



Energy Efficiency Stakeholder Meeting

March 21, 2024

Agenda

1. Re-cap of Last Meeting
2. New Jersey Energy Efficiency Programs
3. Energy Efficiency Updates
 - NJCEP Updates
 - New Construction Program Update
 - Community Energy Plan Grant / Community Energy Plan Implementation Grant Update
 - Utility Updates
 - Regulatory Updates
 - Triennium 2 Filings Review
4. Guest Presentation – Air Source Heat Pumps
5. General Q&A
6. Items of Interest
7. Next Meetings



Recap of Last Month



February Meeting Recap

What we covered:

- ✓ NJCEP Updates
 - ✓ NJCEP New Construction Program
 - ✓ Community Energy Plan Grant / Community Energy Plan Implementation Grant Update
- ✓ Regulatory Updates
 - ✓ Triennium 2 Filings Review
- ✓ Guest Presentation: Heat Pump Technology Primer
- ✓ Q&A



New Jersey Energy Efficiency Programs



New Jersey Energy Efficiency Programs

www.NJCleanEnergy.com/TRANSITION

NJBPU and NJCEP Administered Programs



- New Construction (residential, commercial, industrial, government)
 - Large Energy Users
 - Energy Savings Improvement Program (financing)
 - State Facilities Initiative*
 - Local Government Energy Audits
 - Combined Heat & Power & Fuel Cells
- *State facilities are also eligible for utility programs

Utility Administered Programs



- Existing buildings (residential, commercial, industrial, government)
- Efficient Products
 - Lighting & Marketplace
 - HVAC
 - Appliance Rebates
 - Appliance Recycling

NJBPU and Utility Co-Administered Programs



Energy Efficiency Program Information

www.NJCleanEnergy.com/TRANSITION

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Search

HOME RESIDENTIAL COMMERCIAL, INDUSTRIAL AND LOCAL GOVERNMENT RENEWABLE ENERGY

NEW JERSEY'S CLEAN ENERGY PROGRAM

ABOUT NJCEP

BOARD OF PUBLIC UTILITIES

POLICY UPDATES & REQUEST FOR COMMENTS

CALENDAR

CLEAN ENERGY STAKEHOLDER GROUPS - MEETINGS

GRANTS & SOLICITATIONS

TRAINING RESOURCES

PRESS ROOM

PUBLIC REPORTS AND LIBRARY

CONTACT US

New Jersey's Energy Efficiency Program Transition

Transición del Programa de Eficiencia Energética de Nueva Jersey

Electric Utility Contact Information

Utility Name	Commercial & Industrial Programs	Residential Programs
Public Service Electric & Gas	Website and Email Phone: 844-300-7734	Website and Email Phone: 855-846-2895
Atlantic City Electric	Website, Email and Phone: 833-223-7297	Website, Email and Phone: 866-353-0007
Jersey Central Power & Light	Website, Email and Phone: 800-662-3115	
Rockland Electric	Website, Email and Phone: 877-434-4100	

Gas Utility Contact Information

Utility Name	Commercial & Industrial Programs	Residential Programs
Public Service Electric & Gas	Website and Email Phone: 844-300-7734	Website and Email Phone: 855-846-2895
New Jersey Natural Gas	Website and Email Phone: 877-455-6564	Website and Email Phone: 877-455-6564
South Jersey Gas	Website and Phone: 888-263-7372	Website and Phone: 833-493-0691
Elizabethtown Gas	Website and Phone: 888-263-7372	Website and Phone: 833-493-0692

Check the GIS utility finder to determine who your provider or providers are.

Clean energy is on a **video** in New Jersey

Program Updates

- Energy Master Plan Update
- Solar Scam Warning
- School and Small Business Energy Efficiency Stimulus Program
- Energy Efficiency Program Transition

Program Literature

Applications and Brochures Download the latest program materials.

Energy Master Plan

State of New Jersey Energy Master Plan

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FREQUENTLY ASKED QUESTIONS

Frequently asked questions (FAQs) are grouped by the following subject areas; you can jump to any section by clicking on one of the topics below:

- General FAQs
- Commercial & Industrial Programs FAQs
- Residential Programs FAQs
- Contractor Specific FAQs
- Questions

General FAQs

Why are some energy efficiency programs now managed by the utility companies? (updated August 9, 2022)

The transition of the administration of certain energy efficiency programs from NJCEP to the utilities occurred in accordance with the mandates from the Clean Energy Act of 2018. These new programs allow the utilities to work directly with customers to achieve energy savings. The Board considered the following in establishing this transition:

- Programs that rely heavily on the use of contractors will be handled at the utility level, where the utility companies can build strong relationships and lead co-branded advertising and marketing efforts.
- Utilities will handle programs that rely on customer data or advanced metering infrastructure (AMI) to streamline customer data access layers and minimize the sharing of data to protect customer privacy.
- Utilities are well-suited to deliver certain energy efficiency programs, such as those that are based on existing customer relationships and that rely on utility data and systems.
- Utility administration works best for programs that can leverage utilities' knowledge of energy consumption, customer demographics, workforce infrastructure, and existing customer relationships within their service territories. Utility access – and increased customer access – to energy use data enables the design of more personalized services and programs, targeted outreach, and individualized solutions for customers.
- Utilities can offer flexible financing options, such as on-bill repayment.
- Customers may have more "brand awareness" and direct communication with their utility, which facilitates the broader adoption of energy efficiency measures.



Energy Efficiency Updates:

New Jersey's Clean Energy Program



More NJCEP Information

Quarterly Newsletter:

www.NJCleanEnergy.com/NEWSLETTER

Clean Energy Program Filings:

www.NJCleanEnergy.com/FILINGS

Clean Energy Program Monthly Progress to Goal Report

www.NJCleanEnergy.com/EE - Meeting Materials Archive

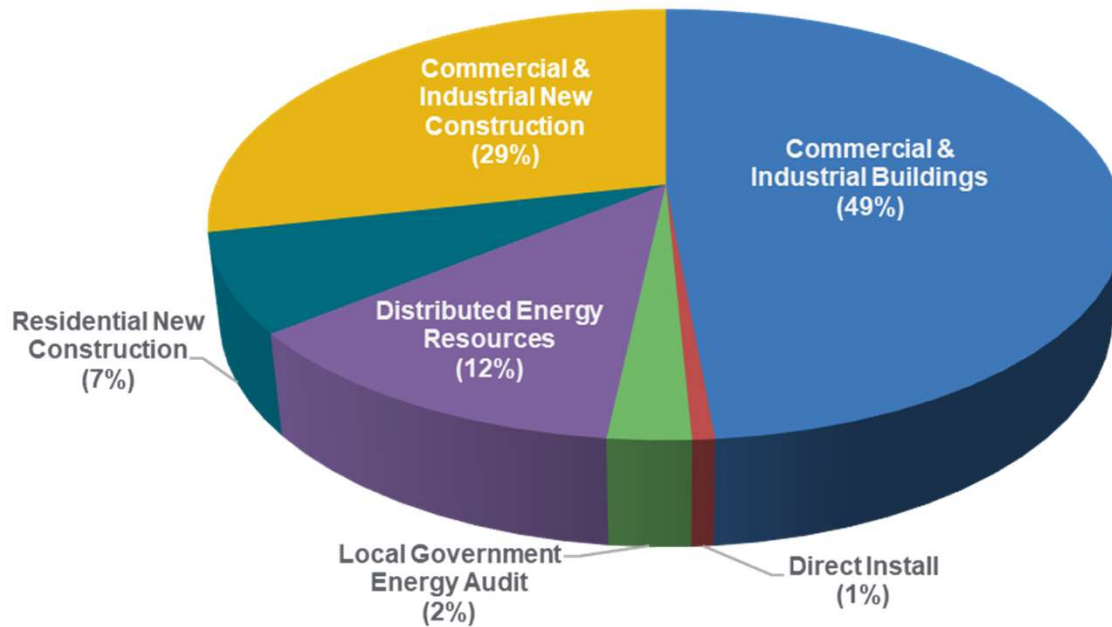
New in FY24:
Progress to Goals Report is posted with post-EE
Stakeholder Meeting resources after this
meeting

The screenshot displays the website's navigation menu with categories: HOME, RESIDENTIAL, COMMERCIAL, INDUSTRIAL AND LOCAL GOVERNMENT, and RENEWABLE ENERGY. The main content area is titled "Energy Efficiency Meeting Materials Archive" and includes a "Select A Year to View:" dropdown menu set to "2023". Below this, there are columns for "Agenda" and "Meeting Materials", with entries for "Slide Deck: Webinar Recording & PTO Report" and "Slide Deck & Webinar Recording". The right sidebar features "Program Updates" (Energy Master Plan Update, Solar Scam Warning, School and Small Business Energy Efficiency Stimulus Program, Energy Efficiency Program Transition), "Program Literature" (Applications and Brochures), and "Energy Master Plan" (State of New Jersey Energy Master Plan).



Budget Break-down by Program

FY24 TRC Managed Programs
Incentive Budget: \$148,502,129



Energy Efficiency Programs FY24

NJCEP/TRC Managed

Closed

- Residential Products & HVAC
- Residential Existing Homes
- Direct Install

Closing Out

- C&I Buildings (existing buildings)
- SmartStart Retrofit
- Pay for Performance Existing Buildings
- School & Small Business Stimulus Program (federally funded)

NJCEP/TRC Managed

Open

- New Construction
Was: Residential New Construction, SmartStart New Construction, Pay for Performance New Construction, Customer Tailored Energy Efficiency Pilot New Construction
- Large Energy Users
- Local Government Energy Audit
- Distributed Energy Resources

BPU/Utility Managed

Comfort Partners





PROPOSED PROGRAM: New Construction Program

What is the New Construction Program?

PROPOSED
PROGRAM

This NEW program being proposed for NJCEP includes:



A **single program with customized pathways** to serve all residential and non-residential projects of all sizes



An **easier application process** for energy incentives



Pre-approved partner network to guide customers through the program



Increased equity and project participation providing equitable access through enhanced incentives and outreach



Improved customer experience and assistance including co-op marketing

What is the New Construction Program?

PROPOSED PROGRAM

ABOUT THE PROGRAM

Three pathways to fit your needs to achieve greater energy savings

INCENTIVES

Based on selected pathways and size

WHO IS ELIGIBLE

All new construction buildings or eligible major renovation projects

ADDITIONAL OPPORTUNITIES

Incentives for energy efficiency beyond code requirements, encouraging greater energy savings

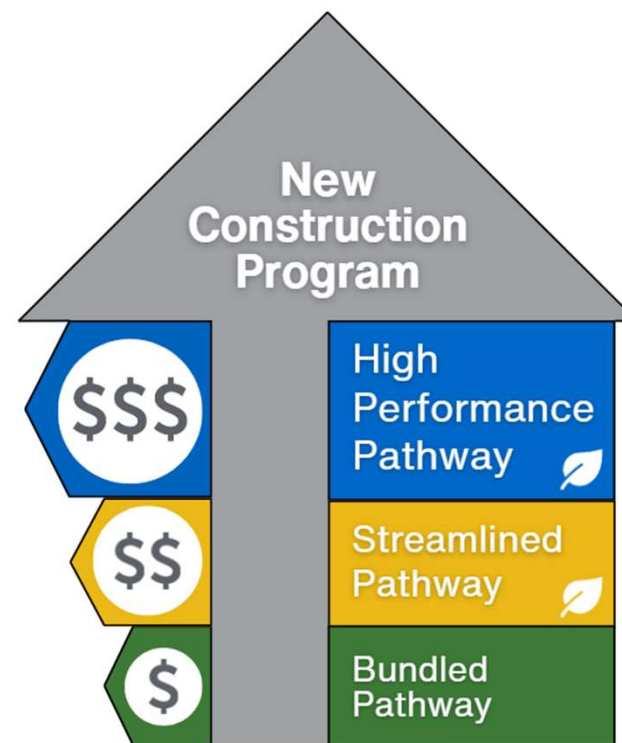


Which pathway is the best fit for your project?

PROPOSED PROGRAM

Choose from **three pathways** for your next project:

- 1 **High Performance**
- 2 **Streamlined**
- 3 **Bundled**



New Construction Program Incentives

PROPOSED PROGRAM

	High Performance Pathway	Streamlined Pathway	Bundled Pathway
Residential	✓ ¹	N/A	N/A
Non-residential	✓ ²	✓	✓
Base incentive rate (\$ per square foot)	\$1.00 - \$2.50	\$0.50	\$0.25
GHG reduction bonus  <ul style="list-style-type: none"> • 0.7 - 0.99 tons CO₂e/kSF at \$0.25 • 1.0 - 1.99 tons CO₂e/kSF at \$0.50 • 2.0 - 2.99 tons CO₂e/kSF at \$1.00 • 3.0+ tons CO₂e/kSF at \$1.50 	✓	✓	N/A
Enhanced incentives rates (\$ per square foot)	\$0.25 - \$1.25 ³	\$0.15 - \$0.75 ⁴	N/A

1. Includes single-family, townhome, or multifamily. Excludes non-proxy (ASHRAE modeling approach) and LEED V4.1
2. Excludes ENERGY STAR[®] and DOE Zero Energy Ready Home (ZERH)
3. Includes residential Affordable Housing, non-residential UEZs/OZs, and Industrial/High Energy Intensity
4. Includes non-residential UEZs/OZs and Industrial/High Energy Intensity

Greenhouse Gas Reduction Bonus

PROPOSED PROGRAM

ABOUT THIS BONUS

Calculated CO₂ equivalent reduction based on project's energy savings

WHO IS ELIGIBLE

Residential and non-residential projects participating in High-Performance or Streamlined Pathways

INCENTIVES

GHG reduction bonus

- 0.7 - 0.99 tons CO₂e/kSF at \$0.25
- 1.0 - 1.99 tons CO₂e/kSF at \$0.50
- 2.0 - 2.99 tons CO₂e/kSF at \$1.00
- 3.0+ tons CO₂e/kSF at \$1.50

High Performance Pathway

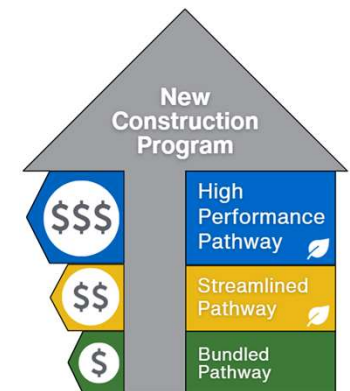


Streamlined Pathway



Bundled Pathway

N/A



Enhanced Incentives

PROPOSED PROGRAM

ABOUT THESE INCENTIVES

Higher incentives available to residential Affordable Housing and non-residential developments in designated areas of the state of New Jersey, as well as all eligible industrial/high energy intensity facilities

WHO IS ELIGIBLE

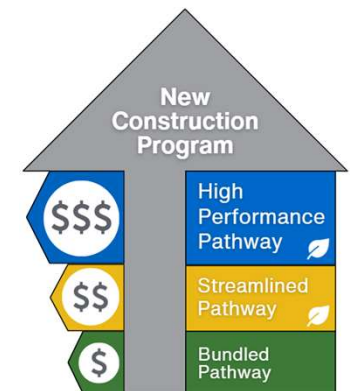
Residential and non-residential projects participating in High-Performance or Streamlined Pathways

INCENTIVES

	High Performance Pathway	Streamlined Pathway	Bundled Pathway
Enhanced incentives rates (\$ per square foot)	\$0.25 - \$1.25 ¹	\$0.15 - \$0.75 ²	N/A

1. Includes residential Affordable Housing, non-residential UEZs/OZs, and Industrial/High Energy Intensity

2. Includes non-residential UEZs/OZs and Industrial/High Energy Intensity



New Construction Program Timeline

PROPOSED PROGRAM

3/6/2024

Compliance Filing posted for Public Comments



3/27/2024

Public comments close for Compliance Filing

NEW:
comment period extended from 3/20 to 3/27



NOW

Current programs remain open until the transition to New Construction Program

TBD

New Construction Program Launch



Watch for BPU [Energy Efficiency Listserv](#) updates, attend [Energy Efficiency Stakeholder Meetings](#), or attend an upcoming program overview or [trade ally webinar](#) event for details.

Community Energy Plan Grant & Community Energy Plan Implementation Grant Update

These two grant programs support municipalities with community-level clean energy initiatives.

Community Energy Plan Grant (CEPG) Program

- Grants for municipalities to develop community energy plan grants
- Two grant award levels
 - \$10,000
 - \$25,000 – overburdened municipalities

Community Energy Plan Implementation (CEPI) Grants

- Grants for municipalities to implement community energy projects
- Applicants eligible for \$250,000 with possibility of additional awards if funds remain after all priority projects are funded.

Sustainable Jersey will provide Technical Assistance for applicants, with a focus on assistance for overburdened municipalities



Community Energy Plan Grant & Community Energy Plan Implementation Grant Update

New Application Deadline!

Friday, May 24

Applications must be submitted before 5 pm Eastern time

- Applications for both programs available on the NJCEP website at NJCleanEnergy.com/CEP
- Questions can be submitted to: community.energy@bpu.nj.gov



Energy Efficiency Updates:
Utility Updates



Utility Updates

NJ Energy Efficiency Stakeholder Meeting

Paul Miles, Atlantic City Electric on Behalf
of The NJ Joint Utilities – March 21, 2024



Utility Updates

- **All utilities submitted their filings for the Second Triennium (1/1/2025-6/30/2027), as well as their extension request for the First Triennium (to cover 7/1/2024-12/31/2024)**
 - Working through extensive discovery requests
- **Joint Utility Contractor Calls**
 - Home Performance with ENERGY STAR contractor call- scheduled for March 21st
 - Residential HVAC contractor event- Spring- scheduled for April 18th
- **Community Events**
 - ACE is participating in the following community outreach events
 - **Riverview Family Success Center**
 - March 26; 11am – 2pm at 157 West Main St., Pennsville, NJ
 - **Bridgeton Wellness Expo**
 - April 18; 6pm – 8pm at 550 Buckshutem Rd, Bridgeton, New Jersey 08302
 - Rockland Electric, New Jersey Natural Gas, Elizabethtown Gas and South Jersey Gas will be sponsoring and attending the 2024 New Jersey Sustainability Summit, May 3, 2024 at Bell Works, Holmdel, NJ.
 - New Jersey Natural Gas is finalizing plans for large scale outreach events at the Jersey Shore Blue Claws and their annual Ocean Fun Days, including an Energy Scavenger hunt (more info to follow in April)

Utility Updates

Earth Day

- ETG, NJNG, and SJG are offering Earth Day promotions on their Efficient Products marketplaces
 - www.elizabethtowngasmarketplace.com
 - www.southjerseygasmarketplace.com
 - www.njng.com/marketplace
- ACE will be offering the following marketplace promotions in April to celebrate Earth Day
 - <https://secure.atlanticcityelectric.com/marketplace/>
 - 7-Spray Water Saving Garden Hose Nozzle
 - Emerson Sensi Thermostat
 - Nest Thermostat - Charcoal,
 - Snow Nest Learning Thermostat
 - Ecobee e3 Lite Thermostat
- PSE&G will be offering the following marketplace promotions in April to celebrate Earth Day
 - marketplace.pseg.com
 - Google Nest Thermostats
 - Nest Learning Thermostats
 - Ecobee Smart Thermostats
 - Sensi Smart Thermostats
 - Honeywell Home Smart Thermostats
- ACE & SJG are participating in the following community events:
 - ACUA Earth Day Festival
 - Sunday, April 28 | 10am-4pm
 - Cape May Zoo Earth Day Celebration
 - Saturday, April 20 | 10am-3pm

Utility Updates

Earth Month Campaigns

- Rockland Electric – *Make Everyday Earth Day*
 - Unique Earth Day discounts on our marketplace oru.com/save on smart thermostats, EV chargers, and water saving products
 - Behavioral Home Energy Report Marketing Module promoting MyORU Store
 - Campaign promoting FREE Home Energy Assessments via bill inserts and newsletter
- PSE&G
 - External communications promoting the Earth Month smart thermostat sale
 - Bill inserts, Residential e-newsletter, Google Postcard , MyEnergy Postcard , MyEnergy Challenge Email, PSEG.com Homepage Banner, Social media on PSEG's Facebook, Instagram, and X accounts
 - PSE&G Spring 2024 Residential Trade Ally Event
 - Pre-Registration is required: <https://www.eventbrite.com/e/pseg-spring-2024-awards-ceremony-and-residential-trade-ally-event-tickets-851101005017>



Thank You



Energy Efficiency Updates:

Regulatory – State & Federal



Triennium 2 Filings Review (Docket No. QO23030150)

- February 26, 2024 – Presiding Commissioners’ Orders
 - Summaries of proposed utility programs, budgets, cost recovery mechanisms
 - Rulings on motions to intervene and participate
 - New Jersey Natural Gas Company (QO23120868)
 - Intervenors: EEA-NJ, NJLEUC, NRDC, NJPEEC, Sierra Club
 - Participants: Uplight, Joint Utilities
 - Elizabethtown Gas Company (QO23120869)
 - Intervenors: EEA-NJ, NJLEUC
 - Participant: Uplight, Joint Utilities
 - South Jersey Gas Company (QO23120870)
 - Intervenors: EEA-NJ, NJLEUC
 - Participant: Uplight, Joint Utilities
 - Atlantic City Electric Company (QO23120871)
 - Intervenors: EEA-NJ, NJLEUC
 - Participants: Convergent, CPower, Google, Uplight, Joint Utilities
 - Jersey Central Power & Light Company (QO23120872)
 - Intervenors: EEA-NJ, NJLEUC
 - Participants: Convergent, CPower, Google, Joint Utilities
 - Public Service Electric & Gas Company (QO23120874)
 - Intervenors: EEA-NJ, NJLEUC, NRDC, NJPEEC, Sierra Club
 - Participants: Convergent, CPower, Google, United, Uplight, Joint Utilities
 - Rockland Electric Company (QO23120875)
 - Intervenor: EEA-NJ
 - Participant: CPower, Joint Utilities



Triennium 2 Filings Review (Docket No. QO23030150)

- Next steps:
 - Ongoing discovery
 - Prehearing orders: procedural schedules, issues to be resolved
 - Settlement conferences (March–April 2024)
 - Public hearings on each filing (April–May 2024)
 - Board action (summer – early fall 2024)
 - Triennium 2 starts January 1, 2025



Guest Presentation



Air Source Heat Pumps

Paul Meierdierck, PE



Paul Meierdierck is a registered Professional Engineer in New Jersey and New York, a Certified Energy Manager and a Certified Cogeneration Professional

Paul was the former Director of Utilities, Rutgers University in charge of Energy Management and O&M of Campus-wide utility systems. As a consultant Paul performed M&V services and NYSERDA Flextech Energy Auditing for Commercial, Industrial and Multifamily sites in New York City.

Paul is currently an Instructor for Building Operating Certification (NEEC) and Heat Pumps at the Thomas Shortman Training Fund in Manhattan and an instructor for the **Center for Building Knowledge at NJIT.**

Agenda

Today we'll be discussing:

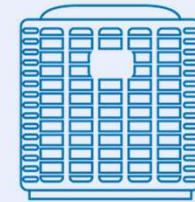
- ✓What is a heat pump?
- ✓How do Air Source Heat Pumps (ASHPs) work?
- ✓Sizing basics
- ✓Using heat pumps for a single family home system replacement
- ✓Common Design Failures
- ✓Lessons Learned
- ✓Heat pumps for commercial buildings

What is a heat pump?



**Pumps heat from the
*outside to the inside***

Same technology as:



Air-conditioner



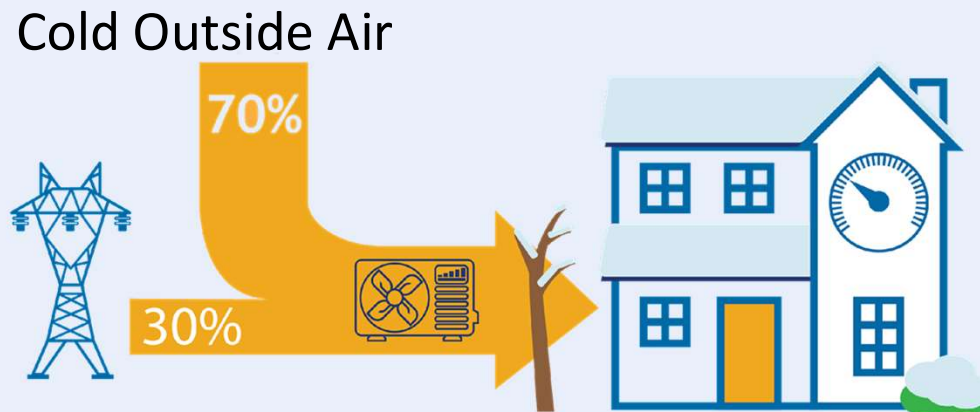
Refrigerator

Heat Pumps Do Not Generate Heat, They **Move** It

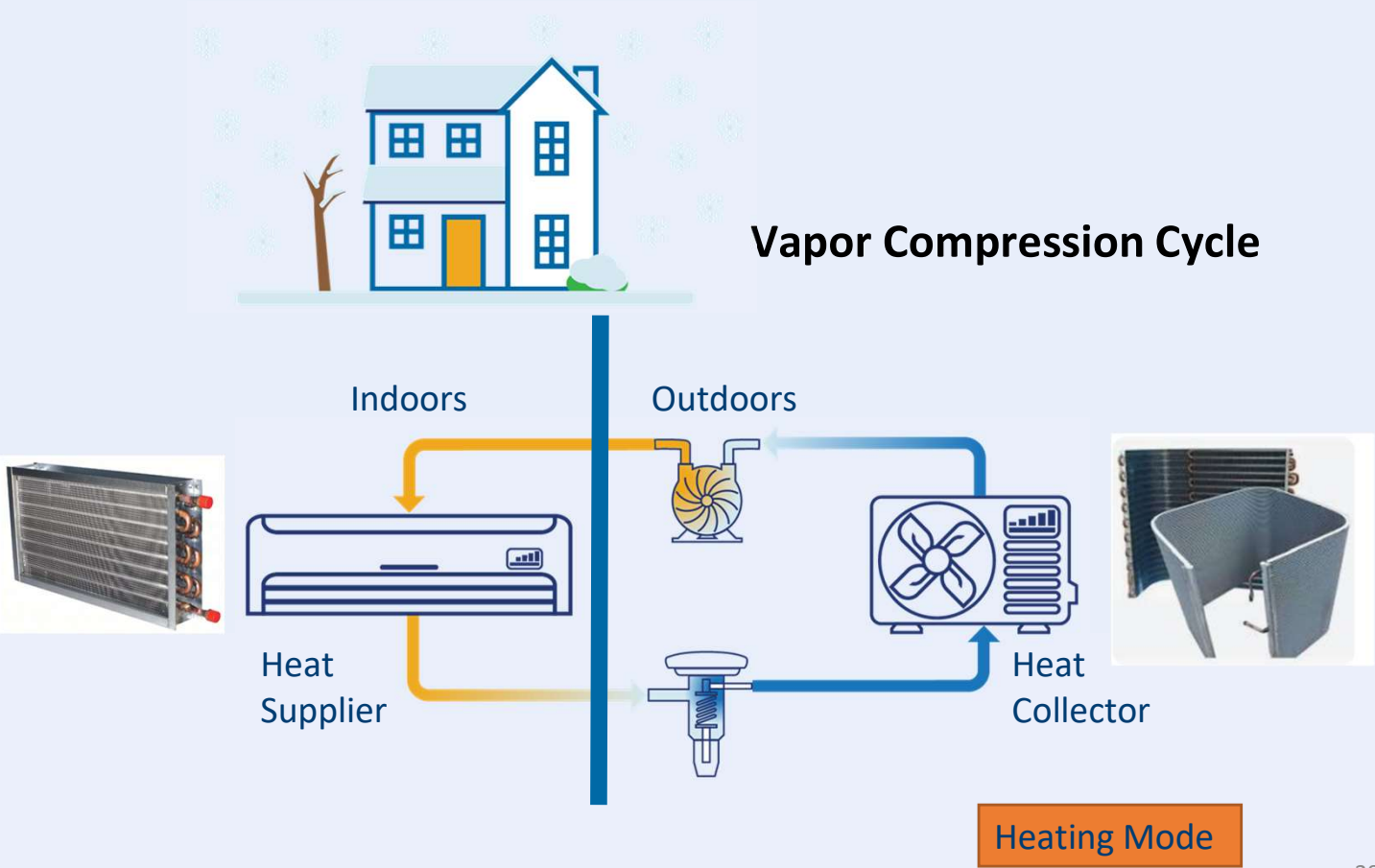


Where does the heat come from?

Heating mode: From the outside air, heated by the sun. Even when it is cold outside, heat energy can be extracted from the air and pumped inside.





How do heat pumps work?



The many names of a heat pump

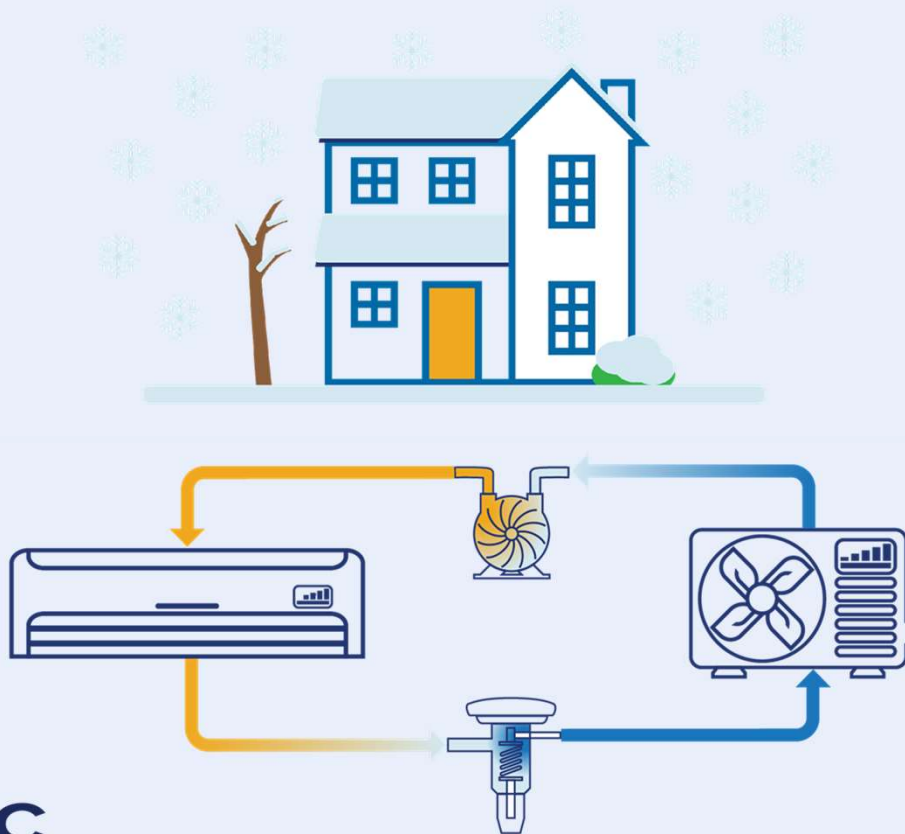
**Air Source Heat Pump
(ASHP)**

**Variable Capacity Heat Pump
(VCHP)**

 **Cold Climate Air Source Heat Pump
(ccASHP)** 

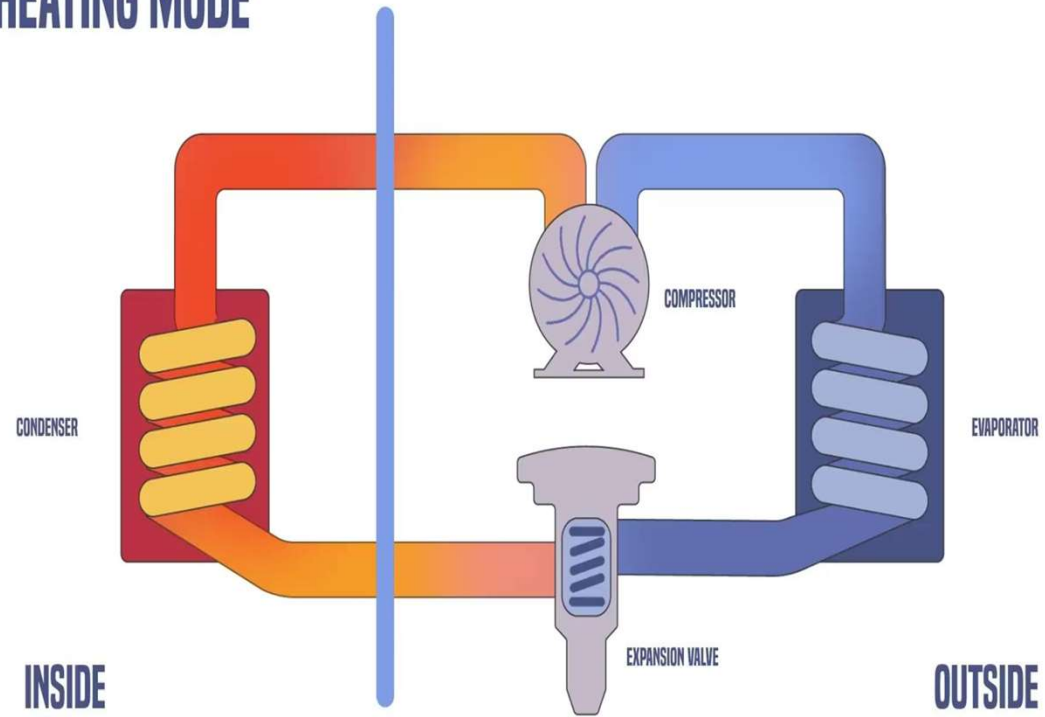
**Also Known As:
Air Conditioner**

Cold Climate Air Source Heat Pumps



- Specially tuned to do well in cold climates - including Climate Zones 4 and 5
- Meets efficiency and capacity criteria set forth by the Northeast Energy Efficiency Partnership (NEEP)
- Improved components combine to provide *variable* speeds
 - Standard heat pumps are single-speed or two-speed only

HEATING MODE



Variable Capacity Heat Pump (VCHP) Component Differences



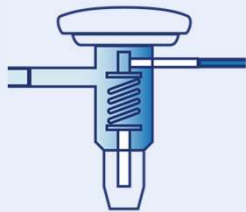
Compressor

Compressor motor is inverter driven for multi-stage variance



Fan

Fan is controlled by an electronically commutated motor for variable speeds

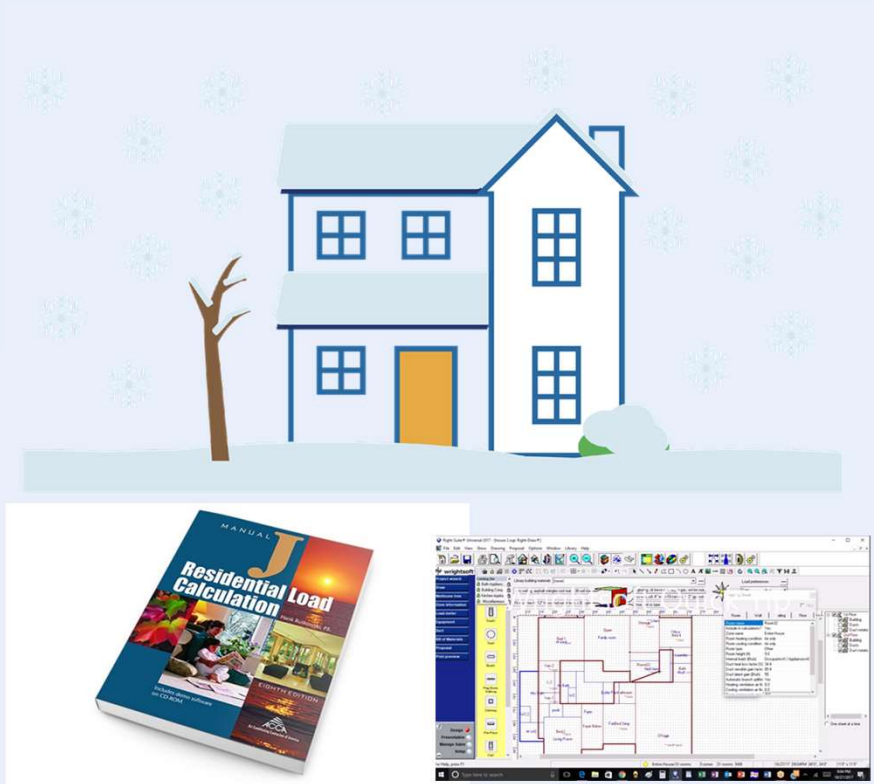


Expansion Valve

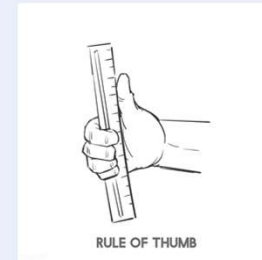
EXV controlled by an electromagnetic piston to vary the firing rate

Load Calculations

How are they done?

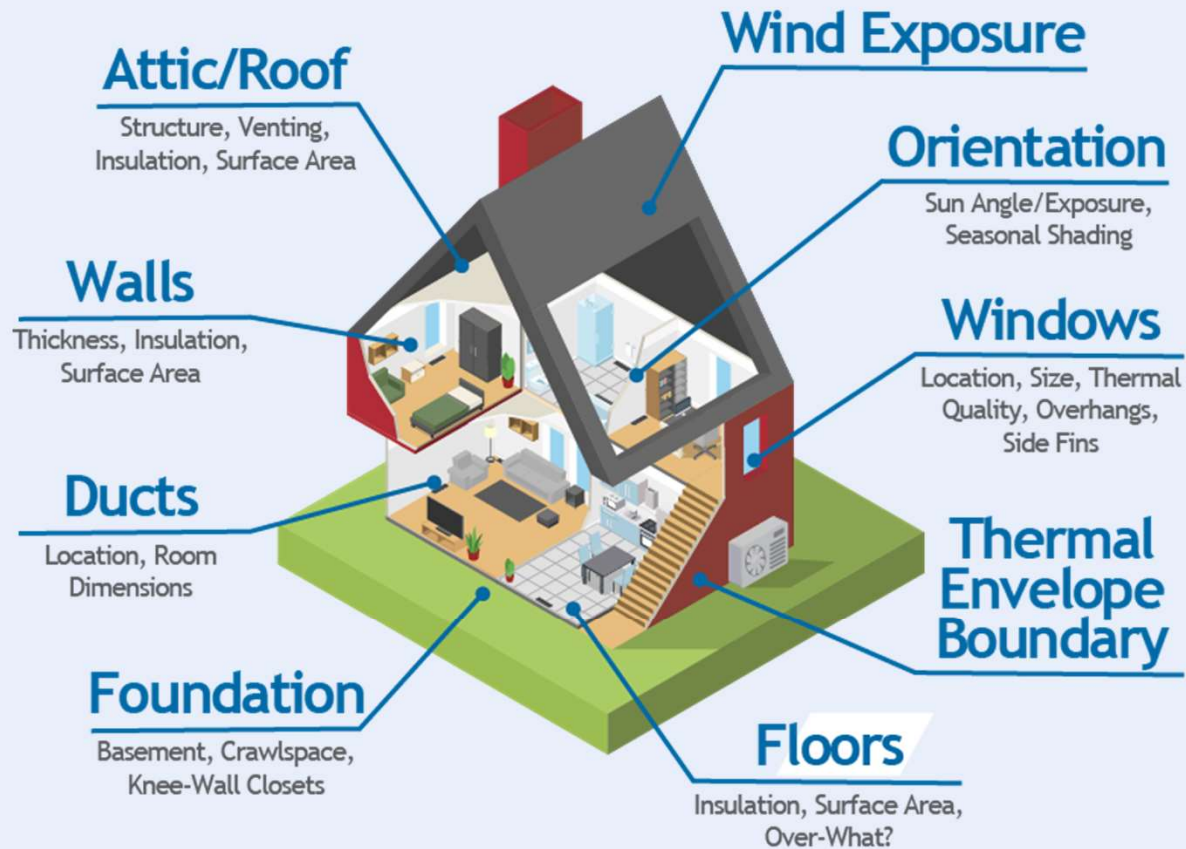


- Standardized process using energy modeling software tools
- Supports system selection and design
- Be accurate to the building
 - Garbage in -> garbage out
- Rules of thumb only as a sanity check



Home Takeoffs

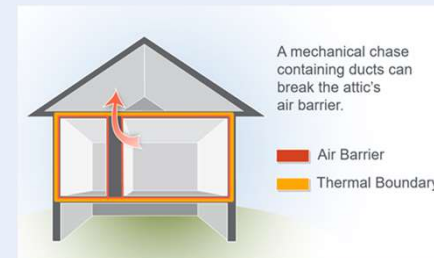
What impacts the load?



Load Reduction

Reduce the load first, *then* size for heating

- **Tenets of load reduction**
 - Define the thermal boundary/envelope
 - Air seal
 - Top plates, joists
 - Recessed lights, duct boots
 - Penetrations
 - Weather stripping
 - Chimney dampers
 - Test with a blower door
 - Insulate
 - Attics, walls (if accessible)
 - Windows
- **Perform load calculations *after* load reductions**
 - Improved comfort
 - Smaller, less expensive heat pump
 - Reduces heat distribution challenges (ducting, indoor head locations)
 - Can make ductless applications more viable



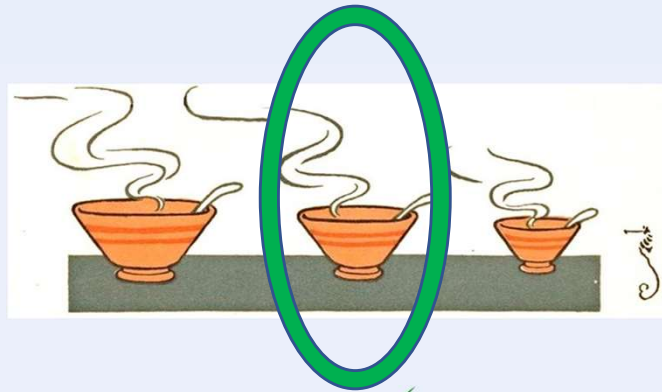
The Goldilocks Principle



Too Small

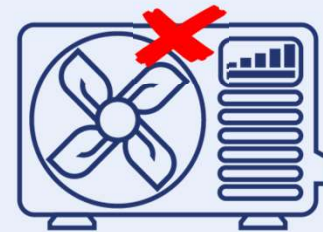
System will not keep the house warm on the coldest days

- Poor comfort, or need for backup heat
- Slow catch up if using thermostat setbacks



Just Right

- Comfort
- Efficiency
- Durability

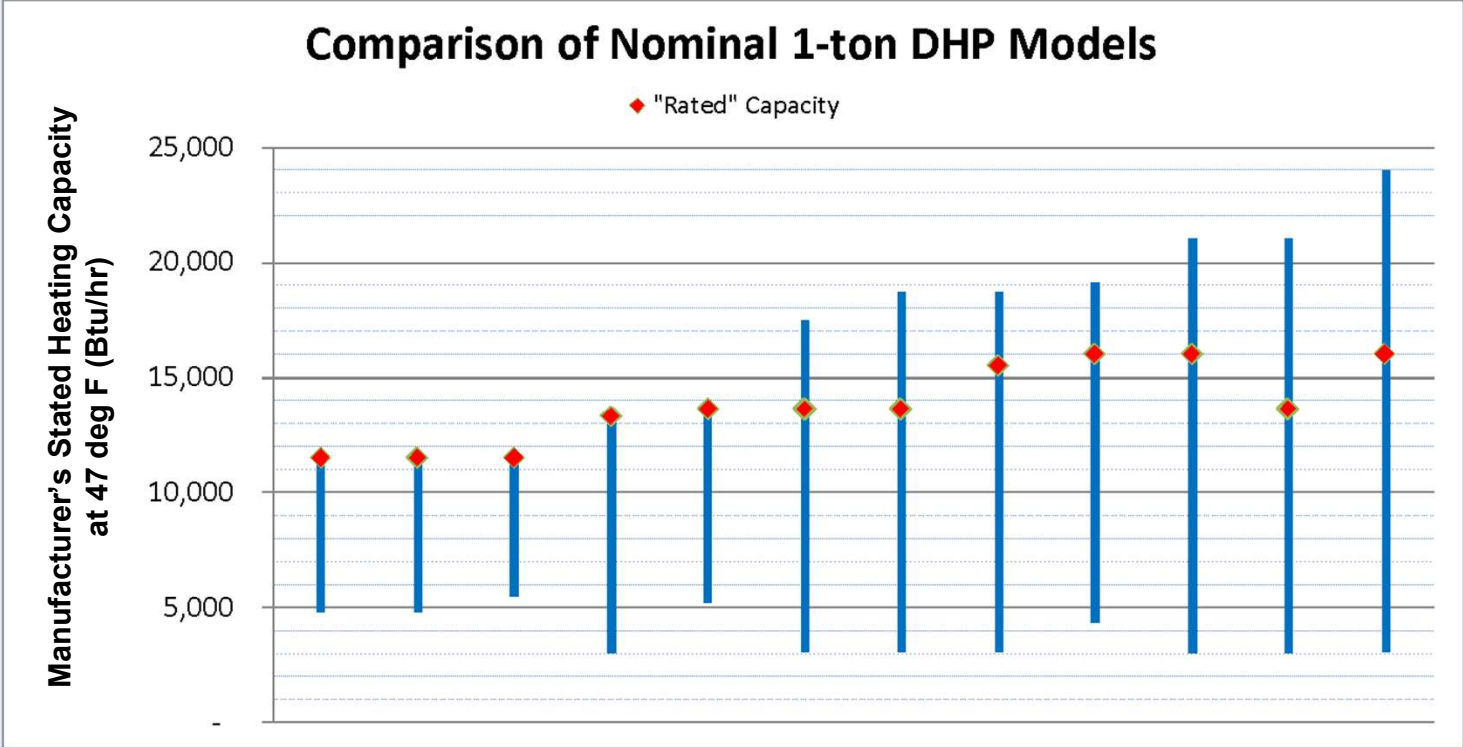


Too Big

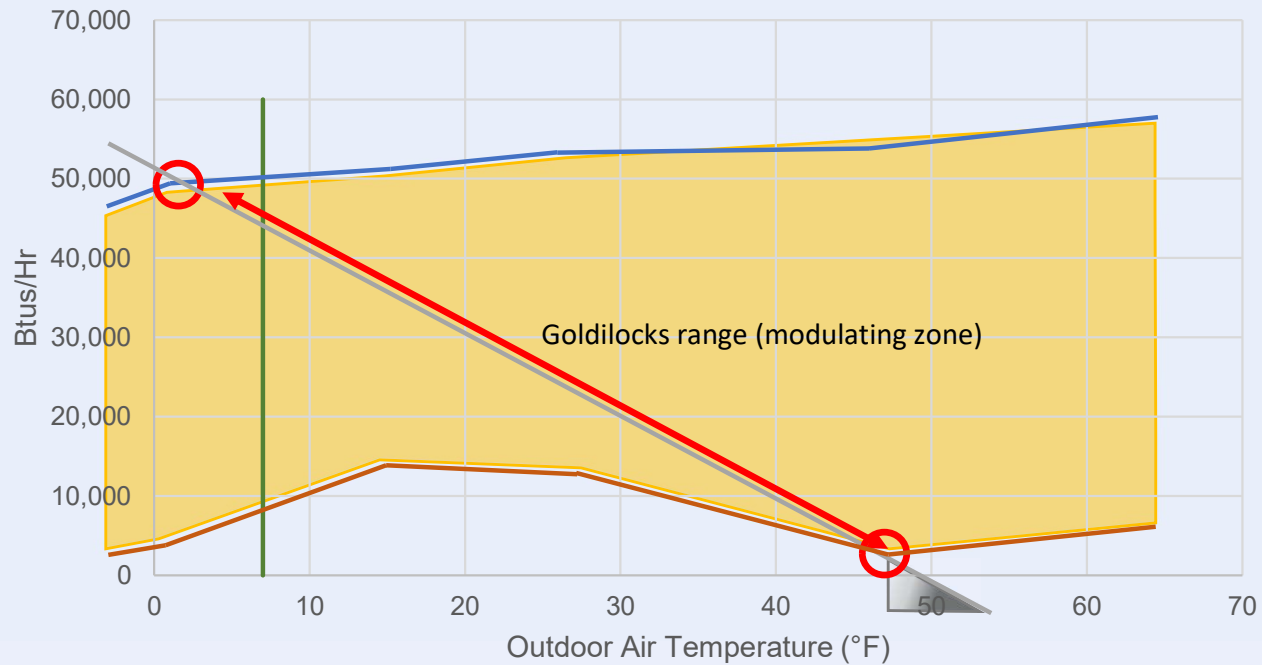
System will cycle on and off

- Poor comfort
- Poor energy efficiency
- Poor durability
- More expensive

Maximum-Minimum Capacity Ranges



Better Sizing – Different Heat Pump?



— Load — Min Capacity — Max Capacity — Design



Backup Heat



Modulating Heat Pump

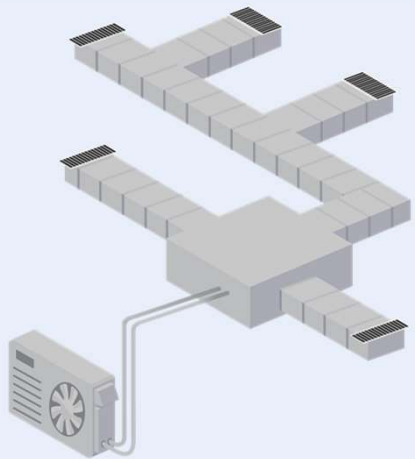


Short Cycling, Minor, above 47°F

Design Options

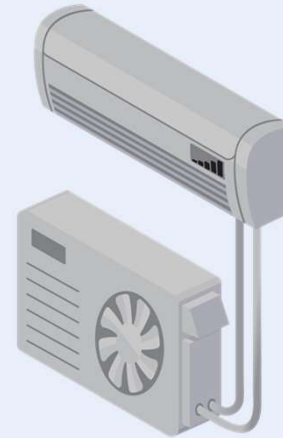
Ducted vs. Ductless

- Heat is distributed to each room through ducts
- Best for replacement/full load scenarios



Ducted

- Individual heat pump *heads* in strategic locations
- Best for displacement/partial load
- Best in simple home layouts



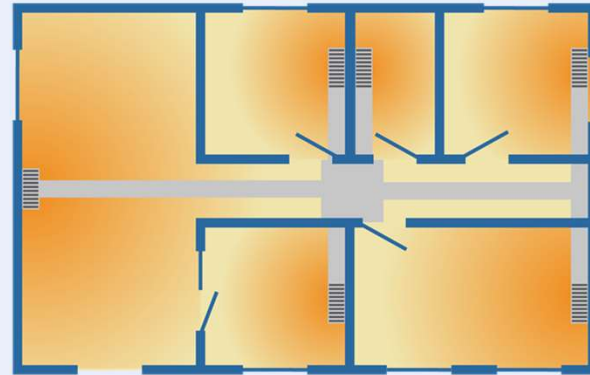
Ductless

Other Design Considerations

Indoor Layout

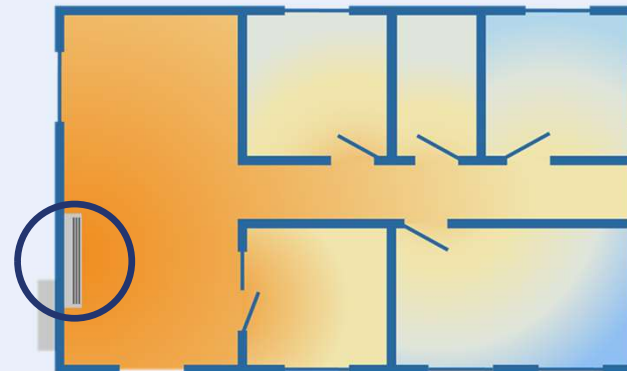
Ducted

- Location of supply and return grilles
- Location of ducts
- Location of heat pump and air-handler unit
- Running ducts to multiple floors
- Location of thermostat



Ductless

- Location of heads, relative to walls and doors
- Style of heads – wall sconce, floor-mounted, in-ceiling
- Optimizing flow of conditioned air to reach as much of the home as possible
- Location of thermostat



Recommended Practices

- ✓ Place in the top third of the wall for standard heads
 - ✓ Minimum 6 inches from the ceiling
- ✓ When possible, place where there's at least 20 feet of clearance in front of the unit for best air mixing
- ✓ Middle of the room, not corners
- ✓ Consider the need to deliver heat to each room

Ductless

- ✓ Ensure ducts are adequately sized, Manual D is recommended
- ✓ Specify sealing existing ducts in crawl spaces, attics, and garages
- ✓ Design new ducts to minimize friction losses (i.e., use large radius bends or turning vanes)
- ✓ Avoid specifying new ducts into outside conditioned space whenever possible

Ducted

Recommended Practices

- ✓ Design and select locations with enough room for free air flow
- ✓ Minimize refrigerant line lengths
- ✓ Specify risers or mount to wall above typical snow line
- ✓ Specify install locations to not be under or near bedroom windows
- ✓ Avoid installations under condensate drip lines

Outdoor Unit

- ✓ Design for drain to slope downhill
- ✓ Design so that terminations are not near walkways or into crawl spaces
- ✓ Specify external condensate pump when needed
- ✓ Ensure condensate line will drain without being blocked by frozen condensate

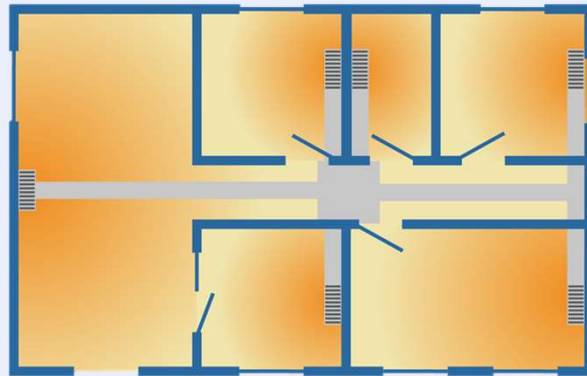
Condensate

Design Example #1b

Single Story, Simple Layout

Inputs

- Current heating is an old, ducted natural gas furnace near end of its life
- Ducts are in poor repair. Home is well insulated and air sealed



Design Solution

- Replacement scenario; leverage existing ducts for new ducted ASHP
- Reseal and insulate ducts and confirm/update duct design as needed
- Remove existing furnace, do not install backup heat


Common Design Failures

 Oversized systems

HVAC contractors use rules of thumb derived from gas or oil systems. Heat pumps short cycle at mild temperatures, hurting energy performance.

 One-solution-fits-all thinking

A contractor gets comfortable with a specific system, (e.g., 2 head ductless multi-split) and attempts to apply it to all homes.

 Sub-optimal indoor head location

Contractors are least familiar with point-source heating and air mixing. Indoor heads are placed where they are blocked (mixing), too close to the ceiling, or unable to provide adequate heat for closed-door bedrooms or offices.

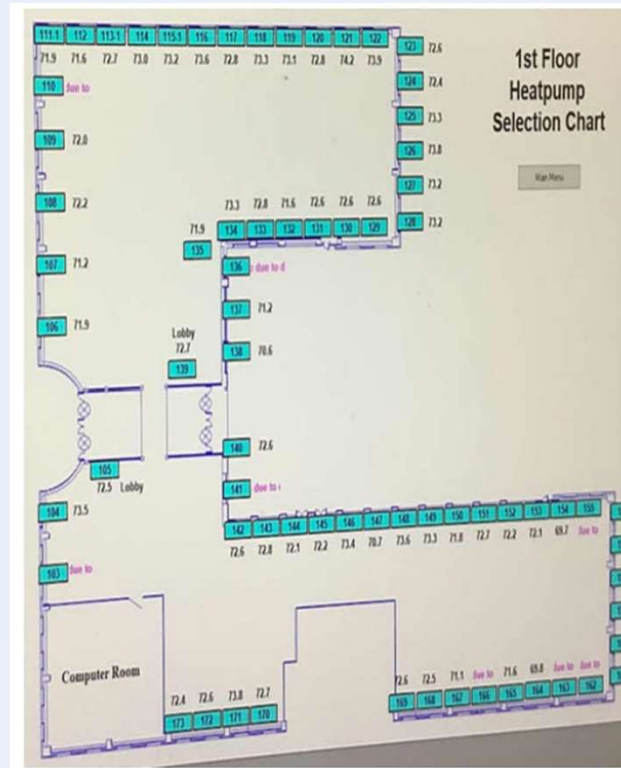
Lessons Learned

- ✓ Variable capacity heat pumps operate differently than traditional heating systems, and so need a different design approach
- ✓ Load calculations are critical for proper sizing; more so even than traditional heating system types
- ✓ Sizing affects comfort, performance, efficiency, and durability

Water Source Heat Pumps at NJ DEP Building



First Floor Heat Pumps



DEP Indoor Unit



Hudson Research Center ASHP



Air to Water ASHP





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Thank You!

General Q&A



To submit questions in advance for next month:
EnergyEfficiency@bpu.nj.gov

Items of Interest



Next Meetings



Energy Efficiency Stakeholder Meetings

NJCleanEnergy.com/EE

3rd Thursday of the Month, 1-2:30pm

Next Guest Presenter:

William Amann – M&E Engineers

Ground Source Heat Pumps (GSHP) &
Air to Water Heat Pumps (AWHP)

April 18, 2024

May 16, 2024

June 20, 2024

July 18, 2024

August 15, 2024

September 19, 2024

October 17, 2024

(no November meeting)

December 19, 2024



More Information

VISIT

NJCleanEnergy.com

NJCleanEnergy.com/EE

CONTACT

EnergyEfficiency@bpu.nj.gov

866.NJ.SMART (657.6278)

EE LISTSERV

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THANK YOU

