

# Air Source Heat Pump Planning Primer for Single Family Residents

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May 23<sup>rd</sup>, 2023



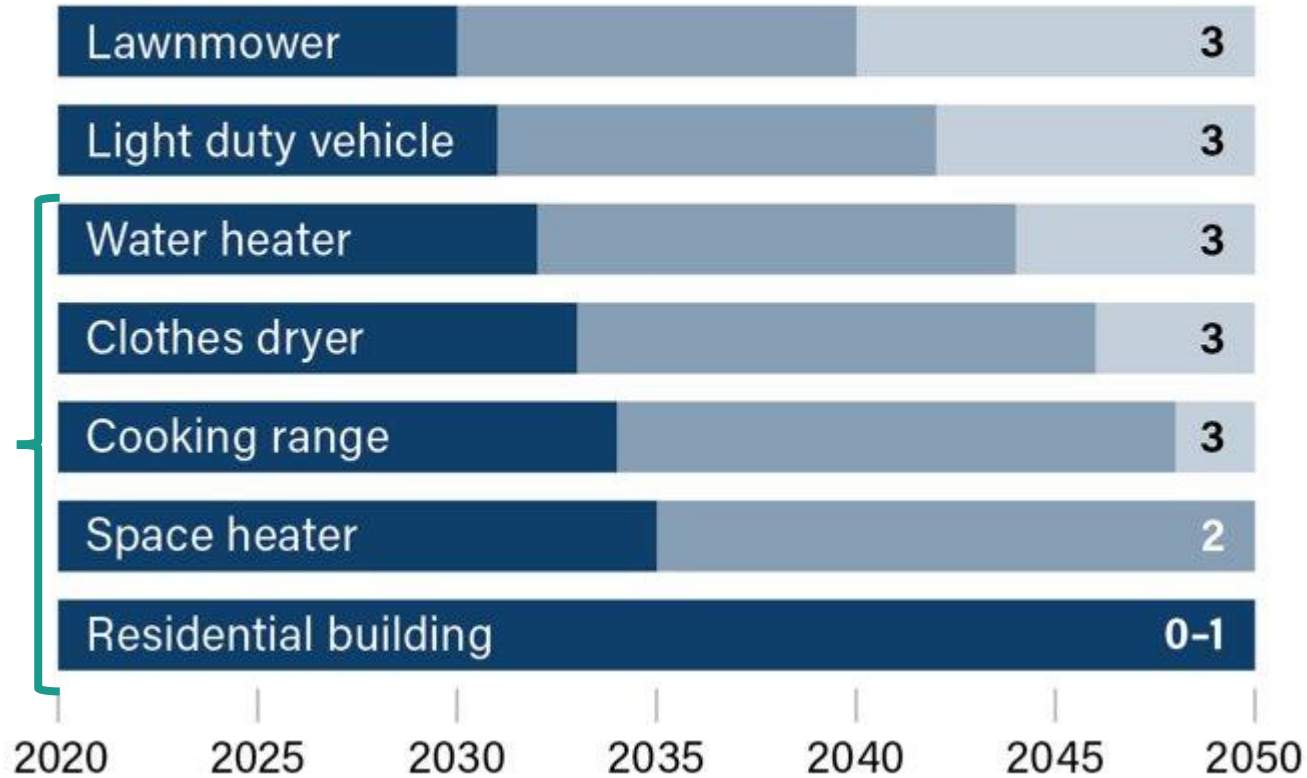
# Climate + Clean Energy Solutions for everyone.

The knowledge, people, and  
resources to solve our biggest  
energy challenges.

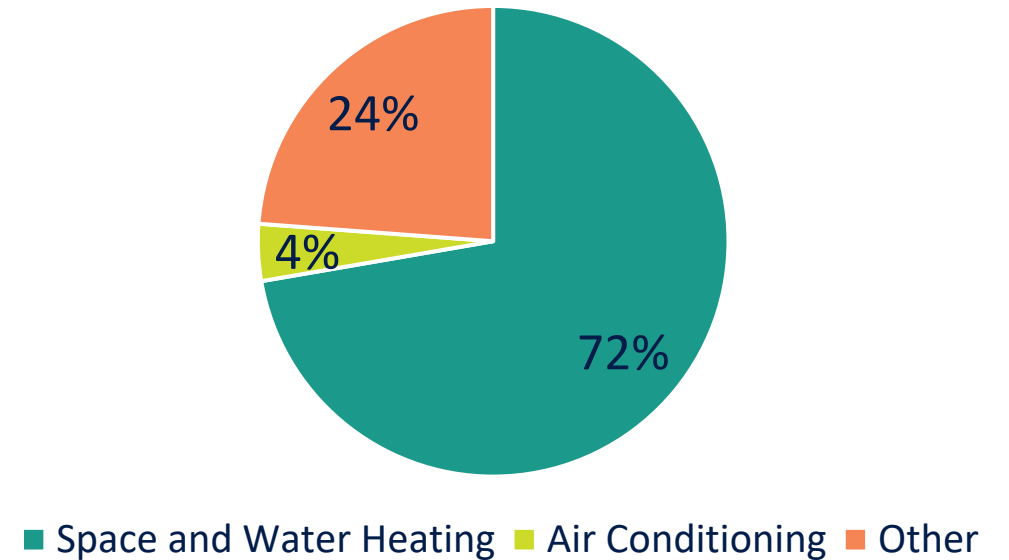


# Residential Equipment Lifetimes

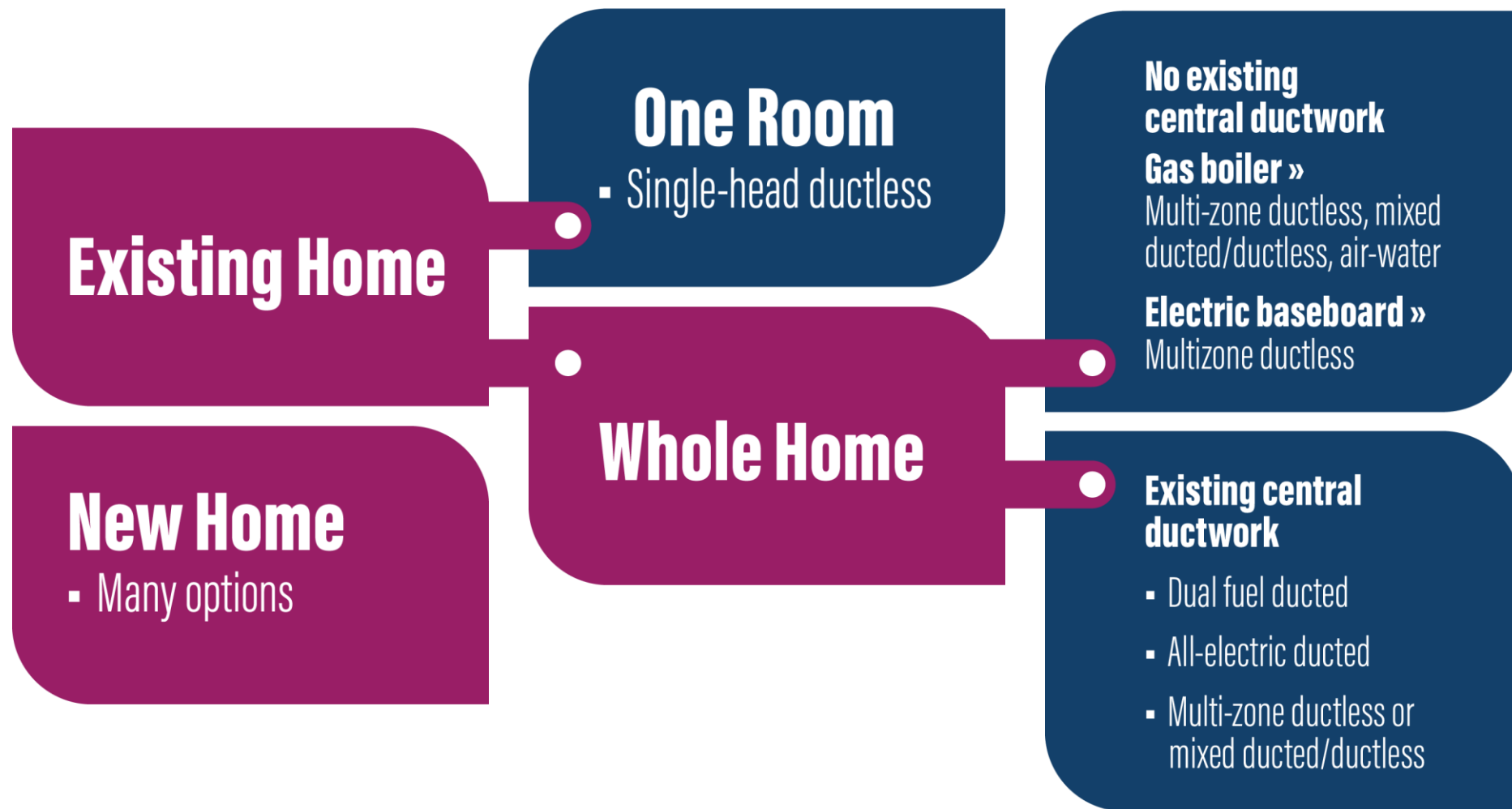
## NUMBER OF OPPORTUNITIES TO ELECTRIFY



Midwest Residential Household Consumption  
(Energy Information Administration)



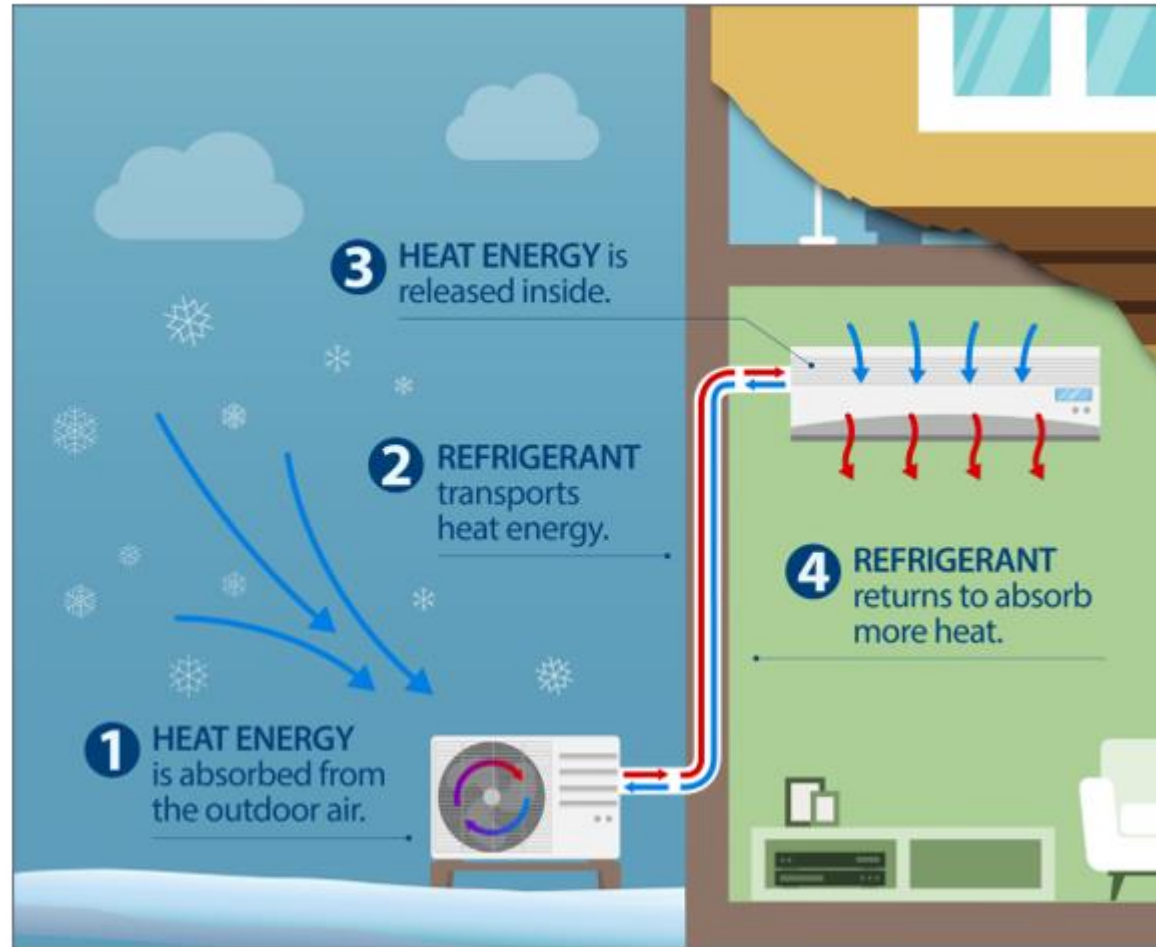
# Single-family: What type of heat pump is right for me?



**Buying Guide Example:**

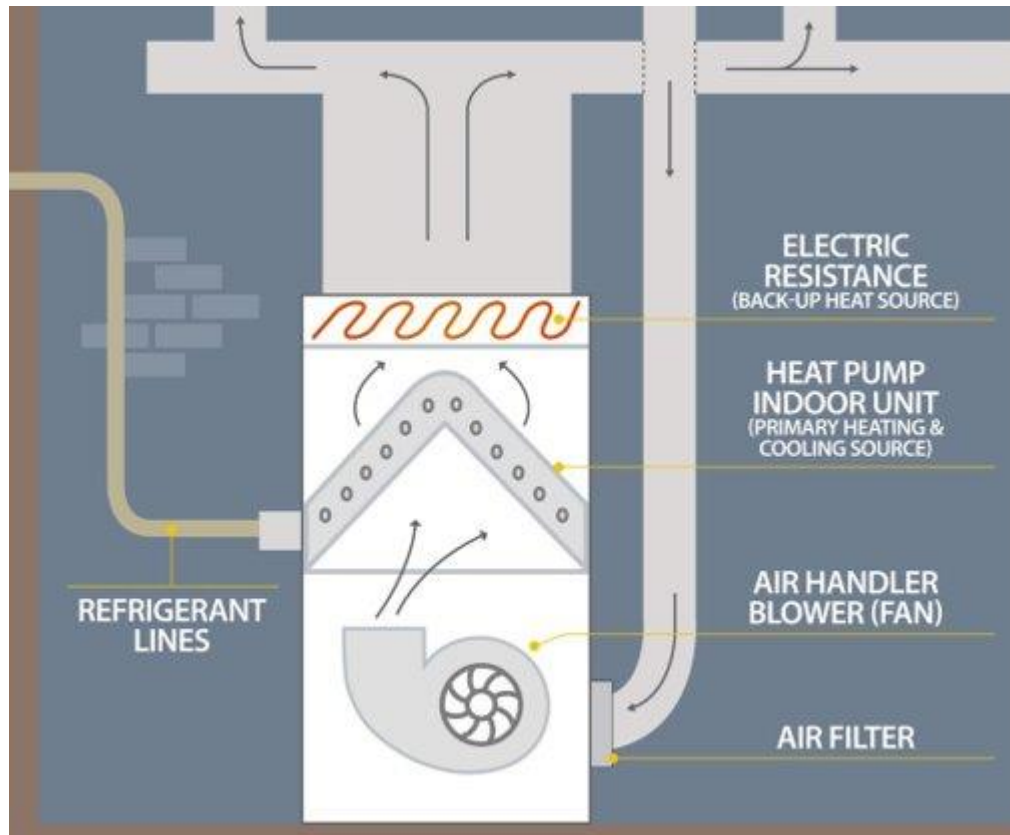
[https://neep.org/sites/default/files/resources/ASHP\\_buyingguide\\_5.pdf](https://neep.org/sites/default/files/resources/ASHP_buyingguide_5.pdf)

# Ductless Air Source Heat Pump

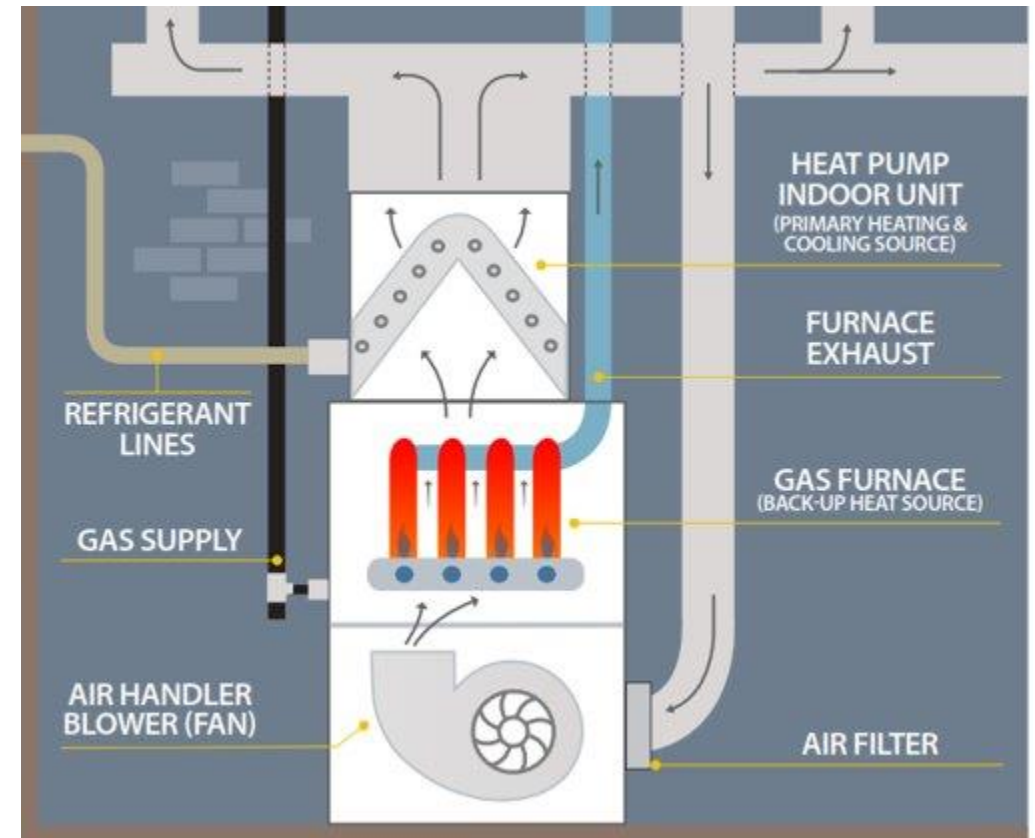


# All-Electric versus Dual Fuel Ducted

## All-Electric



## Dual Fuel

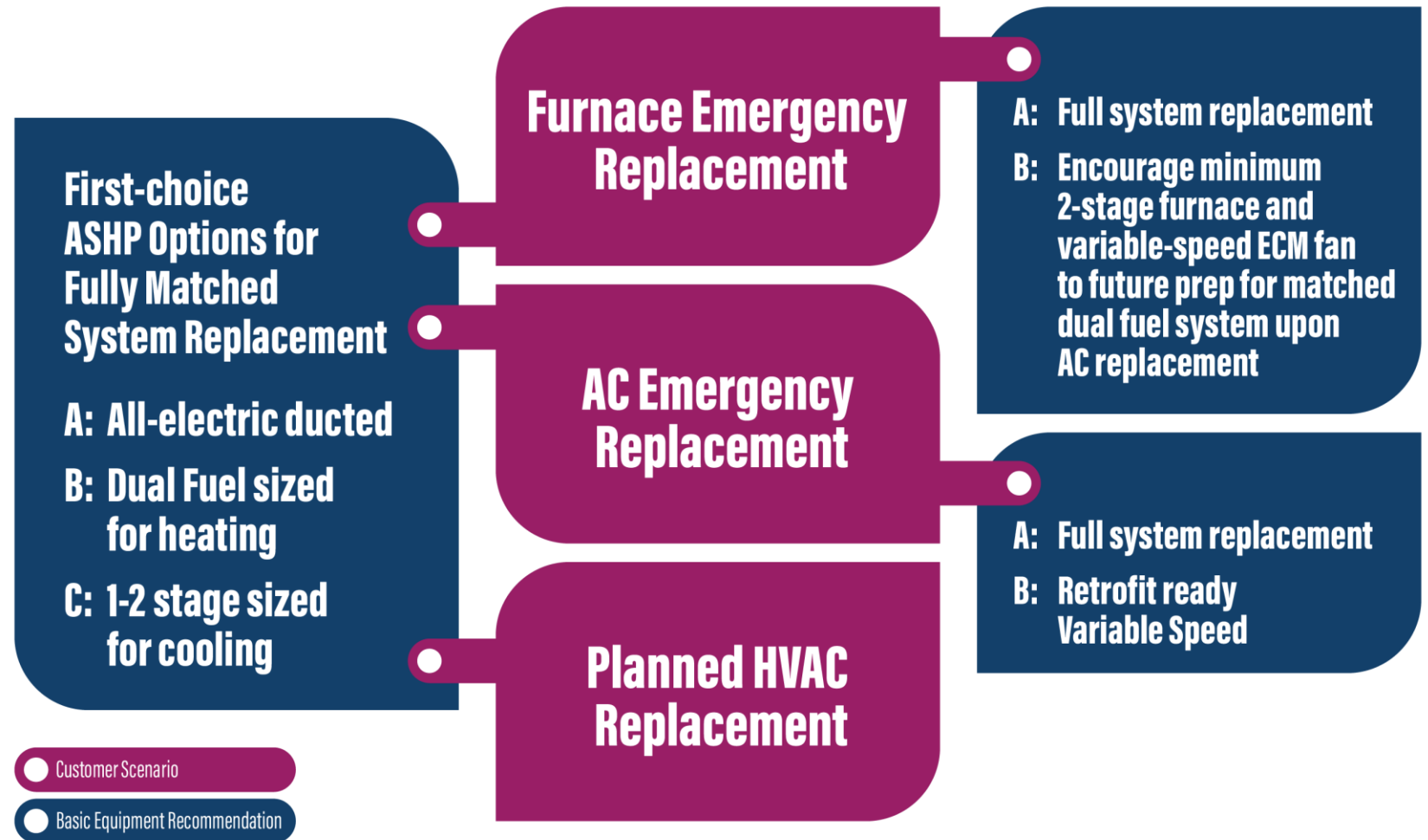


# How to incorporate a heat pump into sales process for single-family homes with forced air furnaces?

“Good” “better”

“best” depends on:

- Existing fuel type
- Customer goals
  - Economics
  - Environment
  - Comfort



# Types of Dual Fuel Air Source Heat Pumps

	Single or two-speed	Modern Variable Speed	Retrofit-Ready Variable Speed
Model examples	Available from all manufacturers	Top-tier from all manufacturers	Bosch IDS Gree Flexx Mitsubishi Intelli-heat Samsung Hylex
Relative Cost	Low	Moderate to High	Moderate
Cold-climate potential performance	No	Yes	Yes



# Proof of Performance and Payback on Propane Dual Fuel Heat Pumps

Site	ASHP Compressor Speeds	Incremental cost	Propane reduction	Simple payback	Switchover (°F)
1	variable	\$2,600	64%	4 years	20
2	variable	\$3,200	50%	5 years	25
3*	variable	\$2,400	41%	9 years	30
4	variable	\$2,600	67%	3 years	None
5	Two	\$900	59%	2 years	None
6	variable	\$2,000	43%	7 years	28
7	One	\$700	34%	3 years	20
8	One	\$600	63%	1 year	25

\*On [NEEP ccASHP list](#)

Source: <https://slipstreaminc.org/research/dual-fuel-air-source-heat-pump-pilot>



# Assessing Field Performance of Clean Water Heating Tech

- Heat Pump Water Heater Field Study  
(Michigan, 2022)
- **Emerging 120V “Plug in” Heat Pump Water Heater Study**  
(Currently identifying study participants in WI)

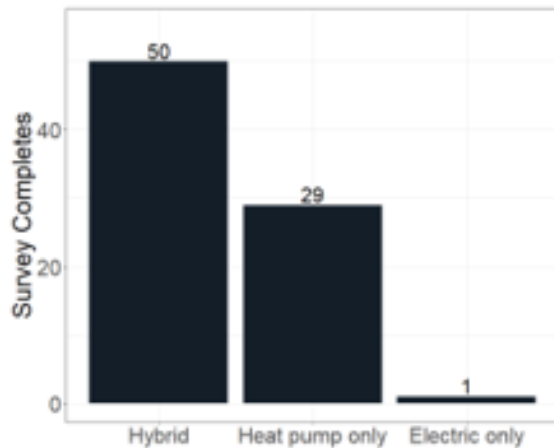
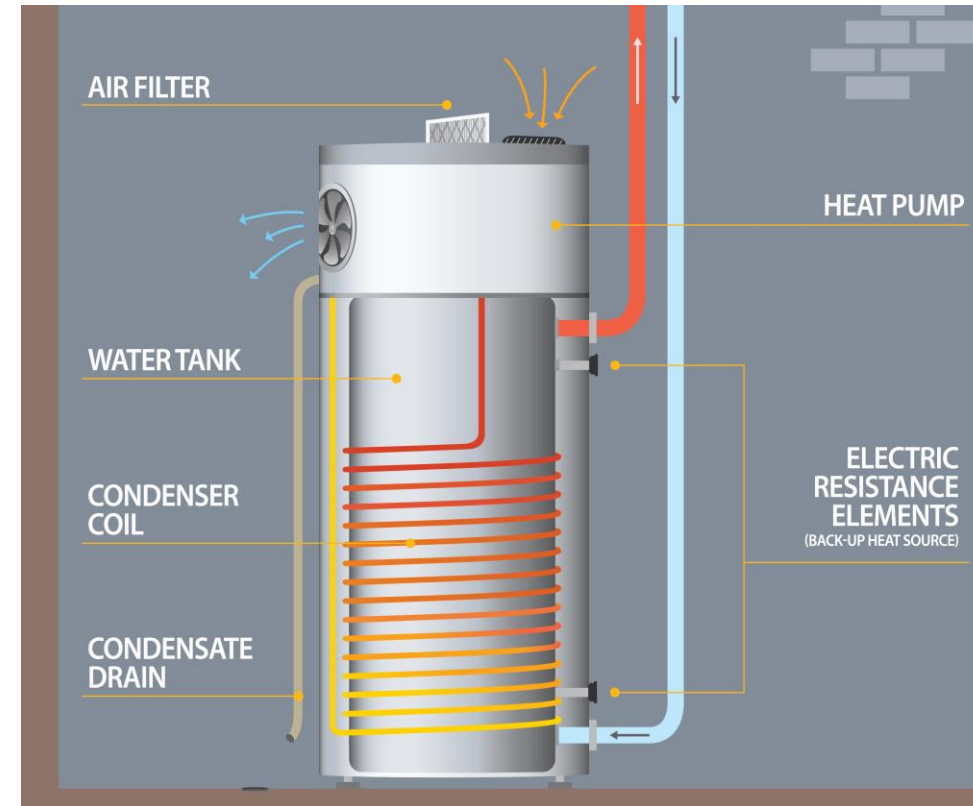


Figure 24. Most common control setting



# Planning for residential air-source heat pump market transformation in Wisconsin by 2030

- Public Webinar, **Tuesday May 30<sup>th</sup> 12-1:30pm**
- Presenting playbook for:
  - State and Focus on Energy
  - Utilities
  - Communities
- Register  
<https://slipstreaminc.org/education/ashp-market-transformation-in-wisconsin>



**Thank you!**



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