

Air Source Heat Pump Planning Primer for Single Family Residents

Justin Margolies | Slipstream

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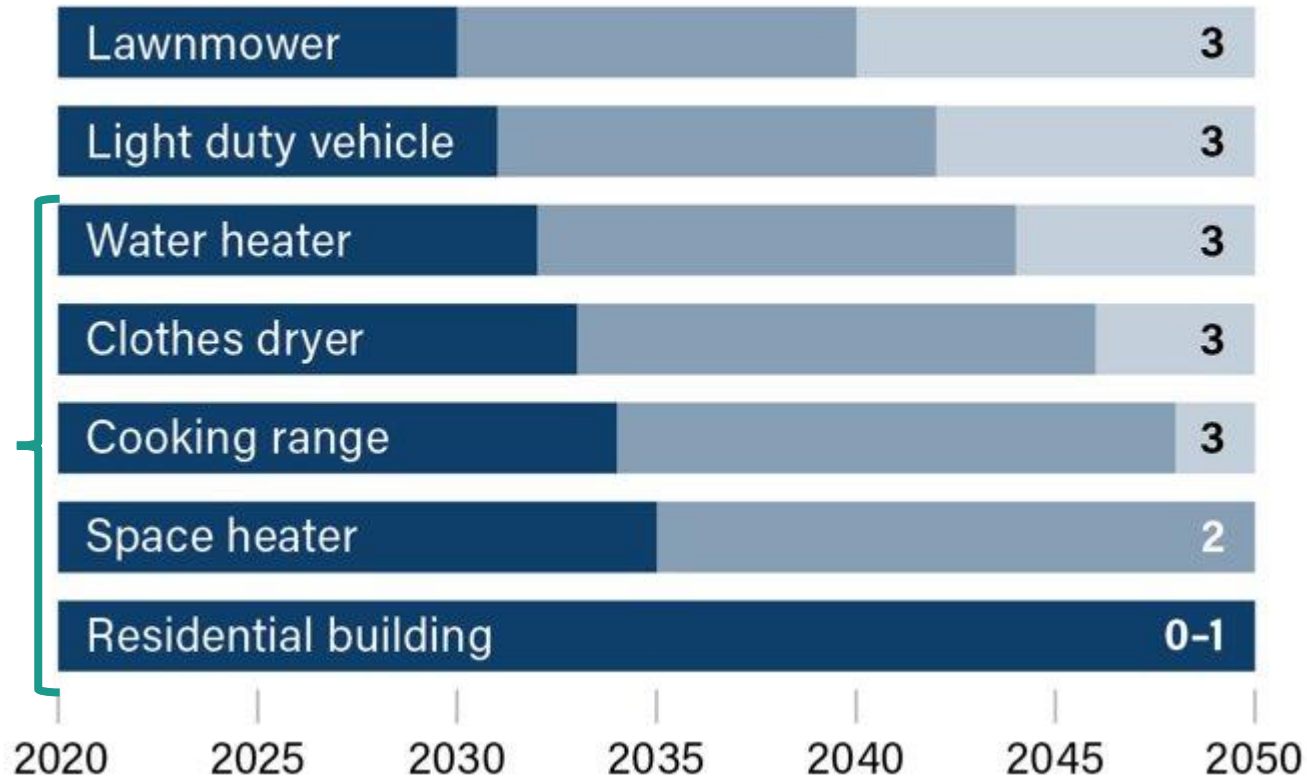
Climate + Clean Energy Solutions for everyone.

The knowledge, people, and
resources to solve our biggest
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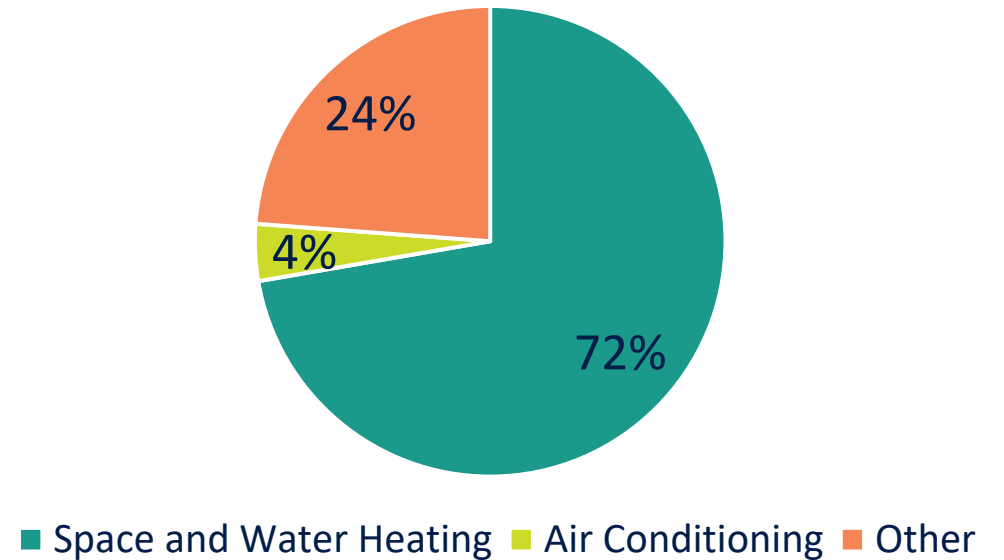


Residential Equipment Lifetimes

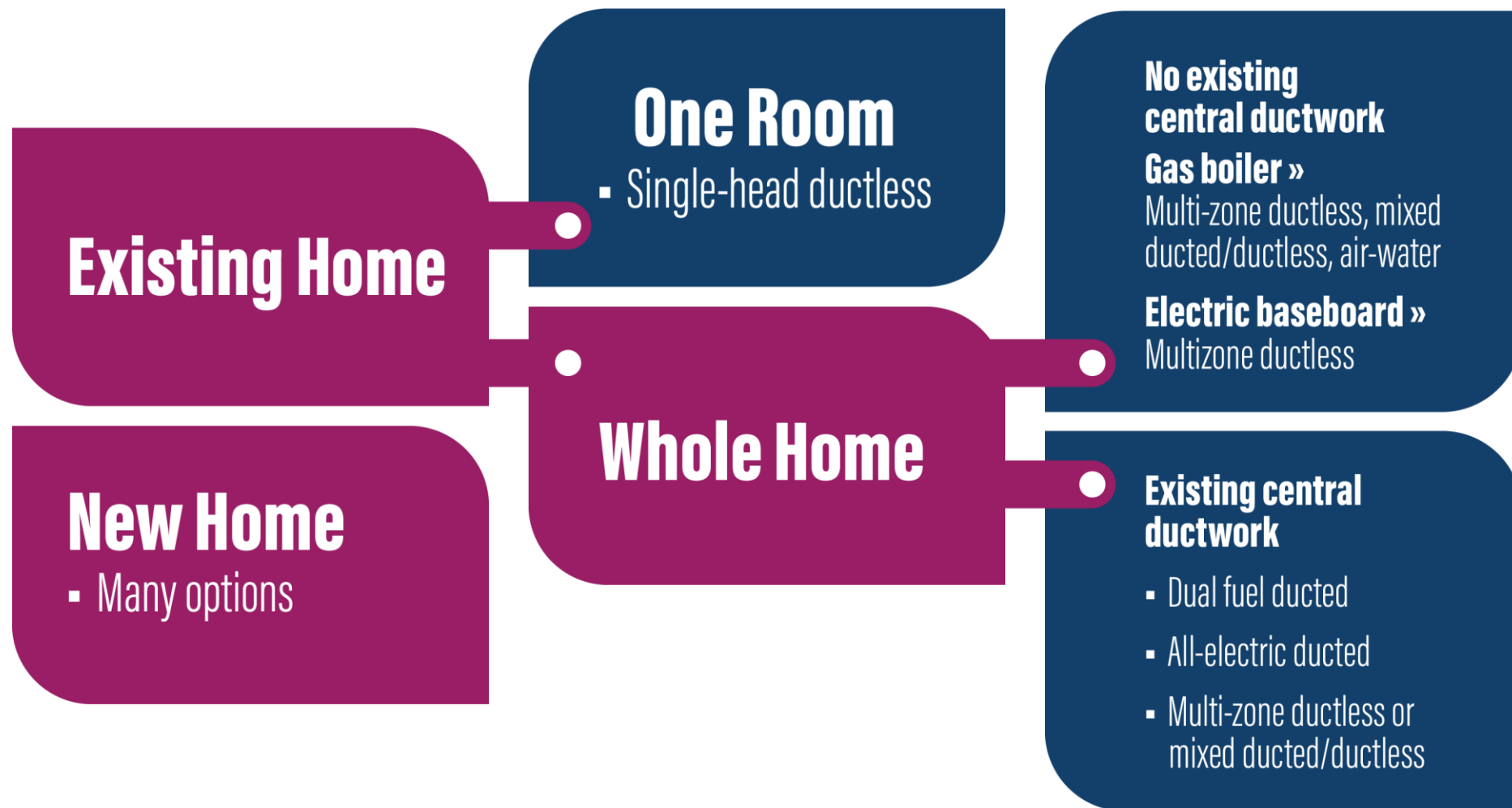
NUMBER OF OPPORTUNITIES TO ELECTRIFY



Midwest Residential Household Consumption
(Energy Information Administration)



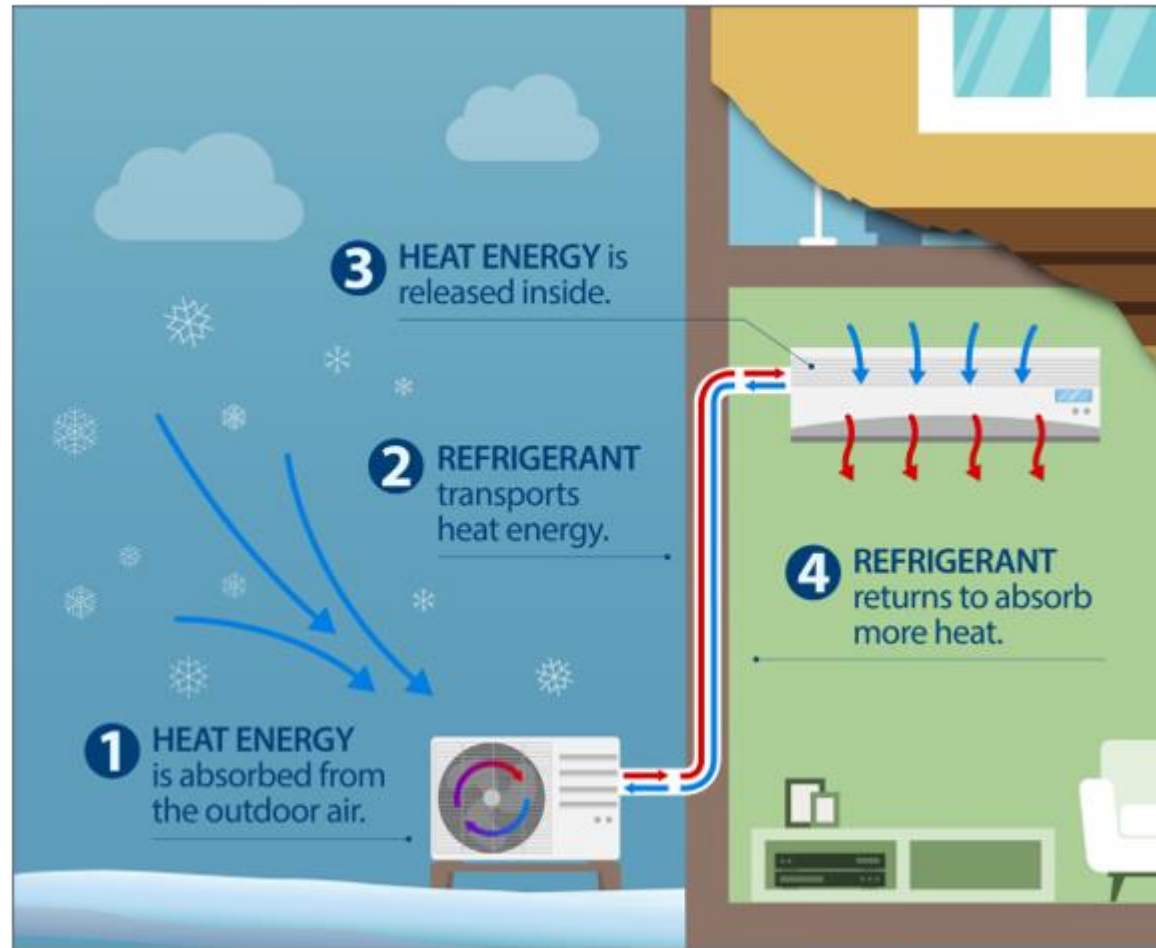
Single-family: What type of heat pump is right for me?



Buying Guide Example:

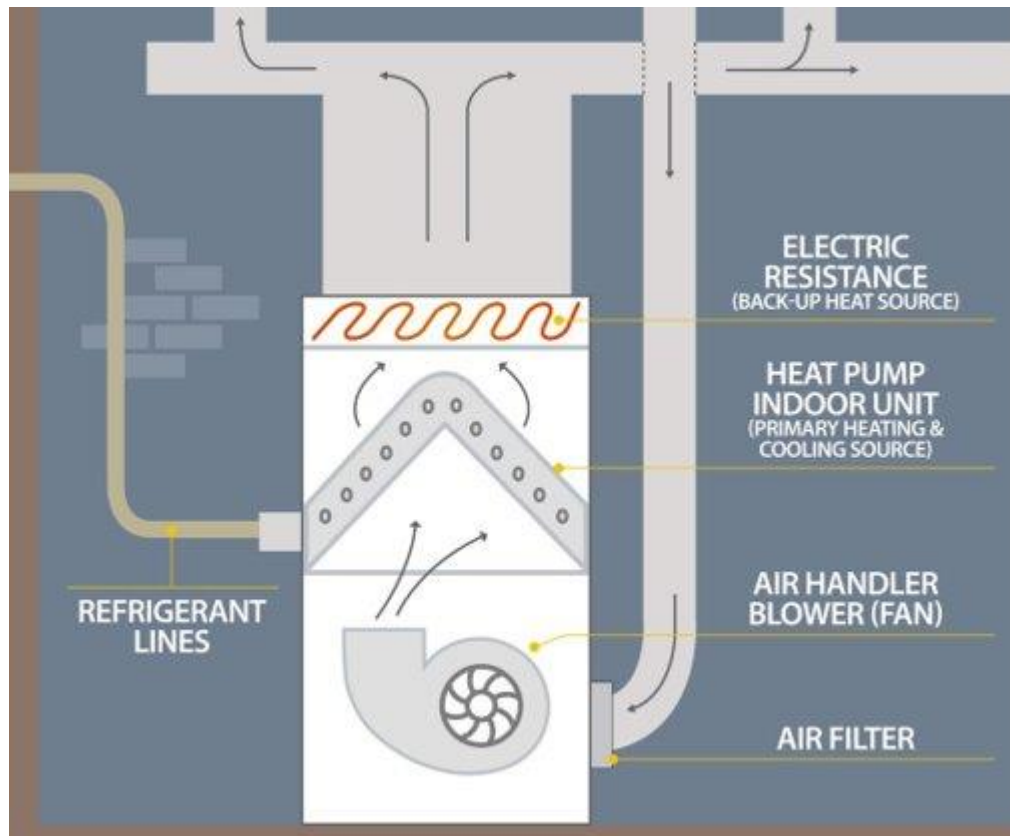
https://neep.org/sites/default/files/resources/ASHP_buyingguide_5.pdf

Ductless Air Source Heat Pump

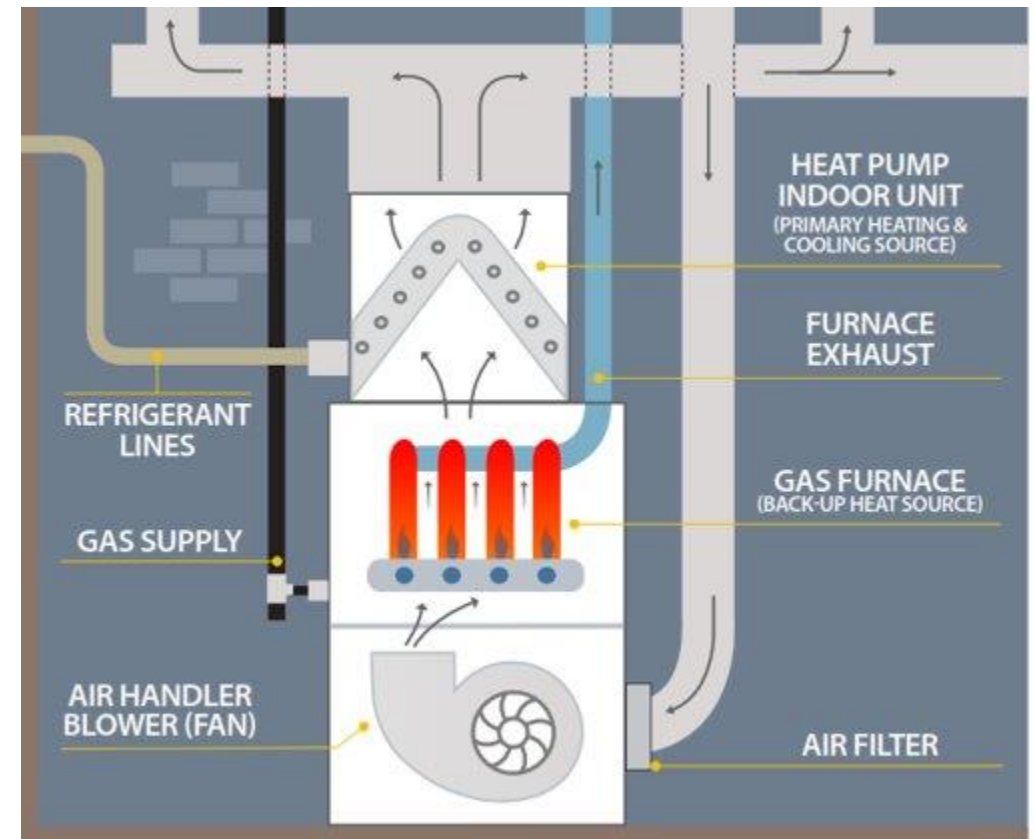


All-Electric versus Dual Fuel Ducted

All-Electric



Dual Fuel

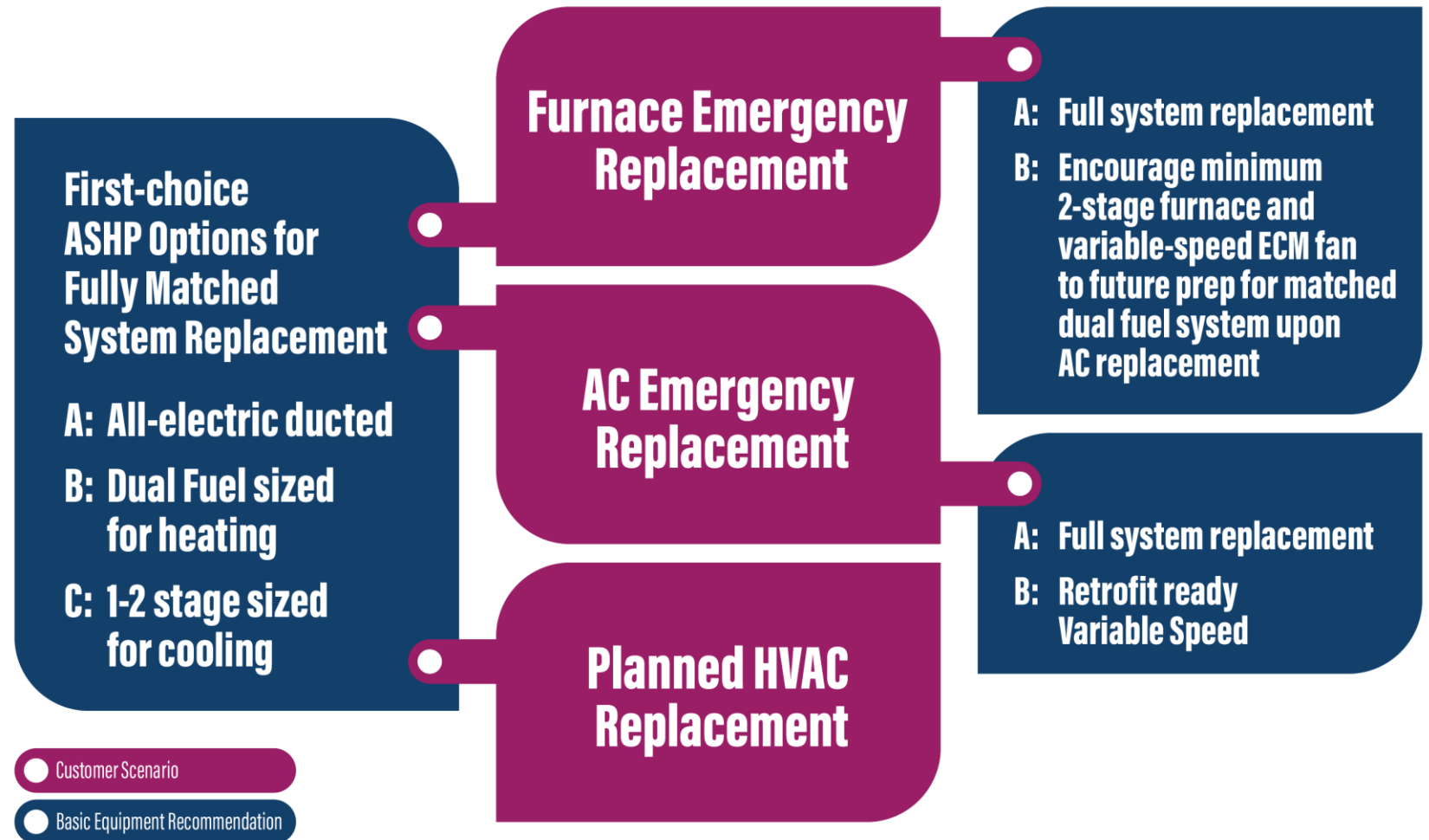


How to incorporate a heat pump into sales process for single-family homes with forced air furnaces?

“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)

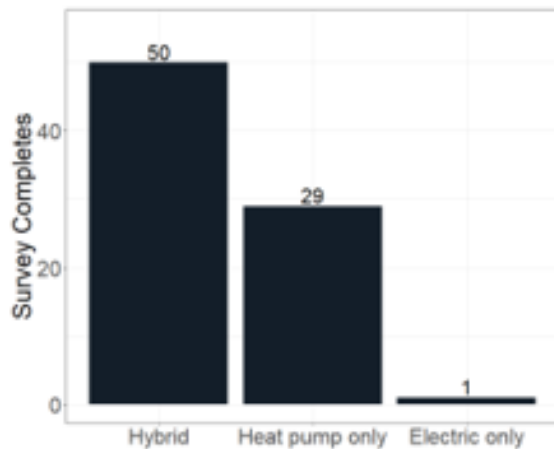
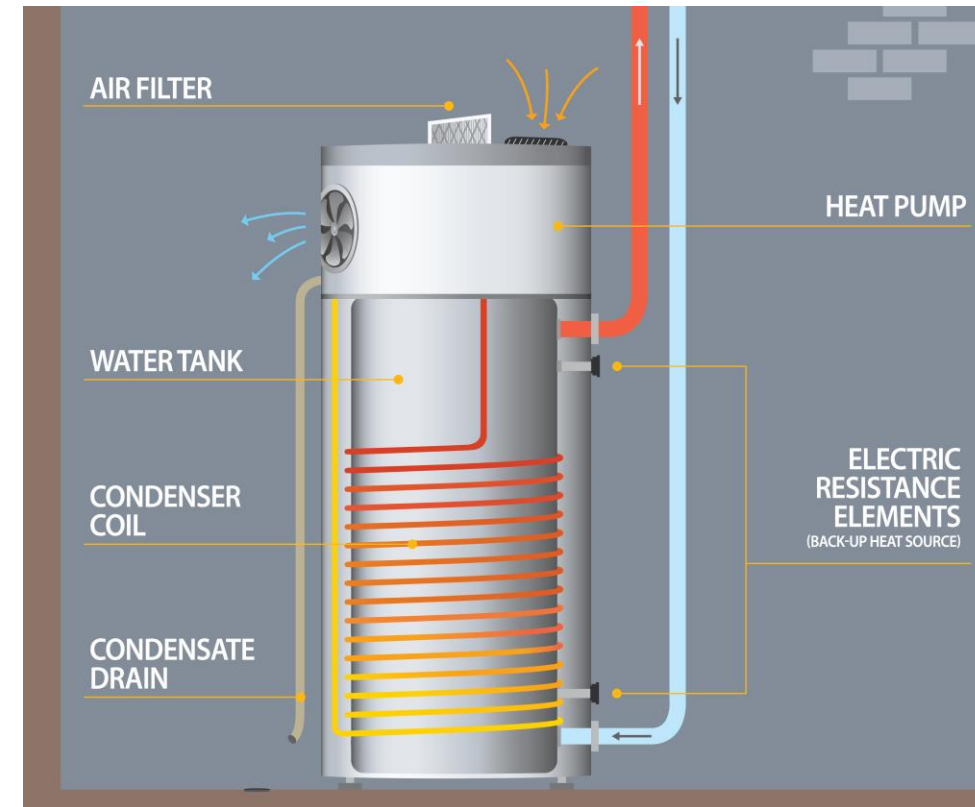


Figure 24. Most common control setting



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

- Public Webinar, **Tuesday May 30th 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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