



# Momentum Savings & Market Research Quarterly Call



February 7, 2024





Org Name

+

Answer this question:

*In one word, share what  
gets you through the  
winter months.*



# 2022 Northwest HVAC Market Snapshot

# HVAC Sales Data Collection

Annual collaboration between NEEA and BPA

**Goal:** Track residential and light commercial HVAC sales volumes and efficiency levels

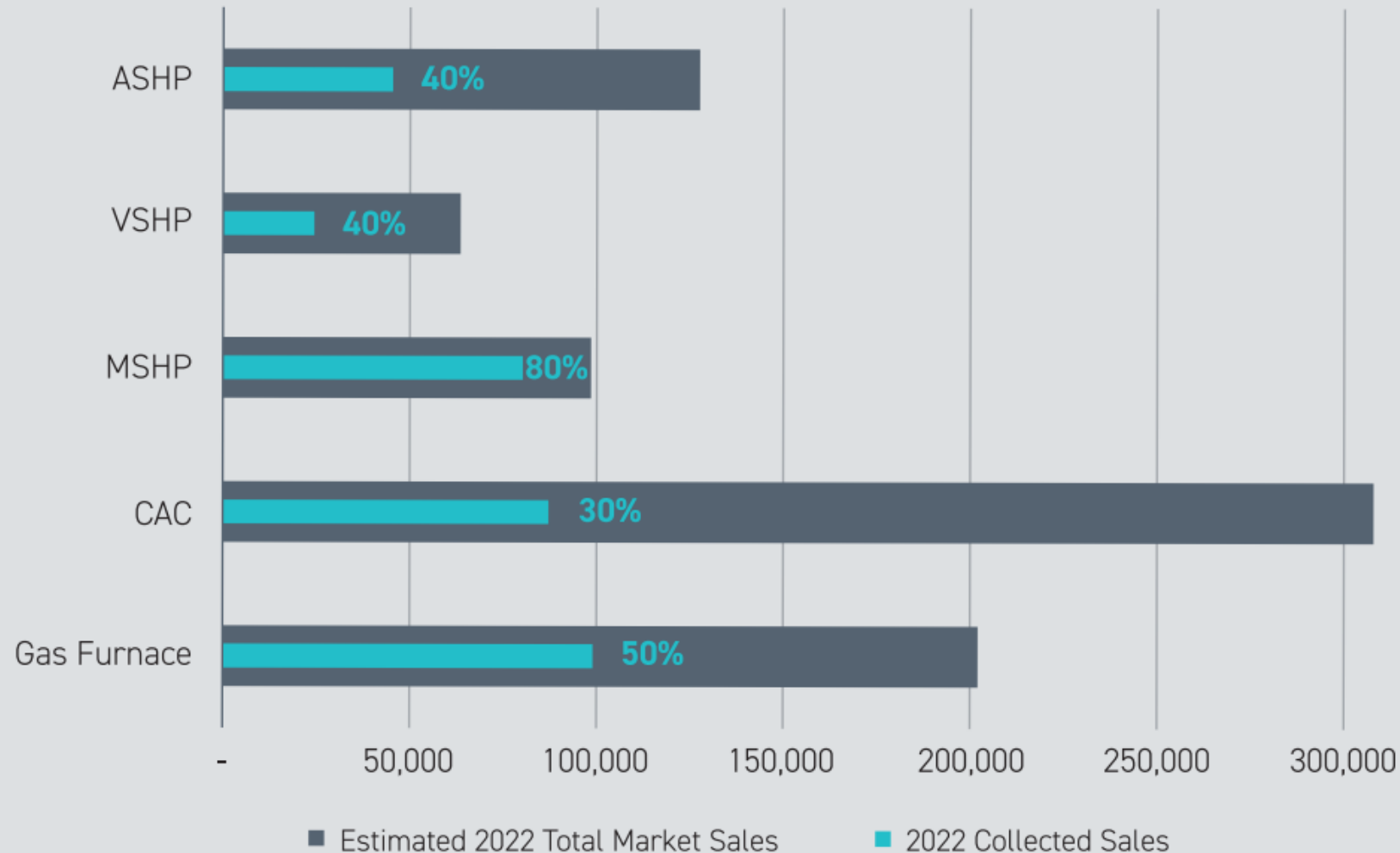


Data Collection &  
Model Matching

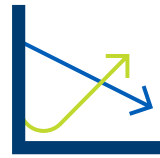


Data Analysis &  
Reporting

# 330,000 units represent between 30-80% of residential market



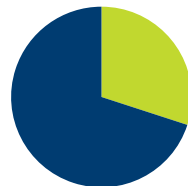
# Overall Takeaways



Combined **heat pump sales surpassed** gas furnace sales



**Gas furnace and CAC market share declined** in 2022



**VSHPs** now make up **35%** of ducted heat pump sales



# Evolution of Heat Pumps

# Centrally ducted heat pumps continue to advance



**1-stage ASHP**

Doesn't work  
below 40F

**2-stage ASHP**

Added some  
efficiency



**VSHP**

Variable speed  
offers efficiency  
and comfort

**Cold climate** or  
**dual fuel** or  
**low load**  
**efficient**

Optimized for  
climate, customer  
preference, and/or  
utility program





# Mini Splits: so many options!

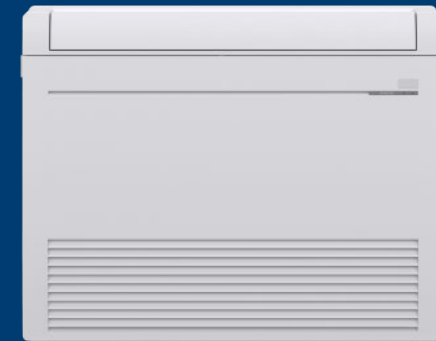
Outdoor unit



High-wall head



Indoor air-handler/  
centrally ducted

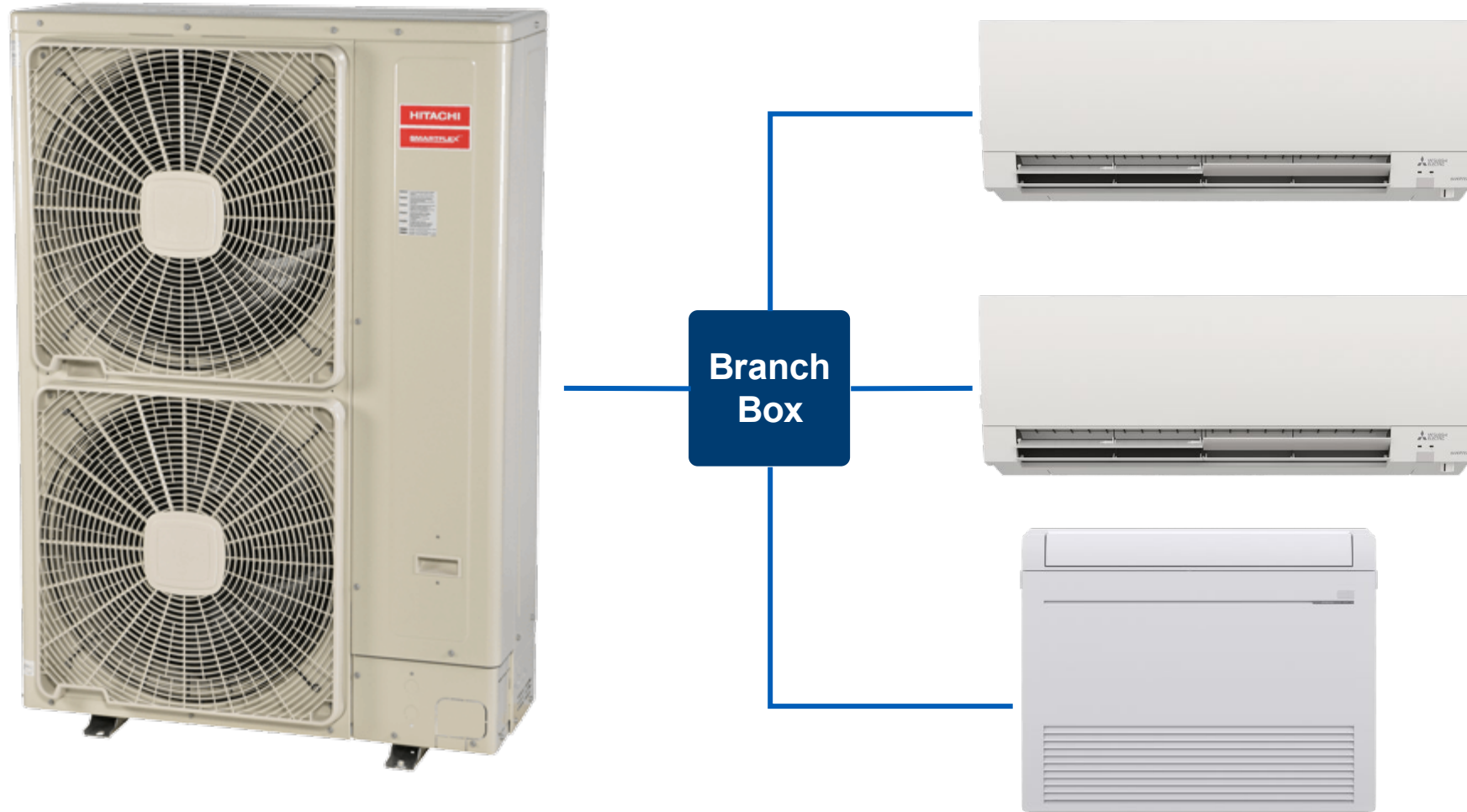


Wall-mount



Ceiling cassette

# What are Mini VRF systems?



# Mini VRF vs. Multi-Head MSHP

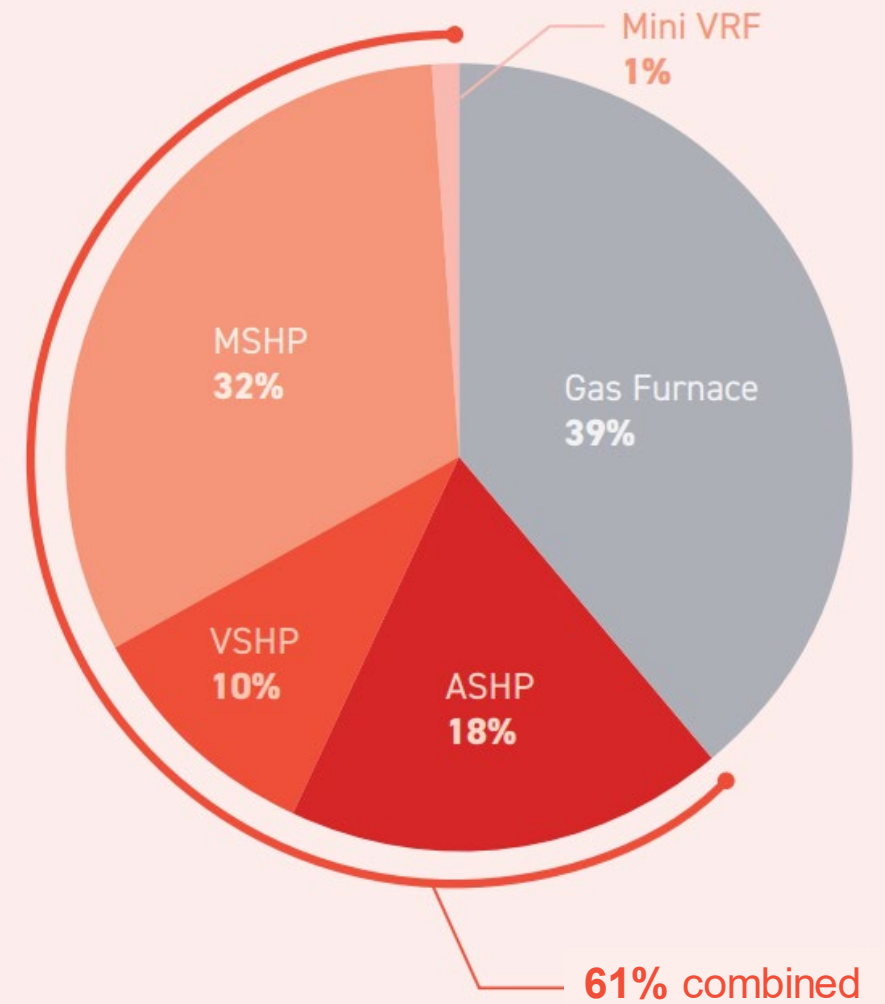




# Technology Mix

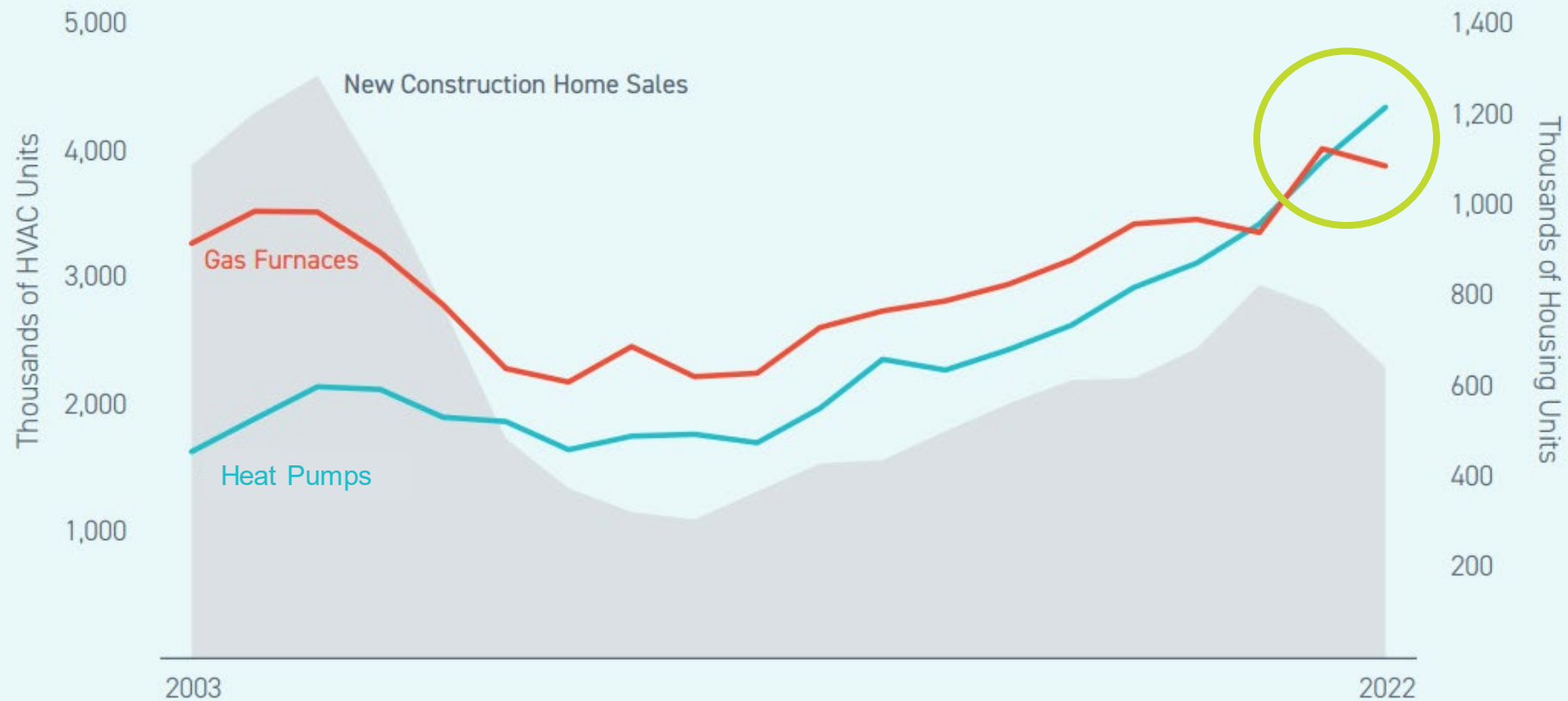
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# Heat pumps surpass gas furnace sales

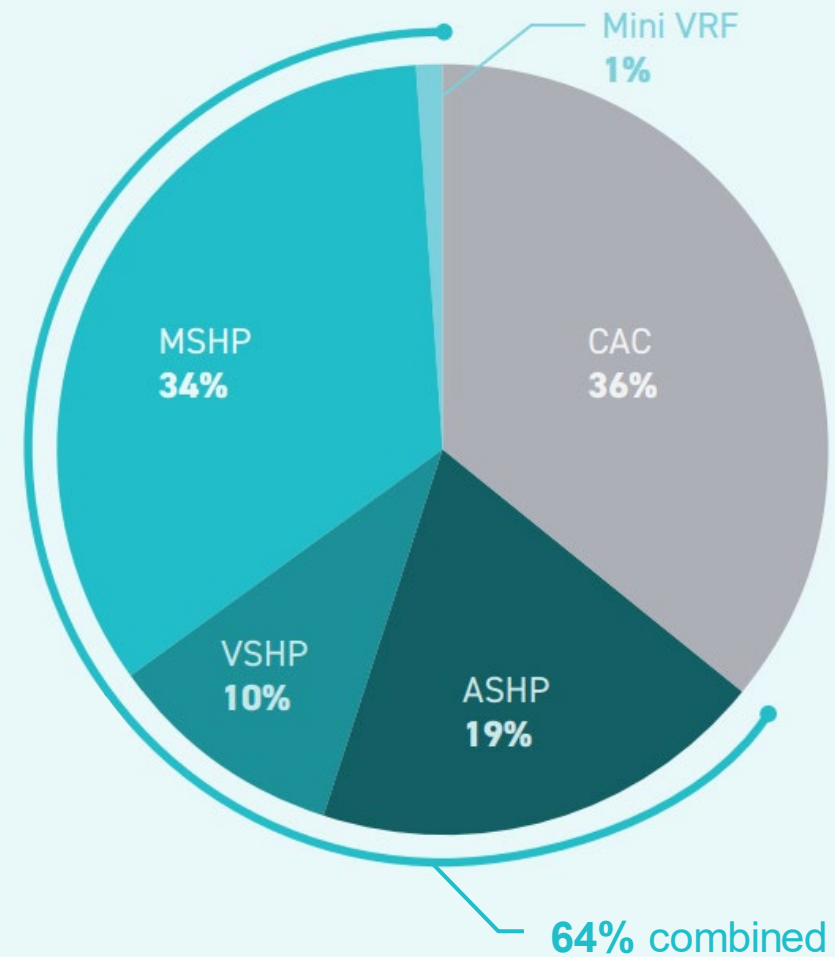


# HVAC follows new home sales ... until now

National AHRI Sales vs. U.S. Census New Construction Home Sales

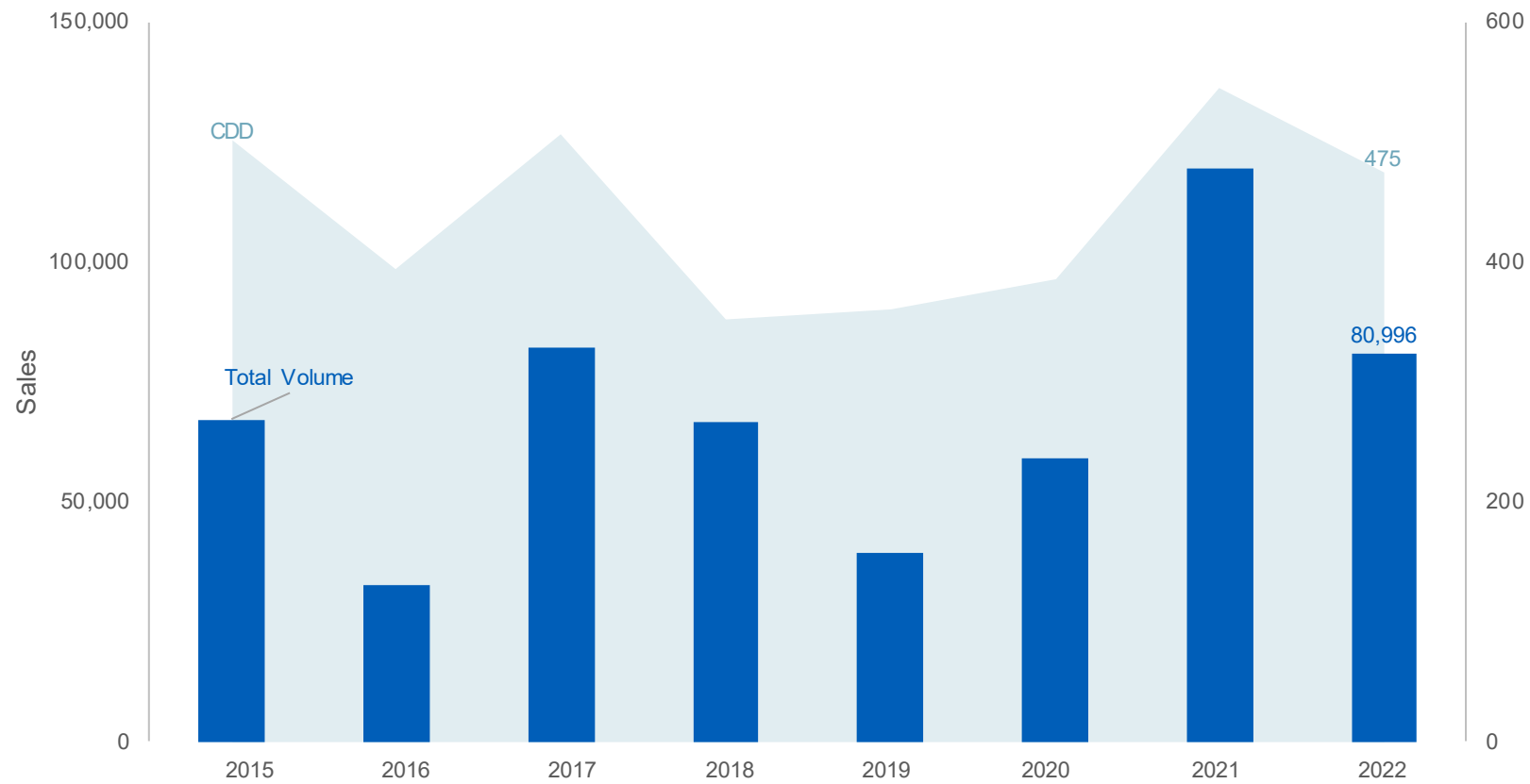


**CAC sales  
lower  
compared to  
heat pumps**



# Room AC sales correspond with weather

RAC sales volume vs. Cooling Degree Days



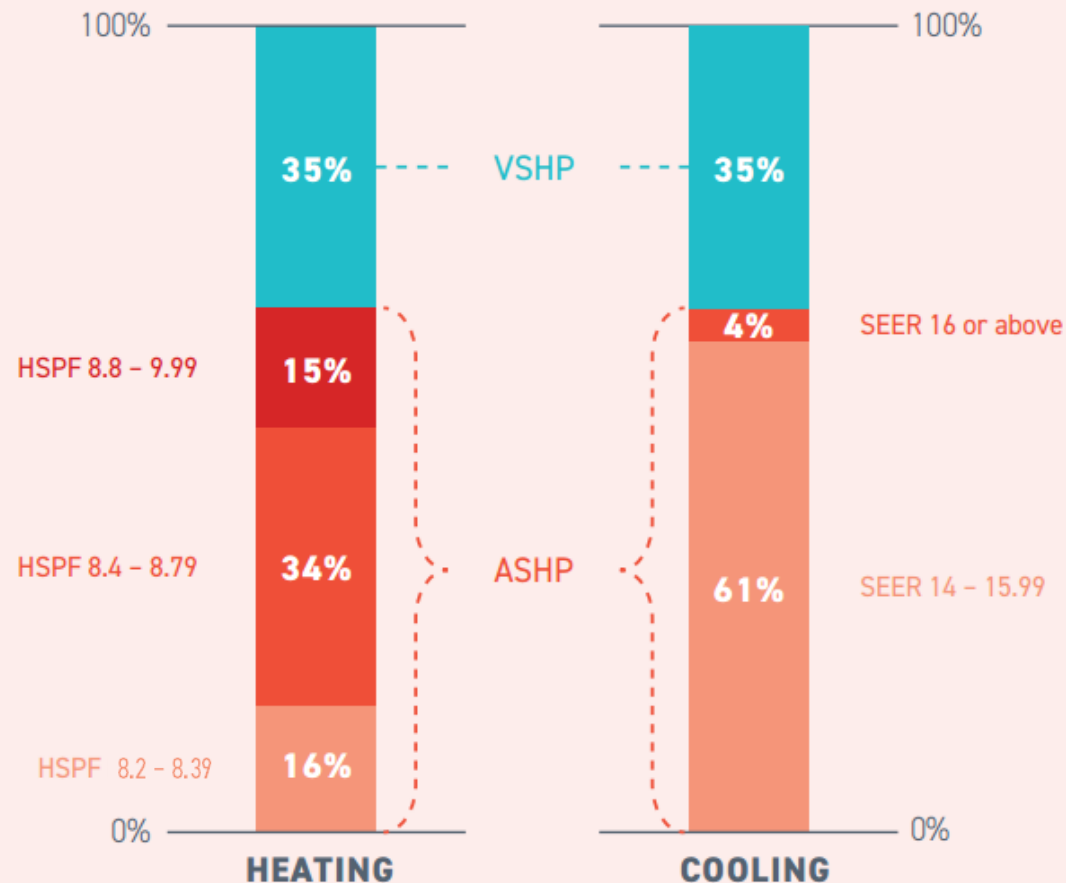




# Efficiency Mix

# VSHPs now 35% of centrally ducted heat pumps

Ducted Heat Pump Heating and Cooling Efficiency Levels

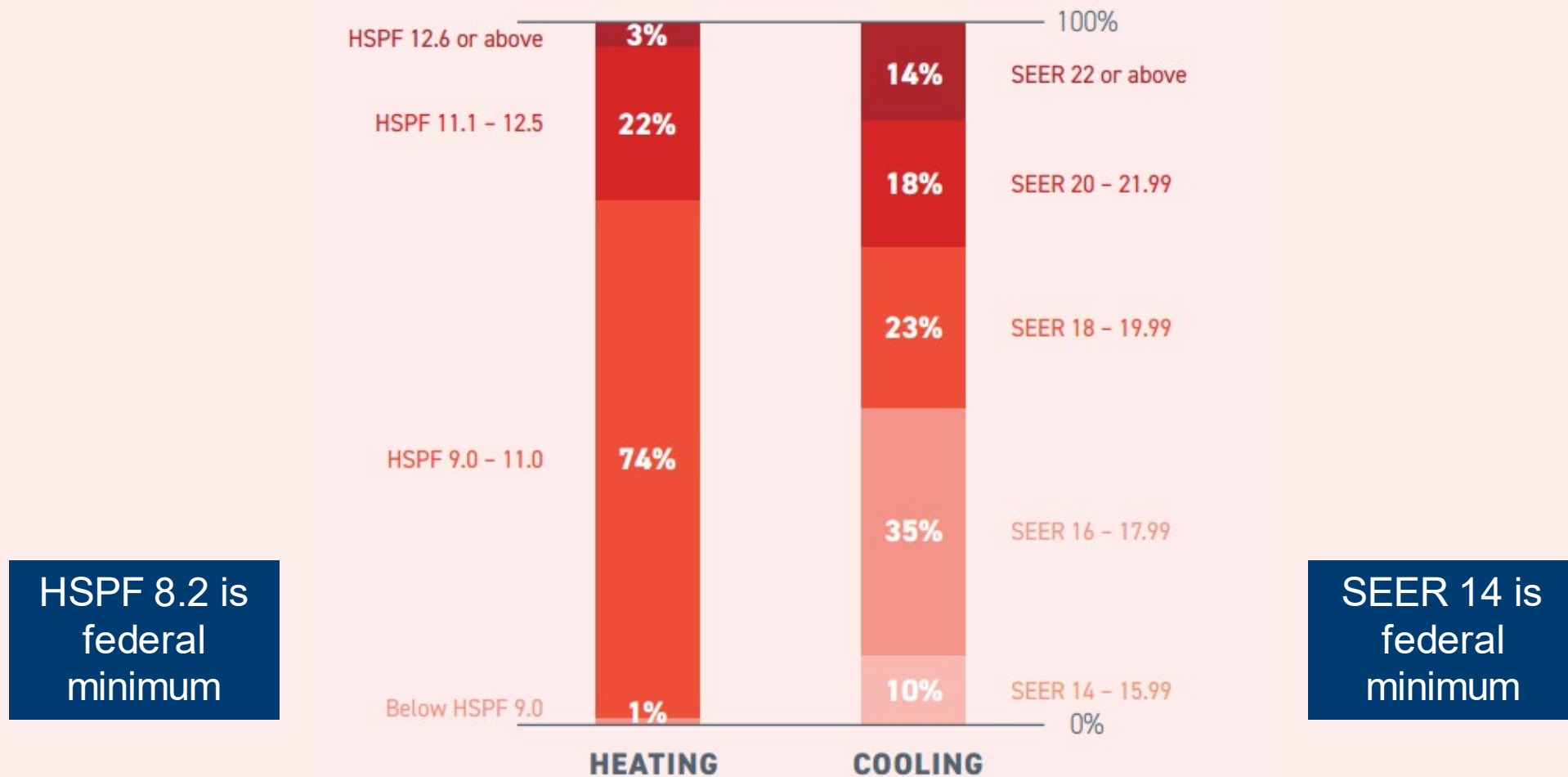


HSPF 8.2 is federal minimum

SEER 14 is federal minimum

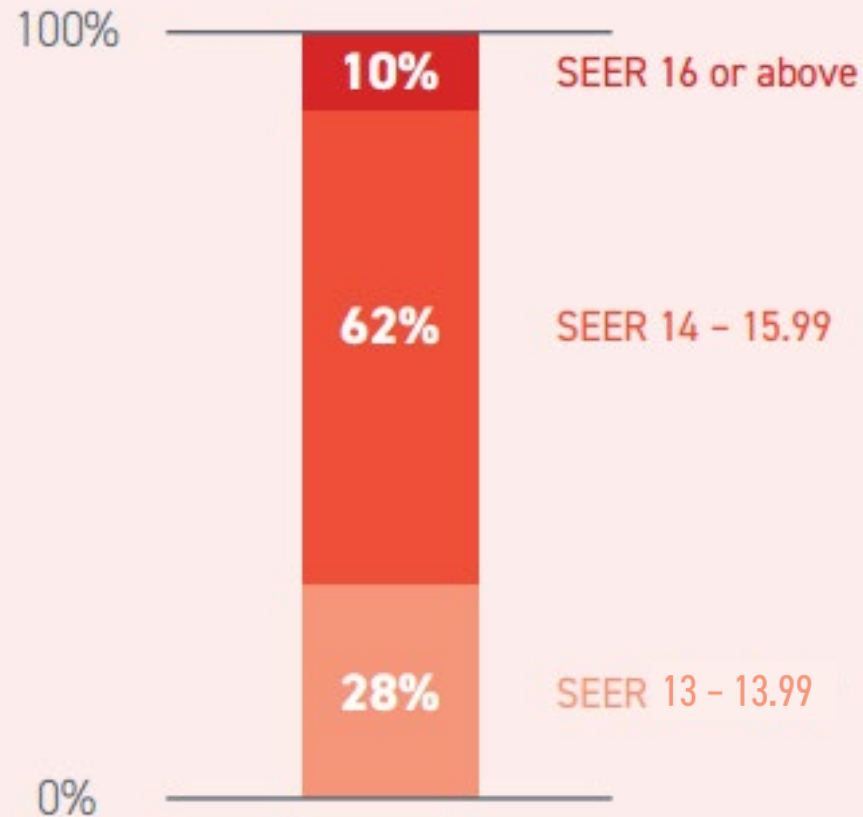
# MSPs reach much higher levels of efficiency

Mini-split Heat Pump Heating and Cooling Efficiency Levels



# 72% of CAC sales are above minimum standards

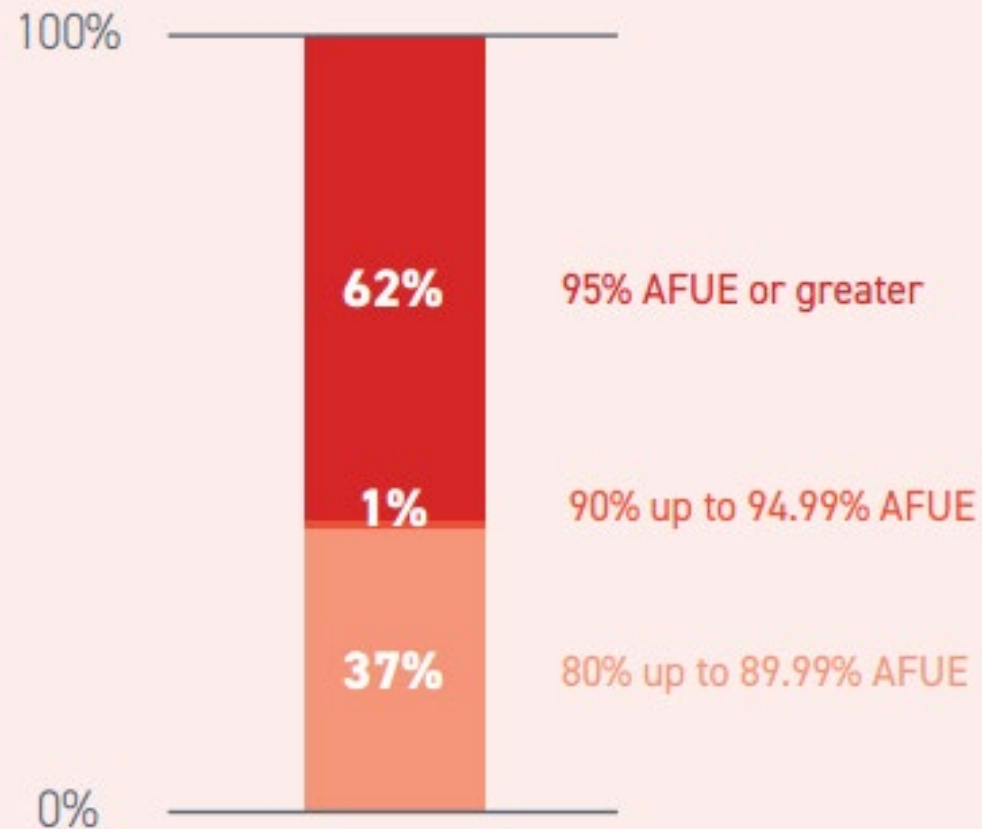
## Central Air Conditioner 2022 Efficiency Levels



SEER 13 is  
federal  
minimum

# Gas furnaces are either high-efficiency or minimum standard

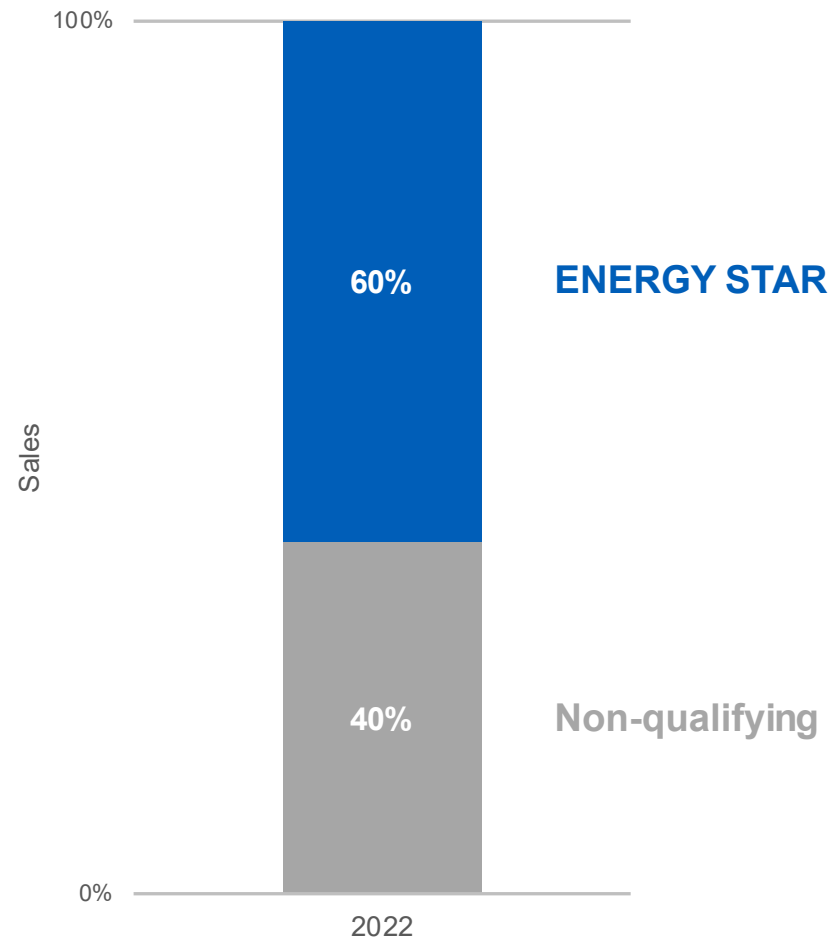
## Gas Furnace 2022 Efficiency Levels



AFUE 80% is  
federal  
minimum



# Room AC ENERGY STAR units regain majority



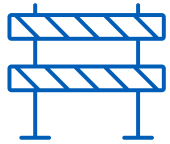


# Upcoming 2023 Sales Data Collection

# Things to look for in 2023



Standard changes – how does that affect efficiency mix?



Impact of new construction sales?



Will heat pumps continue to outpace furnaces and central AC units?



**See you May 1<sup>st</sup>  
at the next  
quarterly call!**

Questions?  
Contact Joan Wang  
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Access 2022 HVAC Sales Data  
Summary at [https://www.bpa.gov/-  
/media/Aep/energy-  
efficiency/momentum-  
savings/2022-hvac-market-  
snapshot.pdf](https://www.bpa.gov/-/media/Aep/energy-efficiency/momentum-savings/2022-hvac-market-snapshot.pdf)



# Appendix: 2023 Standards & M1 Test Procedure

	Current Standards		Standards as of Jan 1, 2023- using old metrics		Standards as of Jan 1, 2023 –using new M1 Test Procedure	
<b>Product Class</b>	SEER	HSPF	SEER	HSPF	SEER2	HSPF2
<b>Split-System Air Conditioners</b>	13		14		13.4	
<b>Split-System Heat Pumps</b>	14	8.2	15	8.8	14.3	7.5