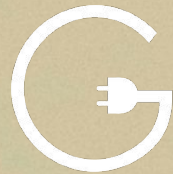




The City of
Worcester



GREEN
ENERGY
CONSUMERS
ALLIANCE

Heat Pumps For Homeowners: What You Need to Know

November 20, 2025

Presenters

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City of Worcester

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Energy Advocate
City of Worcester

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Energy Efficiency Coordinator
Green Energy Consumers Alliance



WHAT WE'LL COVER TODAY

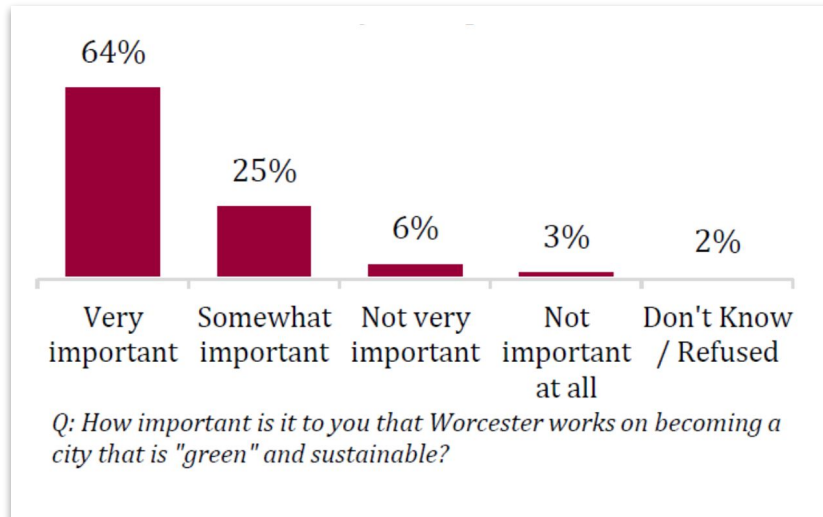
- Worcester's Sustainability & Resilience Initiatives
- Heat Pump:
 - Basics & Design Options
 - Costs
 - Incentives
 - Next Steps and Working with Contractors
- Questions & Answers



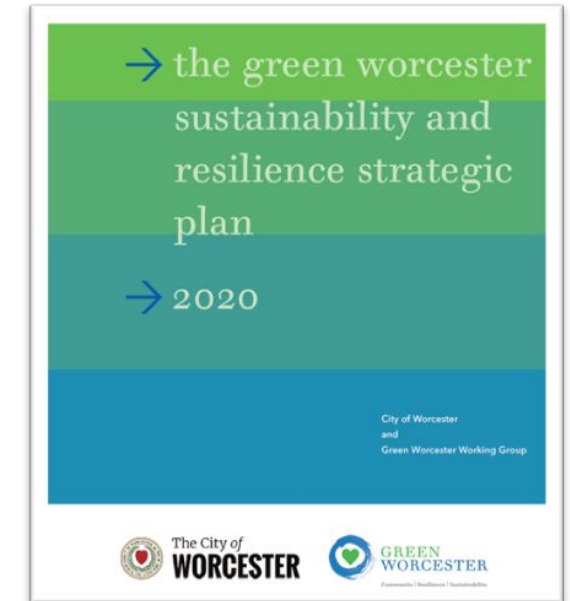
Worcester's Sustainability & Resilience Initiatives

The Green Worcester Plan

- The Green Worcester Plan serves as a roadmap to making Worcester one of the most sustainable and climate resilient mid-sized cities in America by 2050
- The Green Worcester Plan is guided by three lenses: equity, health & prosperity
- Survey results: Worcester residents value making the city more sustainable



- Telephone survey of representative sample of Worcester residents (606 respondents – English and Spanish)
- People of Color: 74% "very important"
- White people: 59% "very important"



SMART ENERGY ADVICE

We're here to answer your questions and guide you to choose energy saving programs. We are working to provide cost-saving energy-efficiency solutions to residents and small businesses in our community.

- **You can learn how to:**
 - Sign up for a no-cost energy assessment
 - Visit: masssave.com/community-first/Worcester
 - Apply for Mass Save incentives and rebates
 - Apply for a 0% HEAT Loan
 - Read and understand energy bill including the city's municipal aggregation program
 - Access to related resources
- **Primarily funded by Mass Save Community First Partnership:**
 - Striving to reach primarily underserved populations
 - Worcester has qualified as a Designated Equity Community
 - Our efforts are sponsored by our local utilities - National Grid and Eversource
- **Schedule a 30 minute, no-cost appointment:**
tinyurl.com/energyadvocatehrs



About Green Energy Consumers Alliance

A nonprofit organization based in Massachusetts and Rhode Island with a mission to empower consumers and communities to speed a just transition to a zero-carbon world.

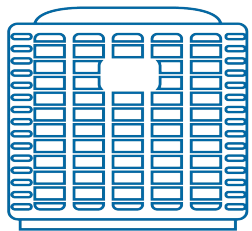


Heat Pump Basics & Design Options

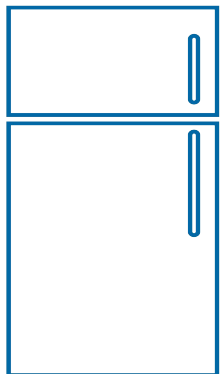


What is a Heat Pump?

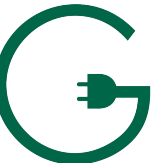
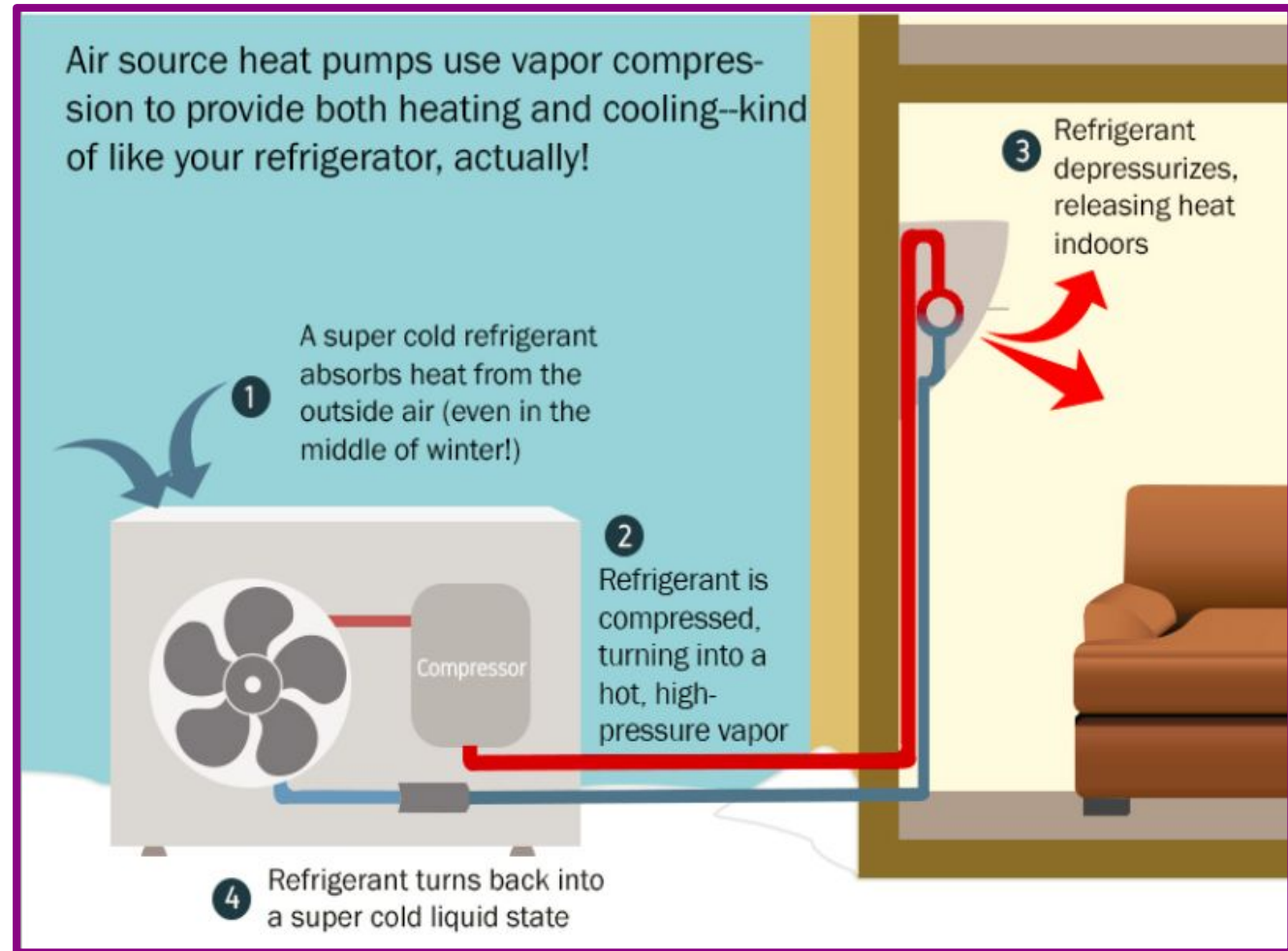
Same technology as:



Air Conditioner



Refrigerator



Outdoor Condensers Need Space

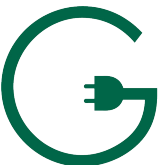


Air-source

- Condenser stand to prevent ice blocking air flow
- Refrigerant line can go through basement

Ground-source or geothermal

- Vertical or horizontal loop



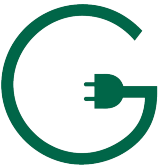
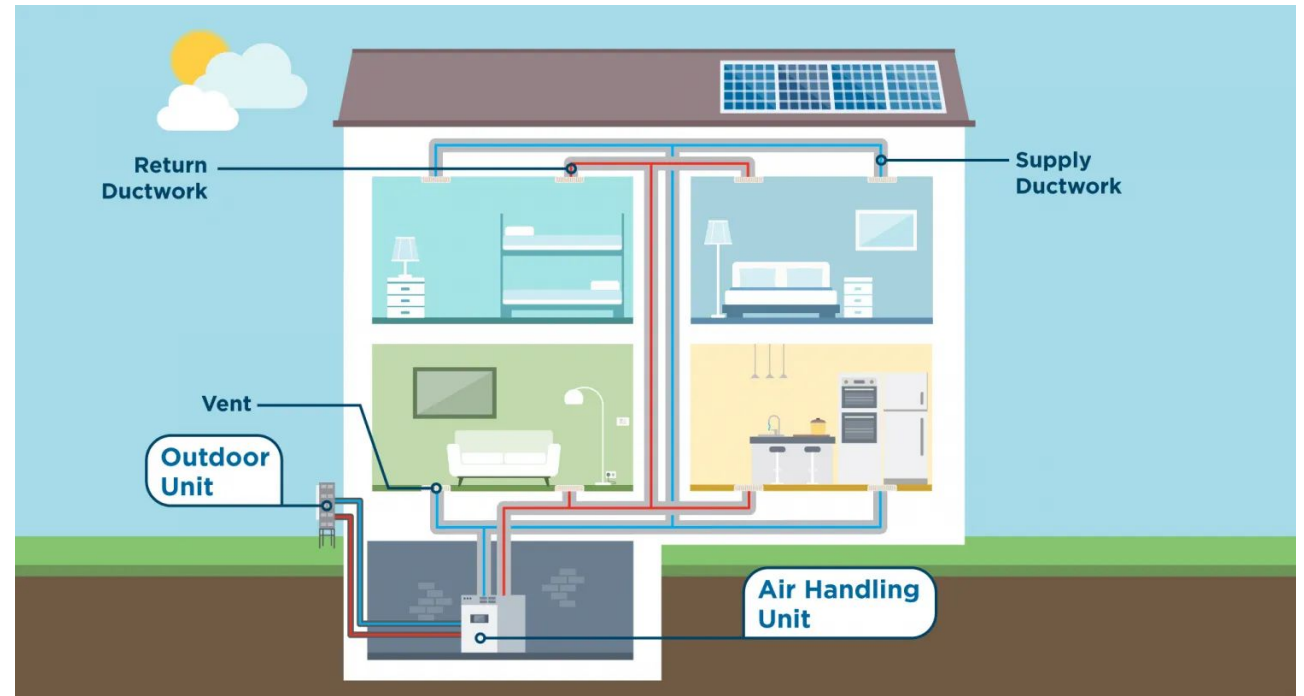
When Home Has Ductwork

Furnace instead of boiler

Hot air ductwork allows for relatively easy replacement of fossil fuel system with whole home fully ducted heat pump.

Central air conditioning

- Heat pumps can replace central a/c
- One piece of equipment could replace two
- Ductwork must be in good condition



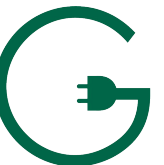
When Home Lacks Ductwork

Heat pumps don't usually produce hot enough water to easily replace boilers.

- Some hydronic options are available; few installers
- Artic
- SpacePak

Ductless or Mini-Ducted Systems:

- Single head can serve a large open area
- Single zones or multi-zones
- Mini-ducted head to serve adjacent small rooms



Ductless Indoor Variations (“Heads”)

Wall Hung



Floor Mount

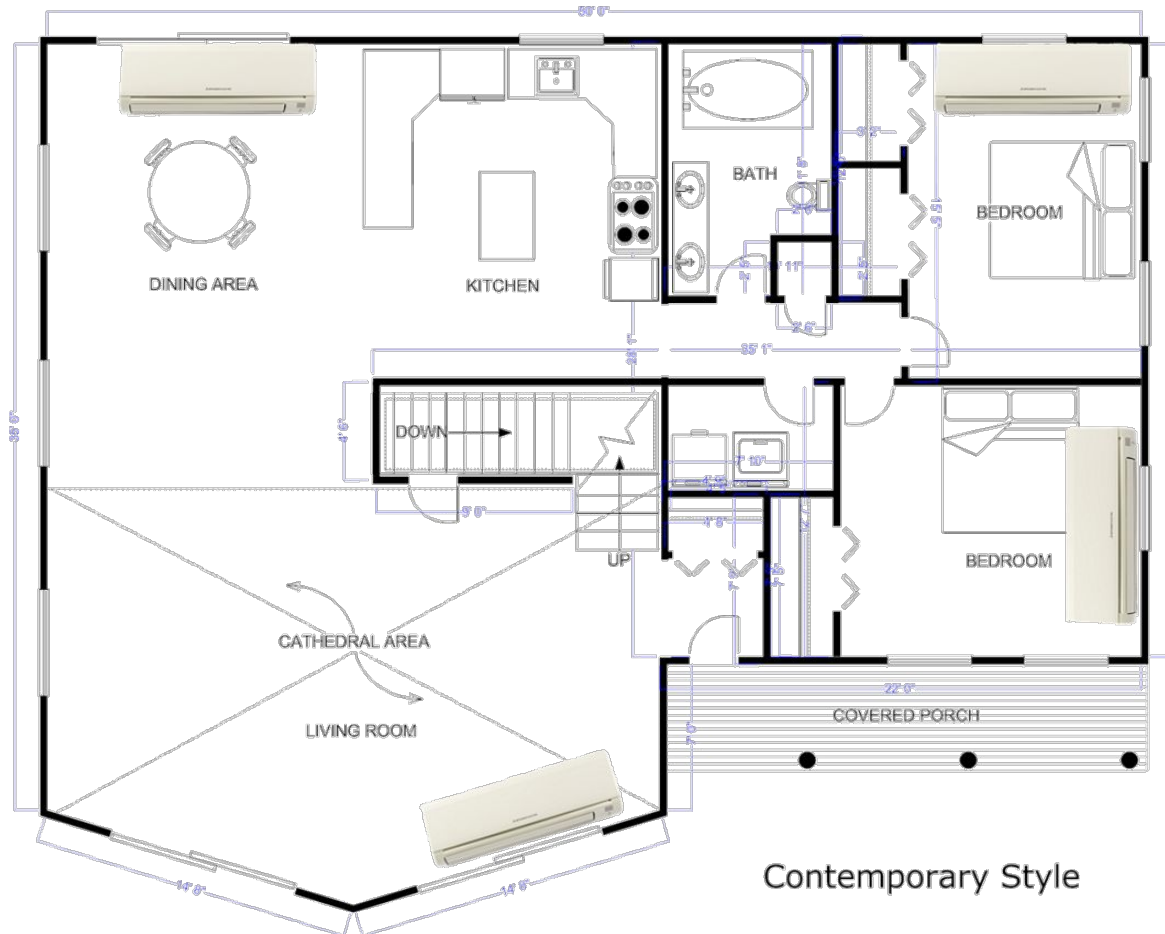


Ceiling Cassette

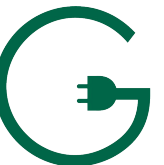


Sizing Your System

Too Many Heads in Small Space



- Four 9K heads = 36K total (33% more than needed)
- Heat pump systems are designed to run continuously
- Too much equipment = expensive and cold and clammy in summer



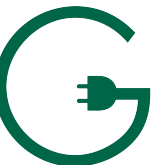
Costs



Weatherize First!

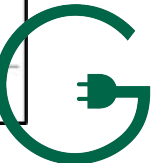
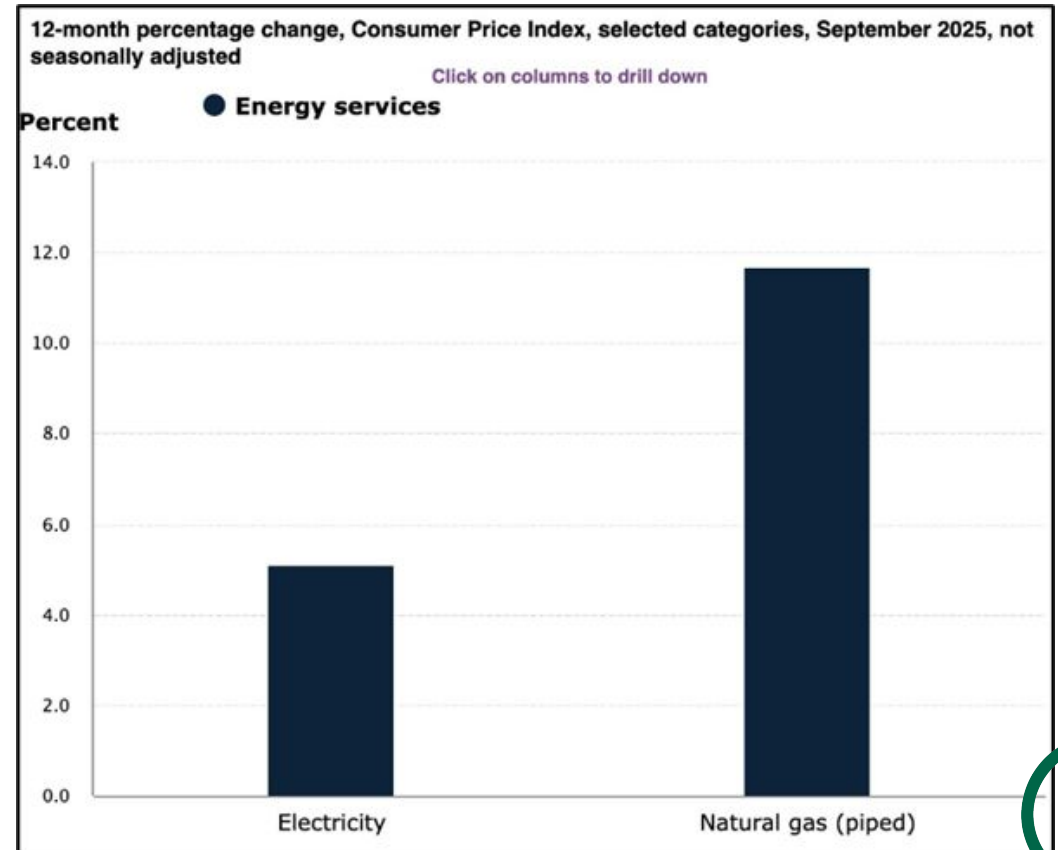
To save money on heating system replacements:

- Get a [Mass Save Home Energy Assessment](#) or [multifamily](#) assessment
- [Pre-weatherization barriers](#) (incentives for residential and commercial)
 - Moisture
 - Old electrical wiring
 - Asbestos/vermiculite
- Add any recommended insulation to unlock more rebates



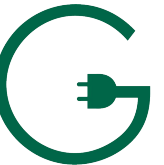
Operating Costs: Seasonal Heat Pump Rate

- Last winter: 45% of MA households were likely to save on winter bills when switching to heat pumps ([study](#))
- This winter: 64% likely to save
- 4 – 7 cents/kwh reduction
- [Eversource](#); [National Grid](#)
- Bigger discounts proposed (DOER)
- Gas rates rising faster than electric rates: [US BLS](#) and US EIA
- Get your Quote Comparison Report from
- Mass Save [Decarbonization Consultation](#)



Maintenance

- Air filters need to be cleaned periodically by homeowner
- Keep snow and ice away from outdoor unit
- Check-up every 2-3 years
- On cooler summer days, occupants should run fan function before shutting off to prevent mold.
- Deep cleaning if mold is discovered

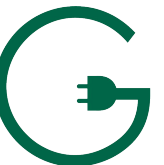


Incentives



Overview

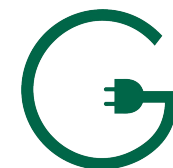
- State & Utility: Mass Save and Municipal Light and Power Plants (MLPs)
 - Designated Equity Community (Worcester) increased incentives including barrier mitigation and electrification incentives
- Financing Options:
 - Mass Save [HEAT Loan](#), interest-free, capped at \$25,000; 3-7 year term (determined by income level), no income cap
 - [MA Energy Saver Home Loan](#), owner-occupied; up to \$100,000, low/moderate income = 135% AMI (\$165K Worcester), 2% interest or less, 20-year term



MA Incentives Vary by Household Income & Zip Code

Example: 2-person household in Worcester, MA

- Low Income: Up to \$67,709
 - Worcester Community Action Council would cover cost of heat pump installation for oil or electric resistance customers
- Moderate Income: Up to \$90,279
 - Mass Save “Enhanced Incentive”: \$16,000 per apt/home or 100% discount turnkey
- Market Rate: \$90,280 and greater
 - Mass Save: up to \$10,000 per apt/home (\$3,000/ton of heating capacity)



Designated Equity Communities

For all 1-4 homes in Worcester, no income qualification needed

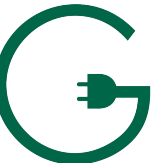
- 100% off weatherization (insulation & air sealing)
- Increased rebates on qualifying energy-efficient HVAC & water heating
- Additional incentives to address pre-weatherization barriers

For 1-4 rental properties in Worcester, no income qualification, with landlord permission

- No-cost air source heat pumps (*gas-heated homes not eligible for this measure*)
- Up to 100% off health & safety barrier remediation
- Turnkey delivery experience, with project coordination managed for you

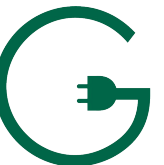
[Designated Equity Communities | Income Based Offers | Mass Save](#)

DECs: Brockton, Chelsea, Everett, Fall River, Framingham, Fitchburg, Lawrence, Lowell, Lynn, Malden, New Bedford, Oak Bluffs, Pittsfield, Quincy, Revere, Salem, Springfield, Tisbury, Woburn, and Worcester



Heat Pump Water Heaters

- \$750 “instant” rebate in MA – through contractor, Lowe’s or Home Depot
- 2 - 3 times more efficient than all other tank equipment
- Need adequate space for air exchange
- Electrical wiring – 240-volt circuit
- Condensate drain
- Makes space cooler and dryer
- Split-System \$1500; solar-assisted: 30% federal tax credit, no cap
- [Heat Pump Water Heater Marketplace -- Mass Save®](#)
- [www.efficiencymaine.com/at-home/water-heating-cost-comparison/](#)

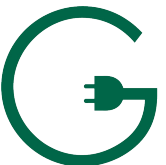
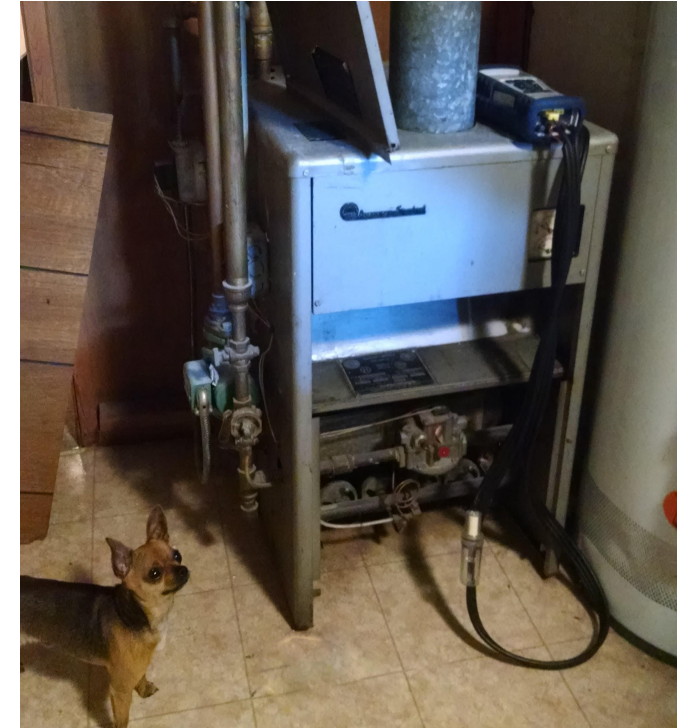


Next Steps & Working with Contractors



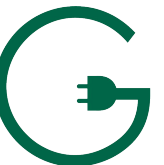
Steps Before Contacting Contractors

- Request Home Energy Assessment
 - Required to qualify for incentives
 - Good for 2-5 years
 - Add any recommended insulation and air sealing
 - For all income levels
- Research Incentives and Loan programs
 - [Mass Energy Savings Finder](#)
- **Speak with Worcester's Energy Advocate**
 - Call 508-456-5752
 - [Schedule an office hours appointment](#)
 - Email: energyadvice@worcesterma.gov



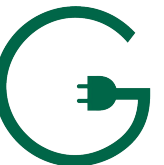
Questions to Ask Heat Pump Installers

- Is your company one of the approved installers for Mass Save?
 - [Mass Save Heat Pump Leaders Network](#)
- Is the equipment you're recommending eligible for cold climate heat pump state/municipal rebate?
- Will you formally calculate my heat load before I sign a contract to purchase specific pieces of equipment?



Get Multiple Perspectives

- **No-Cost Virtual Independent Consultations (before or after getting quotes)**
 - [Mass Save](#) – Decarbonization Consultations
 - [Energy Sage](#) – Heat Pump Marketplace
- **Research installers via [Mass Save](#) and Energy Saver Home Loan Program [contractors list](#), contractors' websites, and their manufacturers' ratings**
- **Get 3 quotes**
- GreenEnergyConsumers.org/HeatPumps



CONTACT US

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