

On-The-Job Training Program PON 3982

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Current Funding Opportunities Webpage

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Current Funding	Opportu	nities. POI	Ns. RFPs. a	and RFQs	5
If you are a homeowner or renter looking	g for programs and s	ervices, see the Home ar	nd Residents page. The F	unding Opportunitie	s below are
targeted towards businesses and resea	chers.				
Technical questions should be directed t 518-862-1090. Extensions and e-mail ad	o the project manage dresses for the project	ers listed. The main NYSE ct managers are listed be	RDA phone number is to low.	II-free 1-866-NYSERE	DA or local
Sign up to receive e-mail updates	for new Funding Op	portunities			
Show Opportunities:		Sort	By:		
Continuous Funding		Alpl	nabetically		
Program Opportunity Notices (PC)	N)	Due	Date		
Request for Proposals (RFP)		_			
		Appl	y Filters		

nyserda.ny.gov/funding-opportunities/current-funding-opportunities



PON 3982

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



All incentives, maximum funding amounts (i.e., caps) and COVID-19 specific provisions are subject to change on 12/31/20



On-the-Job Training (PON 3982) Goals

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



On-the-Job Training (PON 3982) Program Resources

- \$14 million in incentives available statewide, including limited funding for Long Island energy efficiency and clean technology businesses
- NYSERDA works closely with the New York State Department of Labor to implement the program



On-the-Job Training (PON 3982) Target Audience

- "Workers" include those who design, manufacture, specify, sell, distribute, install, operate, maintain, repair, inspect energy efficiency and clean energy technologies and systems
- Priority populations
- Energy efficiency and clean technology businesses



Priority Populations

NYSERDA workforce development programs prioritize initiatives that serve priority populations, including:

- Veterans
- Native Americans
- Individuals with disabilities
- Low-income individuals
- Unemployed power plant workers
- Previously incarcerated individuals
- 18- to 24-year-olds participating in work preparedness programs (BOCES, technical high schools, Conservation Corp, YouthBuild, AmeriCorp, etc.)
- Residents of Potential Environmental Justice Areas as defined by NYSERDA Department of Environmental Conservation

On-the-Job Training (PON 3982) Eligible Applicants/Businesses

Businesses must provide services in the following areas:

- High efficiency HVAC
- Renewable energy heating & cooling, water heating
- High efficiency lighting and controls
- Building automation and controls
- Smart grid
- Energy storage
- Solar Electric
- Other related areas



On-the-Job Training (PON 3982) Eligible Applicants/Businesses (Cont'd)

Eligible Applicants must meet these basic requirements:

- Have at least one physical business location in NYS
- Conduct OJT at a NYS job location and demonstrate relation to CEF goals
- Be in good standing with any prior or current NYSERDA contracts or NYSDOL grants
- Provide all information requested in the Application Process and have clearly set objectives for the use of funds
- Pass a New York State Department of Labor due diligence review
- Have at least two or more employees or the equivalent of two full-time employees
- The candidate being hired under the incentive program must reside in NYS

NEW YORK NYSERDA

PON 3982 - On-the-Job Training Incentives

			Reimbu	rsement Period
Categories	Number of Employees	Reimbursement Rate (up to \$16/hr)	Traditional Worker	Priority Population Worker
Energy Efficiency &	2 - 100	50%	16 Weeks	24 Weeks
Clean Energy	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



Summary: Steps to Apply

Step 1

Businesses submit an "Intent to Apply" e-mail to PONOJT@nyserda.ny.gov.

(General company info, job title, job description/list of job duties, and hourly salary range for each anticipated position)

Step 2

Upon receipt of the "Intent to Apply" email, businesses who meet eligibility criteria or resolve unmet eligibility criteria, will have their "Intent to Apply" information forwarded to the NYSDOL for a due diligence review.

Businesses will be notified if they passed the NYSDOL due diligence review or how to resolve issues found during the review.



Summary: Steps to Apply con't

Step 3

Businesses who pass the NYSDOL due diligence review or resolve pending issues will be contacted by a NYSDOL Business Services Representative (BSR).

The NYSDOL BSR will work with the business on recruitment, skills assessment and completing the Business Application and training plan.

The resulting OJT contract, which will include the Business Application and training plan, will be between NYSERDA and the business.



PON 3982 – On-the-Job Training

Total On-the-Job Training Hires = 342 Priority Population Hires = 81 (24%)

Priority Population Category	# of Hires
Low Income	38
Veterans	19
Environmental Justice Zone Residents	9
Formerly Incarcerated	8
18-24-year-old Technical Training Students	5
Individuals with Disabilities	1
Native Americans	1

Technology Area	# of Hires
High Efficiency HVAC	45
Energy Efficiency/Weatherization	11
Other	6
Smart Grid	6
Renewable Heating and Cooling	4
Solar Electric	4
Building Automation & Controls	2
Lighting & Controls	2
Energy Storage	1
	NEW YORK NY

On-the-Job Training (PON 3982)

Approximately \$2,300,000 provided to date for 80+ businesses to hire new wokers.

Types of Companies

- HVAC contractors
- Geothermal contractors
- Insulation & Home Performance contractors
- Solar PV contractors
- Lighting & Electric contractors
- Energy Efficiency and Weatherization contractors
- Module Construction contractors
- Rechargeable Battery & Energy
 Storage companies
- Electric Vehicle Charging companies

Types of Jobs

- HVAC Installer/Technician
- Insulation Technician
- Hydronic Mechanic
- Energy Auditor/Advisor
- Program/Project
 Coordinator/Manager
- Battery Chemist/Engineer
- EV charging station installer
- Lighting Technician
- Sales Rep/Manager
- Solar PV Installer
- Fabricator
- Smart Grid Engineer
- Site Surveyor

Average Hourly Rate \$18.25

Average Wage Subsidy for 4 – 6 Months \$7,000



Thank You!

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EmPower and Assisted Home Performance Heat Pump Pilot Study



LMI Adder Pilot Study

- <500 single family homes
- Development of short-term statewide standard offer incentive structures and program guidelines
- Eligibility parameters will be developed to address:
 - Fuels displaced to help ensure maximum benefit to the household/building
 - Minimum standards for building shell performance consistent with Comfort Home
 - Minimize cost-shifting of heat to tenants
- Collection of data and market insights on heat pump installations, including DHW
- Need utility input on plan and learning objectives
- Need to work together on transition plan to apply learnings to the next phase

Adders Pilot Study Learning Objectives

- Test drive rules and mechanics for an additional heat pump incentives for LMI customers
- Develop a deep understanding of early building profiles/characteristics that represent the largest opportunity
- Measure household specific affordability/energy burden impacts
- Spur market learning and contactor partnerships to install heat pumps in early phase LMI households
- Gather market data on need and cost for electric panel/service upgrades needed

Program Guidelines

What equipment will be installed?

• Air Source Heat Pumps, Ground Source Heat Pumps, Heat Pump Water Heaters, Panel Boxes and heating system distribution improvements.

What Contractors can participate?

- NYSERDA AHP/EmPower Contractors- perform audit, envelope measures, submit paperwork to NYSERDA
- NY Clean Heat Contractors- install CH&C technologies, apply to utilities for rebates

What Customers can participate?

• 1-4 unit homes, served by Utilities that pay into the SBC with resident paid utilities that do not use natural gas as a heating source.

Program Guidelines

What fuels can be replaced?

 All <u>non-natural gas</u> fuels are eligible including electric, oil, propane, kerosene, coal, and wood.

How old does the heating system need to be?

• The heating system must be at least 5 years old.

How much of the load does the heat pump need to cover?

 The heat pumps must cover 90-120% of the heating load. Central systems that do not meet 100% can use electric strip backup. Existing heating systems can remain in place, but customer education should teach the customer how to use the heat pumps at least 90% of the time.

Program Guidelines

Are there limits to how much work a contractor can do?

• A contractor can use up to 20% of program funds for all their projects.

How will we know how much funding is left?

• There will be a tracker on the residential contract website- NEED URL

Insulation Level Requirements

Minimum Levels of Insulation in household (must be verified with an energy audit)

Area	Required Insulation level
Walls	R-14
Attic	R-30 average
Attic Hatches	R-20
Pull-down Stairs	R-13
Rim Joists	R-14
Mobile Home Walls	R-6
Mobile Home Attic	R-24
Mobile Home Belly	R-21
Airtightness	5 ACH

Heat Pump Requirements

These guidelines align with utility specifications.

- 1. Must cover 90% to 120% of building load.
- 2. ASHP- NEEP Cold Climate
- 3. GSHP- Each heat pump in the system must be ENERGY STAR certified and meet or exceed ENERGY STAR Tier 3 Geothermal Heat Pump Key Product Criteria.7
- 4. HPWH- \leq 55 gallon- UEF > 2.0, > 55 gallon UEF \geq 2.2UEF

Incentive Structure

Proposed Adders- Incentives will cover project up to 60,000 btu/heating

Description	Incentive type	EmPower	АНР
Upstate ASHP	\$/10,000 btu	\$3,000	\$1,500
Downstate ASHP	\$/10,000 btu	\$2,200	\$1,100
Upstate GSHP	\$/10,000 btu	\$3,750	\$3,750
Downstate GSHP	\$/10,000 btu	\$3,850	\$3,800
Upstate HPWH	\$/unit	Normal EmPower	\$975
Downstate HPWH	\$/unit	Normal EmPower	\$825
Panel Box Upgrade/	≤ 100 Amps	Up to \$2,000	50% of Cost up to \$1000

Downstate counties interview with the second second

Additional Incentives

Panel boxes and distribution improvements will also be covered at a <u>total</u> cost of up to \$2,000 for EmPower and 50% of the cost up to \$1,000 for AHP.

- Panel Boxes- If a panel box is ≤ 100 Amps it can be replaced automatically through the program. If it is greater than 100 Amps than a NEC worksheet must be filled out showing a need for the larger service. The contractor must also provide a photo of the panel box and an invoice for replacement to take advantage of the adder.
- Heating Distribution Improvements can also be covered when needed to adapt the ductwork or piping for the heat pump.
- If a heat pump contractor is having an AHP/EmPower contractor process their paperwork, the AHP/EmPower contractor may charge an \$500 subcontractor fee. The 5% AHP contractor incentive does not apply for this program.

Project Example

Incentives are based on 10,000 btu of heating.

For example: 2 ton heat pump (20,000 btu/hr heating) Upstate Air Source Heat Pump for a low income customer the incentive would be \$3,000 per 10,000 Btu/hr x 20,000 Btu/hr= \$6,000

The home could also receive a \$2,000 panel box incentive and \$7,000 for building performance improvements.

EmPower Heat pump	\$6,000
EmPower Panel box	\$2,000
EmPower EE	\$7,000
Utility Incentive	\$2,000
Total	\$17,000

Project Example #2

Ground Source heat pump at 80,000 btu in the Downstate region.

Max incentive cover up to 60,000 btu

Total job cost \$48,800

EmPower Heat pump	\$22,800
EmPower Distribution	\$2,000
Utility Incentive	\$16,000
NYSERDA Loan	\$8,000
Total	\$48,800

Documentation Requirements

- 1. Customer Attestation
- 2. Contractor Attestation
- 3. Picture of Panel Box/Thermal Distribution Improvements
- 4. Invoice for the heat pumps
- 5. Invoice for the Panel Box/Thermal Distribution Improvements
- 6. NEEP Specification Sheet (ASHP)
- 7. AHRI Certificate (GSHP)

Upcoming EmPCalc Updates

> Additional inputs added to accommodate requested HP Adder information

- Update to ASHP & GSHP tabs
 - Dwelling's Existing Insulation Levels
 - Attic
 - Attic Hatches / Pull-Down Stairs
 - Knee walls
 - Walls
 - Rim Joist
 - Mobile Homes (Attic, Walls, Belly)
 - Electrical Panel information
 - Duct modifications
 - Subcontractor Name

> Mandatory upgrade to latest EmPCalc version will be required 30 days after initial release

EmPCalc: Air Source Heat Pump

ASHP Calculator tab

1. Fully enter information on new and existing heating systems so that savings appear at bottom

- 2. Existing Insulation Levels
- 3. Electric Panel & Duct Work Modifications
 - Costs and description
- 4. Subcontractor
 - Name
- 5. Multiple ASHP Units
 - Must be completed if >1

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	ASHP Cooling Canacit	Ta,u-Cellua tv at 95F	33 000	Btu/h (all units)	0.8	No o	f Outdoor Units	1	Walle	14	No	-	
	ASHP Heating Capacit	v at 5F	38,000	Btu/h (all units)	26.400	110.0	Installed Cost:	\$11,400	Attic	30	Yes		-
	ASHP Rated HSPF	10.4	Btu/Wh (avg of all)				Adder Incentive	\$11,400	Attic Hatches	0	Yes		l
	ASHP Rated SEER	16.8	Btu/Wh (avg of all	Weather Region:	Capital District	Heating Load:	70.4	MMBtu/yr	Pull Down Stairs			52	>
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í.	Actual_HP_Sizing	0.950	BEFLH_h	1763	-0.01	0.88			Mobile Home Walls				
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1	Building Cooling Load					Cooling Load:	7.8	MMBtu/yr	Mobile Home Belly				
	BCL (estimated)	20,000	Btu/h BEFLH_c	388	-0.54	0.96							
				Seasonal AVG C	OOLING Efficien	cy (TRM Cales):	15.6	Btu/Wh	Other		Is measure propos	ed Cost	
				Electr	ic Cost (\$/kWh):	\$0.1000	per kWh		Electrical Panel		Yes	\$ 1,200.00	
		Building Vintage	Avg	(sets BEFLH)		National Grid -				Upgrade panel			(2
	Base Case Fuel/System	n (choose one):							Duct work modifica	tions	Yes	\$ 600.00	1,2
	Fuel Oil - Furnace				Fuel Cost:	\$2.4871	per gal			Add central retur	m on 2nd floor		
5	Htg Equipment Age:	11+ yrs	(sets baseline equi	pment efficiency)		NY 3 yr avg							
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5	MEASURED Annual F	fuel Use (for Spac	e Heating ONLY)	Override:		gal per yr			Name:		Heat Pum	ps Inc	
					Base Case AC:								
4	Base Case Cooling Eff	iciency (avg EER)			Room AC	Avg EER:	11.0	Btu/Wh	Calculator for M	ultiple ASHP	Units		
										Htg Capacity	HSPF	Clg Capacity	SEER
		Heating Elect	Cooling Elect	Displaced Annual	Annual Heating	Annual Cooling	Total Annual	Fuel Energy		at SE (Btuds)	(Btu/Wh)	at 05F (Btu/b)	(Res/Wh)
		Heating Elect (kWh/yr)	Cooling Elect (kWh/yr)	Displaced Annual	Annual Heating Cost	Annual Cooling Cost	Total Annual Cost	Fuel Energy (MMBtu/yr)		at 5F (Btu/h)	(Btu/Wh)	at 95F (Btu/h)	(Btu/Wh)
	Base Case	Heating Elect (kWh/yr)	Cooling Elect (kWh/yr) 705	Displaced Annual A. Evel (gal) 641.1	Annual Heating Cost \$1,594	Annual Cooling Cost \$71	Total Annual Cost \$1,665	Fuel Energy (MMBtu/yr) 89.1	ASHP Unit 1	at 5F (Btu/h)	(Btu/Wh)	at 95F (Btu/h)	(Btu/Wh)
	Base Case ASHP System	Heating Elect (kWh/yr) 7,719	Cooling Elect (kWh/yr) 705 498	Displaced Annual Ing Eucl (gal) 641.1	Annual Heating Cost \$1,594 \$772	Annual Cooling Cost \$71 \$50	Total Annual Cost \$1,665 \$822	Fuel Energy (MMBtu/yr) 89.1	ASHP Unit 1 ASHP Unit 2	at 5F (Btu/h)	(Btu/Wh)	at 95F (Btu/h)	(Btu/Wh)
	Base Case ASHP System Savings	Heating Elect (kWh/yr) 7,719 (7,719)	Cooling Elect (kWh/yr) 705 498 208	Displaced Annual A. Evel (gal) 641.1 641.1	Annual Heating Cost \$1,594 \$772 \$823	Annual Cooling Cost \$71 \$50 \$21	Total Annual Cost \$1,665 \$822 \$843	Fuel Energy (MMBtu/yr) 89.1	ASHP Unit 1 ASHP Unit 2 ASHP Unit 3	at 5F (Btu/h)	(Btu/Wh)	at 95F (Btu/h)	(Btu/Wh)
	Base Case ASHP System Savings Simple Payback Based	Heating Elect (kWh/yr) 7,719 (7,719) I on Total Costs	Cooling Elect (kWh/yr) 705 498 208 13.5	Displaced Annual 641.1 641.1 541.1 541.1	Annual Heating Cost \$1,594 \$772 \$823	Annual Cooling Cost \$71 \$50 \$21	Total Annual Cost \$1,665 \$822 \$843	Fuel Energy (MMBtu/yr) 89.1	ASHP Unit 1 ASHP Unit 2 ASHP Unit 3 ASHP Unit 4	at 5F (Btu/h)	(Btu/Wh)	at 95F (Btu/h)	(Btu/Wh)
	Base Case ASHP System Savings Simple Payback Based	Heating Elect (kWh/yr) 7,719 (7,719) t on Total Costs	Cooling Elect (kWh/yr) 705 498 208 13.5	Displaced Annual A, Epel (gal) 641.1 641.1 yrs	Annual Heating Cost \$1,594 \$772 \$823	Annual Cooling Cost \$71 \$50 \$21	Total Annual Cost \$1,665 \$822 \$843	Fuel Energy (MMBtu/yr) 89.1	ASHP Unit 1 ASHP Unit 2 ASHP Unit 3 ASHP Unit 4 ASHP Unit 5	at 5F (Btu/h)	(Btu/Wh)	at 95F (Btu/h)	(Btu/Wh)
	Base Case ASHP System Savings Simple Payback Based	Heating Elect (kWh/yr) 7,719 (7,719) d on Total Costs	Cooling Elect (kWh/yr) 705 498 208 13.5	Displaced Annual	Annual Heating Cost \$1,594 \$772 \$823	Annual Cooling Cost \$71 \$50 \$21 Expected ASHP 5	Total Annual Cost \$1,665 \$822 \$843 System Life (yrs)	Fuel Energy (MMBtu/yr) 89.1	ASHP Unit 1 ASHP Unit 2 ASHP Unit 3 ASHP Unit 4 ASHP Unit 5 Total/ Weighted Avg	at 5F (Btu/h)	(Btu/Wh)	at 95F (Btu/h)	(Btu/Wh)
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EmPCalc: Ground Source Heat Pump

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GSHP Calculator tab

1. Fully enter information on new and existing heating systems so that savings appear at bottom

- 2. Existing Insulation Levels
- 3. Electric Panel & Duct Work Modifications
 - Costs and description
- 4. Subcontractor
 - Name
- 5. DHW Option
 - Complete if applicable

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					Values that "Over	rride" default value	os							
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	Heating COP (GLHP	rating) Full at 32F	3	Htg Capacity (GLI	IP rating, full):	60000	Btu/h	Installed Cost:	\$22,800	Walls	14	No		
	Heating COP (GLHP	rating) Part at 41F	3	Heating Sizing Fra	ction:	1.00		Adder Incentive	\$22,800	Attic	30	No		
	Cooling EER (GLHP	rating) Full at 77F	16		Albany		Heating Load:	: 105.8	MMBtu/yr	Attic Hatches	0	Yes	F.	
	Cooling EER (GLHP	rating) Full at 68F	15	Weather Region:	Capital District				(TRM)	Pull Down Stairs			27	
	Pumping Control	Variable Flow	BEFLH_h	1763	F_pump_h=	0.90		F_dist_h =	0.96	Rim Joists	0	Yes		
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	Base Case Fuel/Syste	m (choose one):								Duct work modifica	ations			3
se System	Fuel Oil - Furance				Fuel Cost:	\$2.4871	per gal				Enter description	on here		
	Htg Equipment Age:	Existing 11+ yrs	(sets baseline equ	ipment efficiency)		NY 3 yr avg								-
	Base Case factors &	Base Case factors & Seasonal Efficiency			139 MBtu per gal 79% eff			SUB Subcontra	actor (if not]	HP Contractor	on Cover)			
5	MEASURED Annual	Fuel Use (for Space	e Heating ONLY)	Override:		gal per yr				Name:				
					Base Case AC:					4 7				
۰.	Base Case Cooling Ef	ficiency (avg EER)			Room AC	Avg EER:	11.0	Btu/Wh	1					
										Calculator for D	omestic Hot	Water Option		-
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EmPCalc: Heat Pump Water Heater

DHW Tank tab

1. Fully enter existing and proposed unit information so that savings appear at bottom

2. Subcontractor name, if applicable

3. Additional notes if the cost is impacted by subcontractor fee



Project Submission: EmPower Approval

- > Existing Requirements
 - EmPCalc v5.9+
 - Signed Homeowner's Agreement
 - Combustion Appliance Form
 - House Diagram
 - Signed Appliance Exchange Agreement
 - Photos

- > Additional Documents
 - Signed Customer Attestation Form
 - Signed Contractor Attestation Form
 - Panel Box photo (showing max Amps)
 - Completed NEC Worksheet, if applicable
 - ASHP: NEEP Spec Sheet
 - GSHP: AHRI Certificate
 - Subcontractor Invoice(s), if applicable

Project Submission: Express Contract Approval Submission

> Workscope HPXML stage

- · Indicate if there is any additional project funding
 - Is the homeowner receiving any third part grants or rebates, including EmPower funding, tax credits, or avoided replacement costs?
- Indicate if a Subcontractor is being used
- If yes, input Subcontractor's name
- > Additional Rebate and Grants stage
 - Answer all questions on rebates, EmPower, grants and tax credits
 - Include amounts and name
 - Indicate if any avoided replacement costs should be accounted for (needed only for financed projects)
 - If yes, brief summary of avoided replacement costs
 - Total amount of replacement costs

Project Submission: Express Contract Approval Submission

> Workscope Screening and Approval stage

- Include the following supporting documentation
 - Copy & Paste EmPCalc notes or EmPCalc file
 - Signed Customer Attestation Form
 - Signed Contractor Attestation Form
 - Panel Box photo (showing max Amps)
 - Completed NEC Worksheet, if applicable
 - ASHP: NEEP Spec Sheet
 - GSHP: AHRI Certificate
 - Subcontractor Invoice(s), if applicable

Project Submission: Express Contract Completion Submission

- > Final Project Documents stage
 - Upload the following documentation
 - Existing Documentation
 - Signed Contract
 - Signed Customer Information Form
 - Signed ESR
 - Post Installation Health & Safety Test Results
 - Subcontractor Invoice (if one used)

Contractor Support Website

- Contractor Support website will be updated on a regular basis to provide information on funding remaining
- Relevant HP Adder documentation will also be available

EmPower and Assisted Home Performance Heat Pump Pilot Study

The Heat Pump Pilot study is an effort to develop short-term statewide standard offer incentive structures and program guidelines for heat pump installation, including DHW. The goal of the pilot is to study the impact of Heat Pumps on the LMI Market and plan for the permanent integration of heat pumps into LMI by 2025. This program is open to current contractors with active participation agreements in the EmPower or Assisted Home Performance Programs. If a contractor is not active in those programs, they can partner with a contractor who is.

Amount of Funding Available:

\$5,000,000.00

Required Documentation:

The Heat Pump Pilot study was introduced during the Contractor Check In Webinar held on October 9, 2020. Links to the webinar recording and slides are located below.

- Webinar Recording
- Webinar Slides

- Customer Attestation (Heat Pump Informational Form *Form Fillable) \rightarrow 10.27.2020
- Contractor Attestation → 10.27.2020
- NEC Worksheet
- NEEP's Cold Climate Air Source Heat Pump List
- AHRI Directory