

ASHP/GSHP Project Submission

Overview Section 5.10 of the Program Manual and Best Practices

EmPower+ Participating Contractors

EmPower+ Program
August 23rd 2024



NYSERDA

EmPower+ Heat Pump Requirements

Today's Webinar Agenda

1. Heat Pump Installation Requirements – Section 5.10 Overview
2. Project Eligibility Requirement
3. Project Documentation Requirements – Pre-Installation
4. Project Documentation Requirements – Post Installation
5. Project Considerations
6. Additional Incentive Project Requirements
7. Best Practices - Verifications Between NYHEP and Supportive Documentation



NYSERDA

Heat Pump Installation Requirements

Heat Pump Installation Requirements can be found in section 5.10 of the Program Manual.

[Section 5.10 Heat Pump Requirements- August 2024](#)

Information in Section 5.10 includes:

- Customer Requirements
- Project Eligibility Requirements
- Air Source/Ground Source Project Documentation
- Pre-Installation Requirements (Workscope Submission)
- Post-Installation Requirements (Final Project Submission)
- Additional Incentive Project Requirements
- Building Envelope Standards
- Project Considerations
- Distribution System
- Heat Pump Water Heating
- Cooling

▼ *UPDATED* Section 5 – Operational Policies and Procedures

5.1 | [Contractor Expectations](#) → rev. 07.10.2023

5.2 | [Contractor Certifications](#) → rev. 06.26.2024

5.3 | [Electronic Signature Policy](#) → rev. 12.11.2023

5.5 | [EmPower+ NY Pricing](#) → rev. 05.22.2024

5.6 | [Inflation Reduction Act HEAR](#) → rev. 06.26.2024

5.7 | [Not For Profit Guidance](#) → rev. 07.10.2023

5.8 | [Pellet Stove Guidelines](#) → rev. 05.29.2024

5.9 | [No Heat Guidelines](#) → rev. 08.17.2023

5.10 | [Heat Pump Requirements](#) → rev. 08.21.2024

5.11 | [Fossil Fuel Conversion Policy](#) → rev. 05.29.2024

5.12 | [Energy Pricing](#) → rev. 02.21.2024

Heat Pump Installation Requirements

Customer and Project Eligibility Requirements

Customer Requirements

To be eligible for incentives:

- The home must be a 1-4 family
- The residents/tenants for the home pay the utility bills including:
 - Electricity
 - Utility Natural Gas
 - Propane
 - Oil
 - Kerosene
 - Wood pellets
 - Wood or other Biomass

Heat Pump Installation Requirements

Customer and Project Eligibility Requirements (1 of 3)

Project Eligibility Requirements

- Projects cannot receive both EmPower+ and NY Clean Heat Funding.
- Participating Contractors **must** inform the program if **ANY** additional funding is being utilized on the project.
- The home must meet the building envelope standards outlined in Table 1.
- The standards can be met either prior to the heat pump project or by the completion of the project.

Table 1

Area Required	Insulation Level
1-4 Family Homes	
Attic Gable Walls	R-14
Knee Walls	R-15
Attic Roof Deck	R-28 or Fill to Capacity
Attic Floors/Open Attic	R-38 Average ¹ or Fill to Capacity
Attic Slope Ceilings	R-38 or Fill to Capacity
Attic Hatches	R-20
Pull-Down Stairs	R-13
Walls	R-14 or Fill to Capacity
Rim Joist	R-14
Air Tightness	7 ACH ²
Mobile Homes	
Walls	R-6
Attic	R-24
Belly	R-21
Air Tightness	7 ACH /12 ACH for mobile homes ²

¹ Average insulation of total attic area- some areas might have less than R-38 if the total average of the combined attics is R- 38.

² Prior to the installation of heat pump heating equipment, the contractor must verify the home is tightened to at least 7 ACH for a 1-4 family home/12 ACH for a mobile home or below to ensure proper heating from heat pumps. If the contractor cannot perform a blower door test, they must use NYHEP to estimate the air leakage.

Heat Pump Installation Requirements

Customer and Project Eligibility Requirements (2 of 3)

Project Eligibility Requirements

- The existing primary HVAC system must be older than 5 years.
- Program funding is for the addition of heat pump technology to an existing home and not for updating or replacing existing heat pumps and heat pump water heaters.
- Heat pump systems shall be designed following the [NEEP Guide To Installing Air-Source Heat Pumps in Cold Climates](#).



- This 4-page guide provides a list of minimum requirements, best practices, as well as homeowner education and system setup guidance, to help ensure efficient air-source heat pumps and happy customers in cold climates.

Heat Pump Installation Requirements

Customer and Project Eligibility Requirements (3 of 3)

Project Eligibility Requirements

- All projects with air source and ground source heat pumps must meet a 20% energy cost savings requirement. The savings will be calculated using the fuel usage and cost of the pre-existing heating fuels and electricity compared to the estimated electricity usage and cost for the home after the project is complete as calculated by the TRM calculations in NYHEP. If a project has less than 20% savings there will be a tertiary review process for possible approval.
- Contractors should include any extenuating circumstances such as health and safety in the project notes that will help with the tertiary review.
- The cost of the heat pump may include any the following system components:
 - Distribution system installation, modification, and repair
 - Controls and control systems
 - Racking, mounting, and shielding components necessary to meet code and manufacturer's installation requirements
 - Line set insulation and conduit
 - Electrical upgrades to the service panel and/or other wiring repairs
 - These improvements necessary to install the heat pump may be included in the overall work scope but costs for these measures should be itemized separately from the heat pump system itself.

Heat Pump Installation Requirements

Air Source/Ground Source Project Requirements

Air Source/Ground Source Heat Pump Project Requirements

- Participating Contractor must complete a Manual J or use ACCA approved sizing software or spreadsheet. Heat pump systems must be designed using the ACCA weather station closest to the project. Contractors shall provide a copy of the house drawings used to generate the Manual J calculation showing measurements used to generate room-by-room or Block load calculations including orientation and rough sizing of windows and doors. Software generated diagrams are acceptable.
- Participating Contractor shall refer to the [Residential Heating and Cooling Load Analysis Quality Control Checklist](#) as a best practice. At the end of the project, the Participating Contractor must attest on the [Heat Pump Form](#), they followed this guidance for the heat pump installation.
- The proposed heat pump system must be designed sized to meet 100-110% of the building's heating load. The proposed heat pump system may include use of a supplemental heating source to reach 100% of the building heating load. Supplemental heat sources may be designed to provide up to 20% of peak heating load up to 5kw or equivalent supplemental.
- The existing whole house fossil fuel heating system (oil, propane, etc.) must be decommissioned. If equipment is left in the home, it must be rendered inoperable per the [Decommissioning Checklist](#). Existing wood or wood pellet stoves and electric baseboards with heating capacity greater than 50% of the home's heating load may remain as supplemental heat

Heat Pump Installation Requirements

Air Source/Ground Source Project Documentation

Pre-Installation Requirements

When submitting a work scope for heat pump projects, in addition to the standard required Program paperwork, the following documents will also be required:

- Detailed summary page generated by approved ACCA Manual J sizing software or spreadsheet designed to the ACCA weather station closest to the project.
- House drawings that show rough measurements of windows, doors, walls either room-by-room or block drawings will be accepted.
- Manual S or equivalent sizing software such as NEEP advanced sizing tool or the manufacturer sizing software or manufacturer specification sheet showing unit btu output at design temperature. This also must show what % of the building is covered by the installed unit(s). This % of the unit coverage can be calculated and written directly onto an uploaded document if software or specification sheet being used does not show that value.
- AHRI certificate for GSHP's and NEEP certificate for ASHP's. Products must be AHRI and NEEP listed.
- Photos of the existing system
- Copies of all utility bills including delivered fuels
 - A minimum of 12 months of energy usage must be documented. When receipts for un-metered fuels such as wood, pellets, or kerosene are unavailable a customer attestation may be used to estimate consumption and cost of those fuels

Heat Pump Installation Requirements

Customer and Project Eligibility Requirements

Project Eligibility Requirements

Example of drawing that is lacking required details

Customer Name: _____ Contractor Name: _____
EmPower+ ID #: _____ Date: _____

A House Diagram is required at workscope submission.
Indicate locations of pre-insulated wall areas AND identify attic areas to be insulated.

REQUIRED

ATTIC: 6-8"fg
WALLS: 5"fg
CEILING: 4"fg

14'

74'

Example of drawing that meets requirements



Heat Pump Installation Requirements

Customer and Project Eligibility Requirements

Project Eligibility Requirements

Example of NEEP sheet



LENNOX MMA SERIES

Central Air Conditioning Heat Pump (HP)
Singlezone Ducted, Centrally Ducted
AHRI Cert #: 212348052

Outdoor Unit Model #: MLB048S4S-2P

Indoor Model #: MMA048S4-*P

Maximum Heating Capacity (Btu/h) @5°F: 46,443

Rated Heating Capacity (Btu/h) @47°F: 48,000

Rated Cooling Capacity (Btu/h) @95°F: 47,000

[Basic View](#)

[Advanced Data - System Sizing](#)

Information Tables

Brand	LENNOX
Series	MMA SERIES
Ducting Configuration	Singlezone Ducted, Centrally Ducted
AHRI Certificate #*	212348052
Outdoor Unit Model #*	MLB048S4S-2P

AHRI Certificate #*	212348052
Outdoor Unit Model #*	MLB048S4S-2P
Indoor Model #*	MMA048S4-*P
Indoor Unit Type*	
Furnace Model* #	
EER*	8.4
SEER*	16.1
HSPF (Region IV)*	10
EER2*	7.8
SEER2*	14.6
HSPF2 (Region IV)*	8.8
HSPF2 (Region V)	7.3

ENERGY STAR V6.1

ENERGY STAR V6.1 Cold Climate

ENERGY STAR V5.0

Performance Specs

Heating / Cooling	Outdoor Dry Bulb	Indoor Dry Bulb	Unit	Min	Rated*	Max
Heating	17°F	70°F	Btu/h*	13,000	38,000	50,500
			kW	1.29	6.02	6.43
			COP	2.95	1.85	2.3
Heating	5°F	70°F	Btu/h*	14,300	45,000	46,443

Heat Pump Installation Requirements

Air Source/Ground Source Project Documentation

Post-Installation Requirements

When submitting for final project submission for heat pump projects, in addition to the standard required Program paperwork, the following documents will also be required:

- Fully completed manufacturer's commissioning form with dates.
- Photo of the unit installed and photo of the name plate with clear view of the model and serial numbers.
- Heat Pump Equipment Invoice(s) if using a subcontractor for heat pump installation.
- Photos documenting that the removal or disabling of the existing system was completed **and** a copy of the decommissioning form.
- Completed NYSERDA Heat Pump Installation form

Heat Pump Installation Requirements

Project Considerations

Project Considerations – Distribution System

Any additional work needed for distribution systems should be itemized and included in the work scope proposal

- The current distribution system should be considered when selecting a system. Distribution costs, if required, will be included in the cost of the heat pump.
- In some homes, major distribution improvements will have to be made. Incentives will have to be balanced with the overall system cost and operational affordability (for instance, it may be more economical to install mini splits rather than a central system with duct improvements, but the mini split system may be more expensive to operate).
- In addition, a homeowner should be informed about the installation costs, operational costs, complexity of systems operation, and overall capacity to deliver comfort as needed when deciding on the type of system to be installed

Heat Pump Installation Requirements

Project Considerations

Project Considerations - Cooling

With rising temperatures from climate change, heat pumps can provide efficient cooling, which can prevent heat-related illness. For homes that did not have access to cooling, once installed, this equipment can increase operating costs.

- The Participating Contractor **must** provide the customer with an estimate of how their operating costs could increase, **and** have the customer sign the attestation on the [Test Out form](#) showing estimated first year utility cost reduction and percentage reduction before installation begins.
- Mandatory recycling that follows EPA guidelines of existing A/C window units is required when installing heat pumps

Heat Pump Installation Requirements

Additional Incentive Project Requirements

Additional Incentive Project Requirements

- Projects that meet the following guidelines are eligible for an additional EmPower+ incentive up to \$5,000 to offset the higher cost for homes that require larger and/or more complex heat pump systems to meet the whole building's needs. Combined heat pump measure incentives may not exceed 100% of the total cost of the heat pump system installation, inclusive of all ancillary components, equipment, and installation costs required to support proper installation and operation of the heat pump system.
- Submitted documents to determine that the design of the heat pump system has been value engineered in a manner that serves to mitigate and reduce project cost over-runs in excess of standard project incentive caps.
- Value engineering strategies should follow the guidelines established in the Northeast Energy Efficiency Partnerships "[Guide to Sizing & Selecting Air-Source Heat Pumps in Cold Climates](#)" including:
 - Right sizing the heat pump system to the heating and cooling loads of the home after weatherization measures have been installed to make the home's envelope "heat pump ready"
 - Optimizing the system design to deliver heating and cooling comfort conditions using a minimal amount of equipment
 - Locating installed equipment to deliver heating and cooling efficiently while minimizing distances needed to run line set and wiring
 - Utilize design and equipment selection guidance to provide a system which maximizes efficiency and minimizes equipment and operational costs

Heat Pump Installation Requirements

Additional Incentive Project Requirements

Additional Incentive Project Requirements

To be eligible for the additional \$5000 in EmPower+ incentives, project submissions must include documentation that value engineering strategies have been applied. The following documents are required to be considered for up to an additional \$5000 in incentives:

- For systems where a **new duct** system is being installed and/or when duct modifications or replacement representing more than **50%** of the total duct system are proposed, a completed Manual D as per ANSI/ACCA 1 Manual D 2016 with AHRI Certification Document is required.
- *Modifications to existing duct systems used to improve airflow or static pressures or to connect to the new system (supply & return plenums) are not considered new ductwork and do not require a Manual D.*
- For **existing ducted** systems, a Geo stamped photo of the existing main plenum must be submitted for project approval. When submitting completion documentation, the contractor must submit a Geo stamped photo of static pressure testing being completed of the duct system with the new unit in place and the result of the static pressure test.
- Floorplan showing Internal Head placement for Mini split systems as per Manufacturer's specifications. (For mini-splits) **(Required at Final Project Submission)**

Heat Pump Installation Requirements

Project Considerations

Project Considerations -Heat Pump Water Heating

Heat Pump Hot Water Heaters should be installed in accordance with manufacturer's installation guidelines and contractors should use their professional discretion when citing them. The following are conditions for determining suitability of a project for a heat pump water heater:

- Electrical capacity present in the current panel box or the panel box can be upgraded to this capacity when the HPWH is installed.
- Adequate ceiling height in the basement for a HPWH.

Electric resistance water heaters should only be installed when the current system is non- functioning and installation of a HPWH is not possible. Projects cannot receive both EmPower+ and NY Clean Heat Funding.

Participating Contractors must inform the program if ANY additional funding (outside of Empower+ based funding) is being utilized on the project.

Best Practices - Verifications Between NYHEP and Supportive Documentation



NYSERDA

Heat Pump Installation Requirements

Project Submission Best Practices.

Verification of Project Eligibility Requirements

Review project eligibility requirements have been achieved before submission.

- Verify that no Clean heat incentives are being included as braided funds
- Verify home **does not** have Natural Gas as Primary Heating Fuel
- Verify minimum shell requirement have been met, or are included as part of the submitted workscope
 - Verify modeling in NYHEP on existing conditions section are accurate and match prepared Manual J
- Verify existing heating system is older than 5 yrs
- Verify that an existing heat pump is not being replaced with new system
- Verify new system covers 100-110% of the building heating load
- Verify all components are included in the proposed cost of the HP measure
- Verify project meets the 20% energy cost savings requirement
 - If project does not meet 20% minimum include a note as to why savings are lower than anticipated minimum requirements.

Heat Pump Installation Requirements

Project Submission Best Practices.

Verification of Project Documentation

Review project documentation requirements have been collected and uploaded before submission.

- Verify Manual J or other ACCA approved sizing software is accurate and included
 - Verify surfaces modeled in Manual J align with pictures, drawings, and NYHEP inputs
- Verify drawings include rough measurements of windows, doors, walls
 - Verify these align with Manual J and NYHEP existing conditions or proposed measures.
 - Verify total conditioned space matches Manual J and NYHEP inputs.
- Verify Manual S or equivalent sizing documentation has been uploaded.
 - Verify sizing aligns with Manual J BTU requirements and are within the 100-110% load design requirements
 - Verify proposed HP Equipment/model numbers are included in Manual S and align with NYHEP inputs
- Verify AHRI certificate for GSHP's and NEEP certificate for ASHP's
 - Verify these match Manual S or equivalent and inputs in NYHEP

Heat Pump Installation Requirements

Customer and Project Eligibility Requirements

NYHEP inputs – Existing condition – Verifications for Manual J and provided Drawings

OUTDOOR DESIGN CONDITIONS
Weather station: Rome, Griffiss IAP (Utica D)

Summer Outdoor F: 84	Summer Indoor F: 75	Design Grains: 21	Daily Range: Medium
Winter Outdoor F: 1	Winter Indoor F: 70	Cooling RH: 50	Elevation (Ft): 514

LOAD CALCULATION TOTALS
HVAC System: ROBERTA STOFFLE

Heated square footage: 1,653	Heating BTUH: 39,585
Cooled square footage: 1,653	Cooling BTUH: 17,447
Heated volume (above grade CF): 14,879	CFM: 790
Cooled volume (above grade CF): 14,879	Sensible cooling: 15,650
Exposed wall area (SF): 1,588	Latent cooling: 1,797
	SHR: 0.897

Load Calculation

Heating	39,585
Cooling	17,447

HEATING AND COOLING LOADS

SECTION	AREA	HEAT LOSS
aboveGradeWalls	1,288	8,621
ceilings	1,653.3	4,335
ducts	0	1,984
floors	1,653.3	4,151
infiltration	0	7,039
skylights	0	0
windows	300	13,455
Totals		39,585

Heating Loads

windows	34%
infiltration	17.5%
aboveGradeWalls	21.8%
ceilings	11%
ducts	5%
floors	10.5%

Heat Pump Installation Requirements

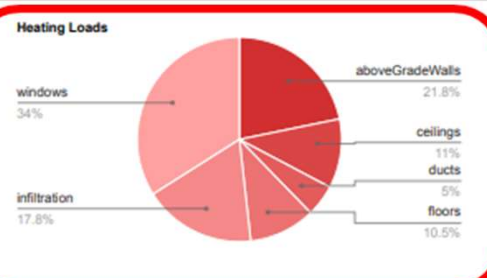
Customer and Project Eligibility Requirements

NYHEP inputs – Existing condition – Verifications for Manual J and provided Drawings

HEATING AND COOLING LOADS

HEATING LOADS		
SECTION	AREA	HEAT LOSS
aboveGradeWalls	1,288	8,621
ceilings	1,653.3	4,335
ducts	0	1,984
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skylights	0	0
windows	300	13,455
Totals		39,585

Heating Loads



windows	34%
aboveGradeWalls	21.8%
ceilings	11%
ducts	5%
floors	10.5%
infiltration	17.8%

Map trace wall
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.

Construction nr:	12B-0s w	Exposure:	NW	Heating BTUH:	1,347
U Value:	0.097	Area:	201.2	Cooling BTUH:	373

BELOW GRADE WALLS

There are no components for this section.

WINDOWS

Default small windows for wall id 8154156					
Window, NFRC rated, Clear glass.					
Construction nr:	1G	U Value:	0.65	Heating BTUH:	269
Area:	6	SHGC:	0.4	Cooling BTUH:	63
Exposure:	NE				
Default medium windows for wall id 8154156					
Window, NFRC rated, Clear glass.					
Construction nr:	1G	U Value:	0.65	Heating BTUH:	1,076
Area:	6	SHGC:	0.4	Cooling BTUH:	262
Exposure:	NE				

CEILINGS

Map trace generated ceiling				
Ceiling under attic or attic knee wall, Asphalt shingles, Dark, R-25.	Construction nr:	16B-25 ad	Area:	Heating BTUH:
	U Value:	0.038	1,653.3	4,335
				Cooling BTUH:
				2,827

Heat Pump Installation Requirements

Customer and Project Eligibility Requirements

Example of NEEP sheet



LENNOX MMA SERIES

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 Rated Heating Capacity (Btu/h) @47°F: 48,000
 Rated Cooling Capacity (Btu/h) @95°F: 47,000

[Basic View](#)

[Advanced Data - System Sizing](#)

Information Tables

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AHRI Certificate #*	212348052
Outdoor Unit Model #*	MLB048S4S-2P

AHRI Certificate #*	212348052
Outdoor Unit Model #*	MLB048S4S-2P
Indoor Model #*	MMA048S4-*P

Indoor Unit Type*

Furnace Model*

EER*	8.4
SEER*	16.1
HSPF (Region IV)*	10
EER2*	7.8
SEER2*	14.6
HSPF2 (Region IV)*	8.8
HSPF2 (Region V)	7.3

ENERGY STAR V6.1

ENERGY STAR V6.1 Cold Climate

ENERGY STAR V5.0

Performance Specs

Heating / Cooling	Outdoor Dry Bulb	Indoor Dry Bulb	Unit	Min	Rated*	Max
Heating	17°F	70°F	Btu/h*	13,000	38,000	50,500
			kW	1.29	6.02	6.43
			COP	2.95	1.85	2.3
Heating	5°F	70°F	Btu/h*	14,300	45,000	46,443

Heat Pump Installation Requirements

Customer and Project Eligibility Requirements

NYHEP inputs – Existing condition – Verifications for Manual J and provided Drawings



Details to include:

- Wall height
- Exterior perimeter measurements
- Roof type
- Tuck under garage
- Defined unconditioned spaces
- Reference pictures if necessary
 - 3 season porches
 - Window types
 - Others as needed

Heat Pump Installation Requirements

Customer and Project Eligibility Requirements

NYHEP inputs – Existing condition – Verifications for Manual J and provided Drawings

Dwelling Information	
**Dwelling Type Single-Family (1 unit)	Number of Units 1
**Existing Siding Type Vinyl	**Year Property Built 1994
**Stories Above Grade 1	**Average Story Height (ft) 8
**Wind Exposure Normal	**Predominant Basement Type Basement
**Total Conditioned Space (sq. ft.) 1456	**Number of Bedrooms 3
Shell - Windows	
**Existing Window Type 1 Intact Double-Pane	**Sq. Ft. of Windows 1 145
**Exterior Walls - Sq. Ft. 1312	**Exterior Walls - Fiberglass-Batts
**Exterior Walls - Insulation Depth (in) 4	**Exterior Walls - Less than 10% Void
**Exterior Walls - Wall Cavity Depth 2x4	

Shell - Insulation	
**Attic 1 - Sq. Ft. 1456	**Attic 1 - Insulation Type Cellulose-Loose Fill
**Attic 1 - Insulation Depth (in) 14	**Attic 1 - Insulation Grade Less than 10% Voids or Compression
Attic 2 - Sq. Ft.	Attic 2 - Insulation Type
Attic 2 - Insulation Depth (in)	Attic 2 - Insulation Grade
Attic 3 - Sq. Ft.	Attic 3 - Insulation Type
Attic 3 - Insulation Depth (in)	Attic 3 - Insulation Grade
Blower Door Test Completed?:	Yes
Pre Air Sealing Air Infiltration (CFM50):	1429
**Post Air Sealing Air Infiltration (CFM50):	<input type="text" value="1,360.0"/>
Pre Air Sealing Air Infiltration (ACH50):	7.3609203297
Post Air Sealing Air Infiltration (ACH50):	7.0054945055

Heat Pump Installation Requirements

Customer and Project Eligibility Requirements

NYHEP inputs – Usage and Fuel Info. – Verifications for Fuel Usage and Existing Primary Fuel

**Primary Heating Fuel Type Propane	Secondary Heating Fuel Type	
<hr/>		
Delivered Fuel Information		
Delivered Fuel Propane	Delivered Fuel Supplier Center State	Unit Type Gallon
Price Per Unit \$3.0800	Annual Delivered Fuel Usage 826	
<hr/>		
Electric Usage Information		
**Annual Electric Usage (kWh) 19377.0000	**Electrical Panel Box Size (amps) 100	**Electric Panel Type Breakers

Month	Days per Month	KW per Month	Monthly Total
January	31	32	992
February	28	27	756
March	31	24	744
April	30	17	510
May	31	19	589
June	30	27	810
July	31	43	1333
August	31	37	1147
September	30	23	690
October	31	15	465
November	30	18	540
December	31	25	775
TOTAL			9351

YOUR ENERGY USAGE

Daily Usage		Daily Cost		Total Use
Jun 24	27 kWh	Jun 24	\$5.84	775 kWh
Jun 23	23 kWh	Jun 23	\$4.06	

Average Daily Use
(monthly use / days in period)



Monthly usage

One kWh of energy is equal to 1000 watt hours and will power a 100 watt light bulb for 10 hours (100 watts x 10 hours = 1,000 watt-hours = 1 kWh).

Heat Pump Installation Requirements

Customer and Project Eligibility Requirements

NYHEP inputs – Existing condition – Verifications for Manual J, Manual S, and NEEP sheets,

**Will this ASHP project satisfy 90-120% load (before 5/31) or 100% load per Code (on or after 5/31)?:	<input type="text" value="Yes"/>	**Cost:	<input type="text" value="\$11,000.00"/>
**ASHP Configuration Type:	<input type="text" value="Central Ducted"/>	**Material Cost:	<input type="text" value="\$8,000.00"/>
**ENERGY STAR Certified:	<input checked="" type="checkbox"/>	Duct Work Cost:	<input type="text"/>
**ASHP Controls:	<input type="text" value="Integrated/Modulating"/>	Dollar Savings:	<input type="text" value="\$1806.71"/>
**Does the new HP meet EnergyStar's requirements for cold climate HP?:	<input type="text" value="Yes"/>	Lifetime Savings:	<input type="text" value="\$27100.71"/>
**What percent of the heating load will this system cover?:	<input type="text" value="100%"/>	Alternate Funding:	<input type="checkbox"/> Utility <input type="checkbox"/> WAP <input type="checkbox"/> 3rd Party
**Make:	<input type="text" value="LENNOX"/>	Estimated Customer Contribution:	<input type="text" value="\$0.00"/>
**Model:	<input type="text" value="MLB048S4S-2P"/>	**Will the Customer Contribution be overridden?:	<input type="text" value="No"/>
**Efficiency Rating Standard:	<input type="text" value="SEER/HSPF"/>	Show Hidden Calculations:	<input type="text" value="No"/>
**Replacement Cooling Efficiency - SEER:	<input type="text" value="16.1"/>		
**Replacement Heating Efficiency - HSPF:	<input type="text" value="10.0"/>		
**ASHP Size (rated cooling capacity) Btu/h:	<input type="text" value="47000"/>		
**Maximum Heating Capacity 5 Degrees:	<input type="text" value="46443"/>		
**Building Heating Load (Manual J) Btu/h:	<input type="text" value="42288"/>		

Heat Pump Installation Requirements

Customer and Project Eligibility Requirements

Total Utility Funding:	\$0.00
Total WAP Funding:	\$0.00
Total 3rd Party Funding:	\$0.00
Total Customer Contribution:	\$0.00
EmPower+ Incentive Including Audit, DI, Pilot:	\$25085.96
EmPower+ Incentive Excluding Audit, DI, Pilot:	\$24192.82
EmPower+ Incentive Excluding Audit, DI, Pilot, Enabling:	\$20192.82
EmPower+ Incentive Excluding Audit, DI, Pilot, Enabling @ 80%:	\$16154.26
Health & Safety Towards Prequalification:	\$2500.00
Annual Fuel Cost:	\$5725.78
First Year Dollar Savings:	\$3315.57
First Year Savings Percentage:	57.9%
Total Lifetime Dollar Savings:	\$50642.77
Passed Project Level Cost Effectiveness:	Yes
Estimated Total HEAR Incentive:	\$14000.00
Estimated EmPower+ Incentive:	\$10192.82
Additional Funding Requested Above Maximum Incentive Amount:	\$192.82

- Verify If braided funding is included:
 - Supportive documentation is provided with submission
 - Amounts for each funding source is accurately reflected
 - Customer contribution is accurately reflected
 - Verify that NYHEP funding allocation indicates correct amount in “Additional Funding Requested” and does not exceed \$5000

First year savings, verify minimum 20% or include note with submission if less than

Heat Pump Installation Requirements

Project Submission Best Practices.

Verification of Project Documentation

- Verify Photos are provided for the existing system
- Verify supportive documentation has been provided if project includes alternate funding / 3rd party funding.
- Verify delivered fuel and electric utility bills are provided
 - Verify usages align with NYHEP inputs

Ducted Systems:

- For existing ducted systems, a Geo stamped photo of the existing main plenum must be submitted for project approval.
 - Verify picture has been provided
- Verify that a Manual D is provided if proposing a **New** distribution system **or** over **50%** modifications to existing.
 - Verify duct design meets system needs for selected equipment in Manual S, J. (The provided house diagram may be used for floor plan / home layout and contractor provided pictures can be used to help inform verification of system compliance but should only be used as a guide and not as a submission requirement)

Heat Pump Installation Requirements

Project Submission Best Practices.

Verification of Additional Incentive Project Documentation

- Verify correct sizing for the proposed heat pump system satisfies the heating and cooling loads of the home after weatherization measures have been installed to make the home's envelope "heat pump ready"
- Verify Optimizing the system design to deliver heating and cooling comfort conditions using a minimal amount of equipment
 - Verify Manufacturer system design documentation and existing site conditions as illustrated in pictures or notes have been included
- Verify the proposed installed equipment will deliver heating and cooling efficiently while minimizing distances needed to run line set and wiring.
 - Verify Manufacturer system design documentation are being provided

Heat Pump Installation Requirements

Customer and Project Eligibility Requirements

Documentation Upload Best Practice

Document Type(s)	Document Name	Source	File Size	Comments	Create Date	Created By
Electric Bill	17218447687968478470342954777385.jpg	Workscope Submission	942.86 KB		7/25/2024 2:05:53 PM	User, API

- Naming files before upload can save time when looking to verify what documents have been uploaded.
- Comments can be added which can help inform the content of the file, especially if it's a revision.
- Created date can be used to help identify what previous version of a document was provided.

Heat Pump Installation Requirements

Final Project Submission



NYSERDA

Heat Pump Installation Requirements

Final Project Submission Best Practices.

Verification of Final Project Submission Documentation

When submitting for final project submission for heat pump projects, in addition to the standard required Program paperwork, the following documents will also be required:

- Fully completed manufacturer's commissioning form with dates.
 - Verify all required areas are completed and include required data such as:
 - Temperature: Temperature drop rates during cooling and temperature rises during heating
 - Static pressure: Readings at each stage of the process
 - Amperage: The blower motor's amperage
 - Gas pressure: At each phase of heating or cooling
 - Airflow: Cubic feet per minute (CFM) of airflow throughout the ductwork
 - Refrigerant pressure: At each phase of the cooling cycle

Heat Pump Installation Requirements

Final Project Submission Best Practices.

Verification of Final Project Submission Documentation

When submitting for final project submission for heat pump projects, in addition to the standard required Program paperwork, the following documents will also be required:

- Fully completed manufacturer's commissioning form with dates.
 - For ducted units, a commissioning checklist may also include:
 - Design airflow
 - Design discharge static pressure
 - Measured airflow
 - Measured static pressure
 - Whether the ducts are sealed and insulated

Heat Pump Installation Requirements

Final Project Submission Best Practices.

Verification of Final Project Submission Documentation

When submitting for final project submission for heat pump projects, in addition to the standard required Program paperwork, the following documents will also be required:

- Photo(s) of the unit installed and photo(s) of the name plate with clear view of the model and serial numbers.
- Heat Pump Equipment Invoice(s) if using a subcontractor for heat pump installation.
- Photos documenting that the removal or disabling of the existing system was completed **and** a copy of the appropriate completed decommissioning form.
- Completed NYSERDA Heat Pump Installation form.

OTDA 2024 Projects with ASHP/GSHP

Additional Incentive Project Requirements



NYSERDA

OTDA 2024 Projects with ASHP/GSHP (1 of 3)

IF an OTDA eligible project meets **ALL** the following requirements:

- Enrollment Incentives exceed \$20,000
- Includes an ASHP/GSHP
- Requesting \$5,000 expended Value Engineered Incentive

THEN review the current enrollment for IRA eligibility prior to completing work in NYHEP and BEFORE submitting for approval at Workscope Submission*. Follow the path based on IRA eligibility.

A. *Customer Address Eligible for IRA* field is **Yes**

Customer Address Eligible for IRA

Yes

B. *Customer Address Eligible for IRA* field is **No** or is **blank** or **does not exist**

Customer Address Eligible for IRA

No

Customer Address Eligible for IRA

(enrollments created before 5/19/2024 do not have IRA field)

**If the enrollment is currently in Workscope Review and the OTDA project exceeds \$20,000, CLEAResult will automatically send the project back and include the instructions.*

OTDA 2024 Projects with ASHP/GSHP_(2 of 3)

A. *Customer Address Eligible for IRA* field is **Yes**

1. **Contractor:** For each enrollment submit as support ticket and include
 - Enrollment ID
 - Reason for change “*OTDA project exceeding cap, requesting change to IRA*”
2. **CLEARResult** will review request and update NYHEP as needed
 - If necessary, roll back to Workscope Submission
3. **Contractor:** Review
 - Ensure IRA incentives are enabled
 - Rework project cost allocation
 - Indicate in notes that project is seeking the Value Engineered Incentives
 - Add any required documentation per Section 5.10 of the Program Manual
 - Resubmit for approval

OTDA 2024 Projects with ASHP/GSHP (3 of 3)

B. *Customer Address Eligible for IRA* field is **No** or **is blank** or **does not exist**

1. **Contractor:** For each enrollment submit as support ticket and include
 - Enrollment ID
 - Reason for change “*OTDA project exceeding cap, requesting change to IRA*”
2. **CLEARResult** will review request and initiate an IRA application confirmation with TRC
 - If IRA application confirmed, update NYHEP and roll enrollment back to Workslope Submission
 - If a New enrollment was needed, assign to contractor and close previous enrollment
3. **Contractor:** Review enrollment or complete new one
 - Ensure IRA incentives are enabled
 - Rework project cost allocation
 - Indicate in notes that project is seeking the Value Engineered Incentives
 - Add any required documentation per Section 5.10 of the Program Manual
 - Resubmit for approval

Heat Pump Installation Requirements

Additional Resources.

Additional Resources For Contractors:

- Heat Pumps Best Practices for Your New Heat Pump: https://cleanheatconnect.ny.gov/assets/pdf/CHC-SFR-HP-maintenance-fs-1-v2_acc.pdf
- Heat Pump Options: <https://cleanheat.ny.gov/planner/quiz/?show-all=true>
- Marketing Tools & Materials: <https://cleanheatconnect.ny.gov/marketing-tools-and-materials/>
- Forms: <https://hpwescontractorsupport.com/forms/>
- Decommissioning Checklist for Heat Pump Installations: <https://hpwescontractorsupport.com/wp-content/uploads/2024/06/Decommissioning-Checklist-June-2024.pdf>
- Residential Heating and Cooling Load Analysis Quality Control Checklist: <https://hpwescontractorsupport.com/wp-content/uploads/2024/08/Residential-Heating-and-Cooling-Load-Calc-Quality-Control-Checklist-v2-FINAL-1.pdf>
- Guide To Installing Air-Source Heat Pumps in Cold Climates: https://neep.org/sites/default/files/resources/InstallingASHPinCold_edits.pdf
- Guide To Sizing & Selecting Air-Source Heat Pumps in Cold Climates: https://neep.org/sites/default/files/resources/ASHP%20Sizing%20%26%20Selecting%20-%208x11_edits.pdf

Thank you



NYSERDA