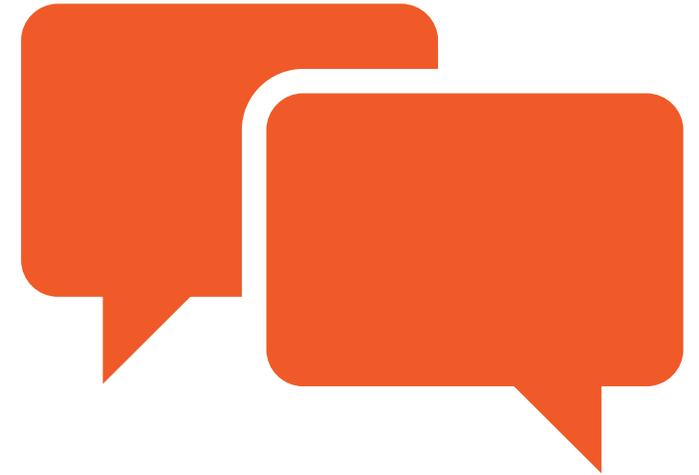


# Feedback

*“I would like to pass on my appreciation to all those involved. This module was a breath of fresh air. Challenging yet gettable. Engaging. Motivating. Impeccably managed. Exceptional speakers. etc...”*

*“It would not be a lie to say my sense of purpose and urgency has been reinvigorated, and for that I am grateful.”*

*“This was a very good session and I’ve encouraged others at my team to sign up for it as well. Probably the shortest four-hours I’ve had for a course!”*



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## Contact Us

Steven Winter Associates, Inc.

307 7th Ave., New York, NY 10001



Adam Romano  
Senior Building Systems Consultant  
CEM



[aromano@swinter.com](mailto:aromano@swinter.com)



212.564.5800 x1110



[www.swinter.com](http://www.swinter.com)



# Questions?



# Contact Us

## **NYSERDA**

Davetta Thacher

(518) 862-1090 x3603

[Davetta.Thacher@nyserda.ny.gov](mailto:Davetta.Thacher@nyserda.ny.gov)

## **Steven Winter Associates**

Adam Romano, C.E.M

(212) 564-5800 x1110

[aromano@swinter.com](mailto:aromano@swinter.com)

## **Business Council of New York State**

Joe Foskett

Director of Government Affairs

[Joseph.Foskett@bcnys.org](mailto:Joseph.Foskett@bcnys.org)

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