



Whole Home Heat Pump Assessment

3 June 2026

Agenda

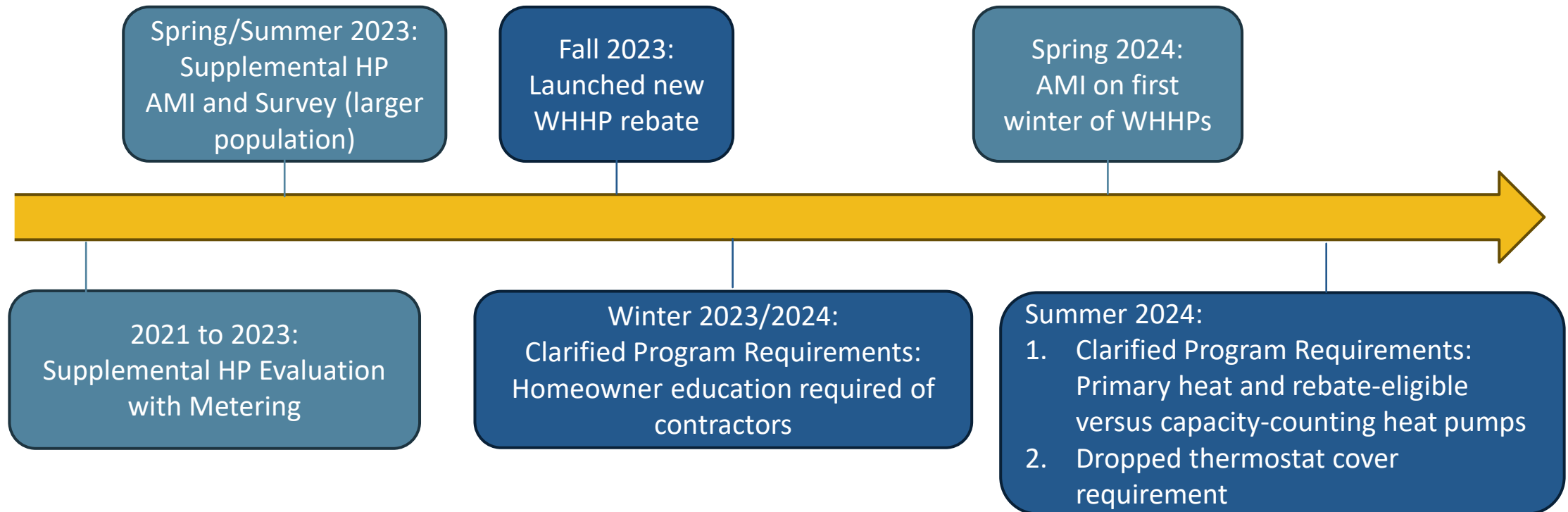
- Timeline of Efficiency Maine's Whole Home Heat Pump Activity
- Lookback at Supplemental Heat Pump Performance
- Whole Home Heat Pump Performance



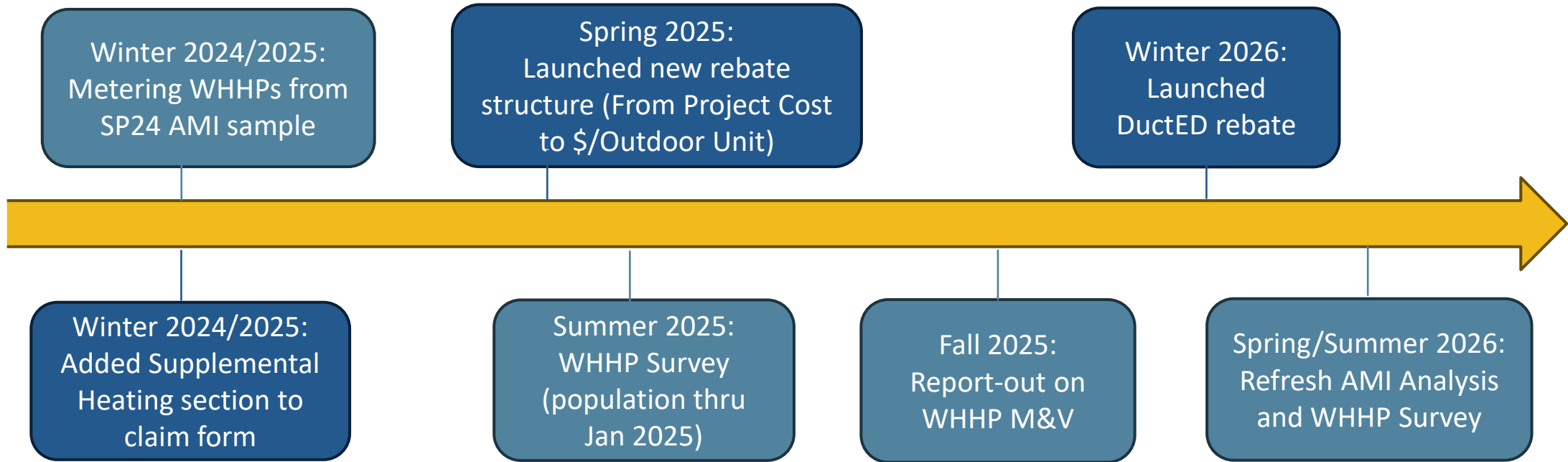
Timeline of M&V and Program Changes



Timeline



Timeline, cont.

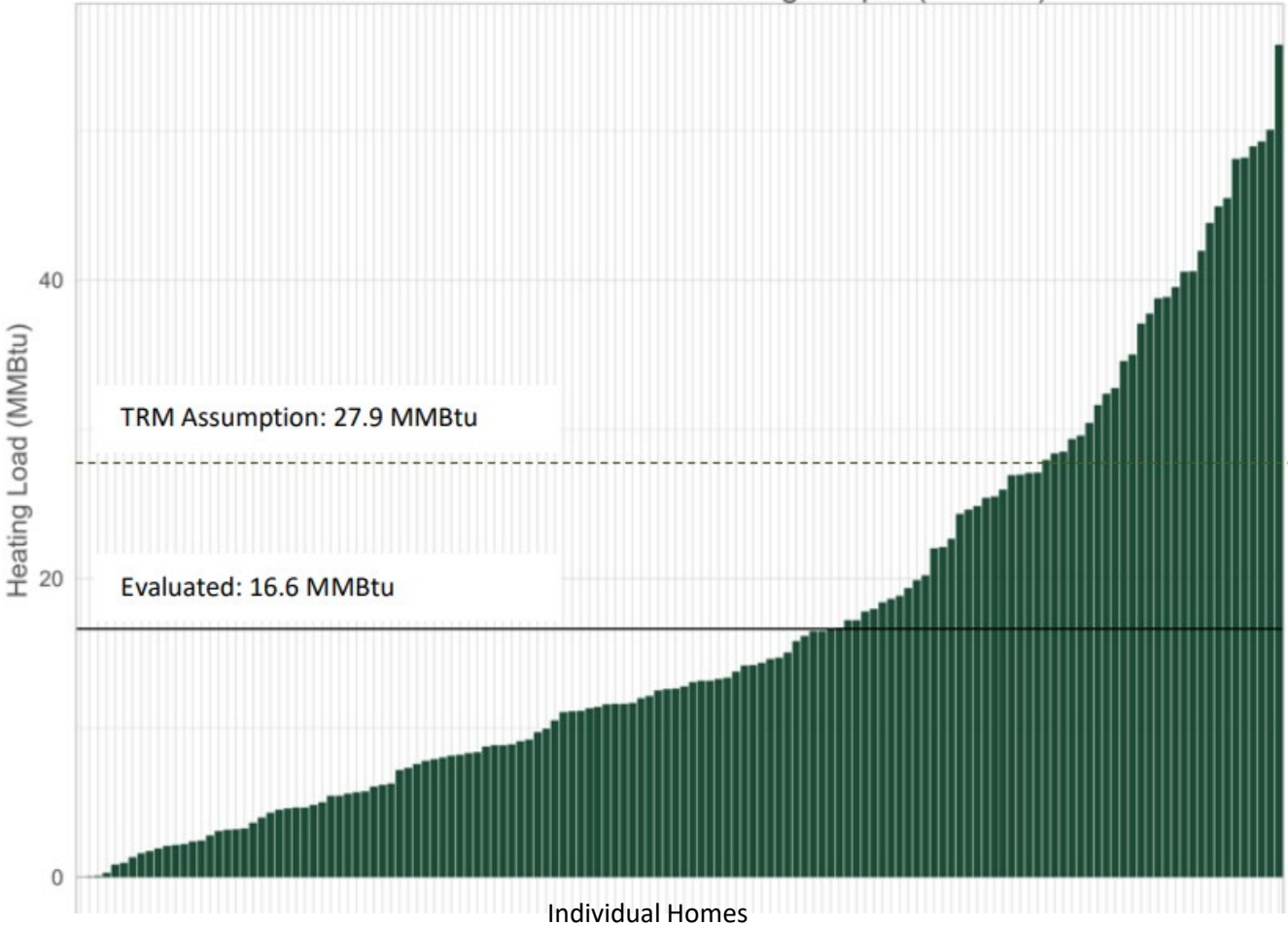


Supplemental HP Evaluation

Evaluated Heat Output of Old Program: Supplemental Heat Pumps installed pre 2021

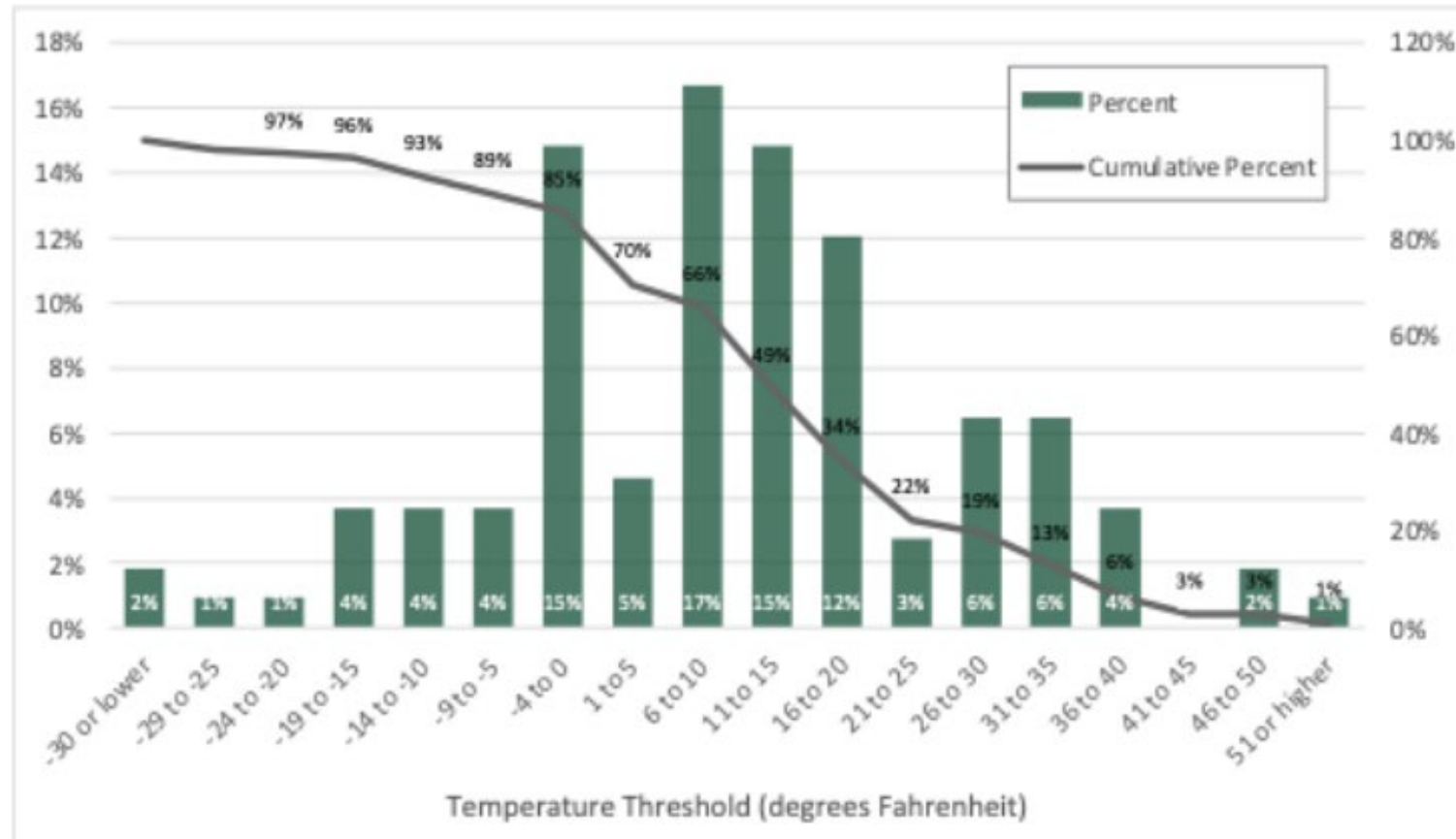
Average Home Annual Heat Load
(per Residential Baseline 2024):
82.5 MMBtu

Figure 5. Heating Provided by Heat Pumps
TMY3 Normalized Winter Heating Output (n = 140)



Self-Reported Turn-Off Temperature in Old Program Supplemental Heat Pumps installed Pre 2021

Figure 24. Outdoor Temperature Where Users Report Shutting Off Heat Pumps (n=112)

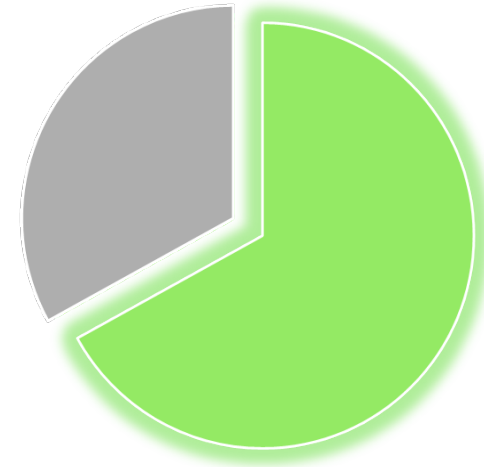


Whole-Home Heat Pump Metering: Sample

WHHPs rebated 9/18/2023 to 2/28/2024

Metering Sample

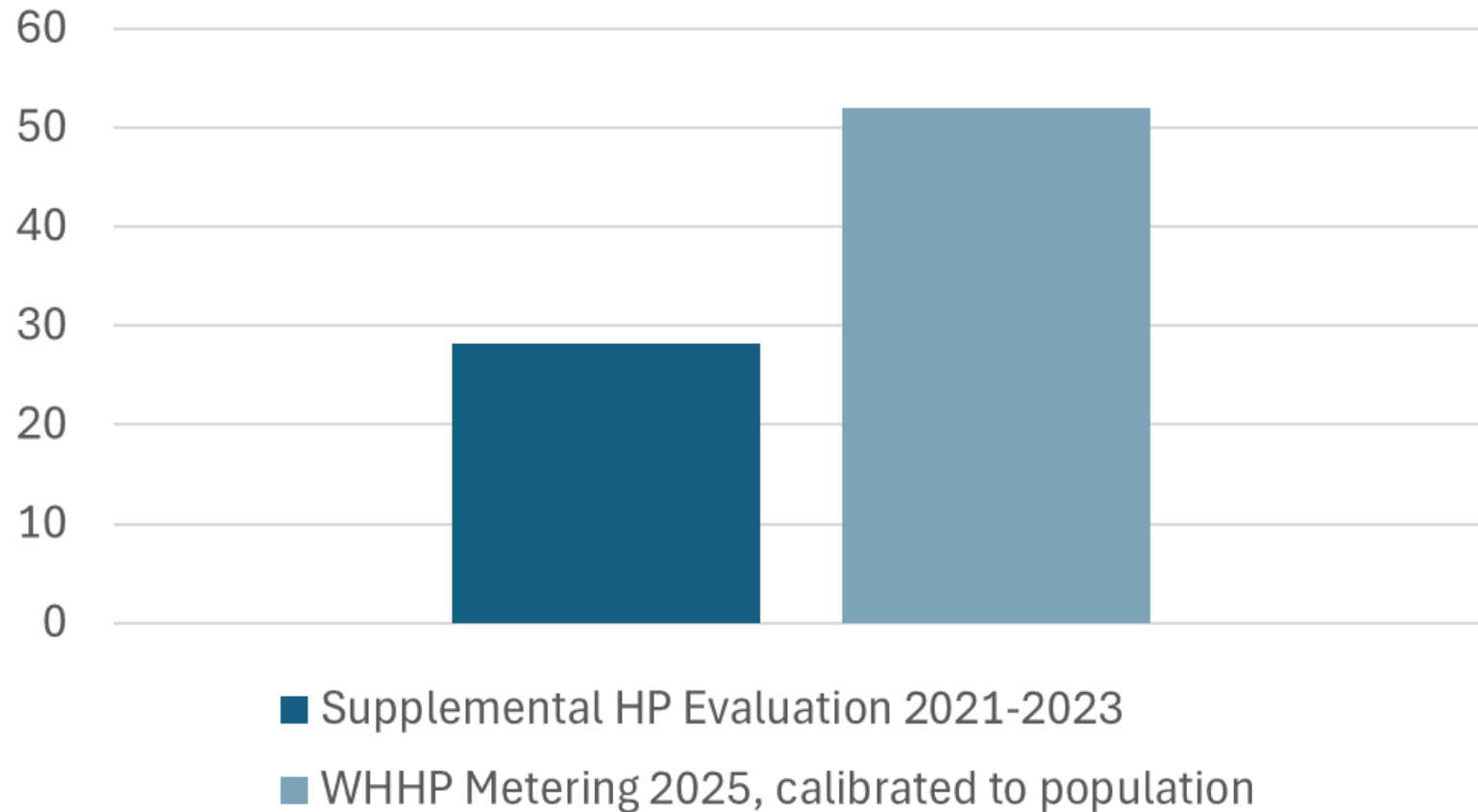
- First 6 months of WHHP program
- Bottom 2/3rds of population – aimed to understand what's going on in homes with less than expected temperature-dependent kWh
- Did not meter top 1/3 due to strong temperature-dependent AMI signatures



Whole-Home Heat Pump Performance

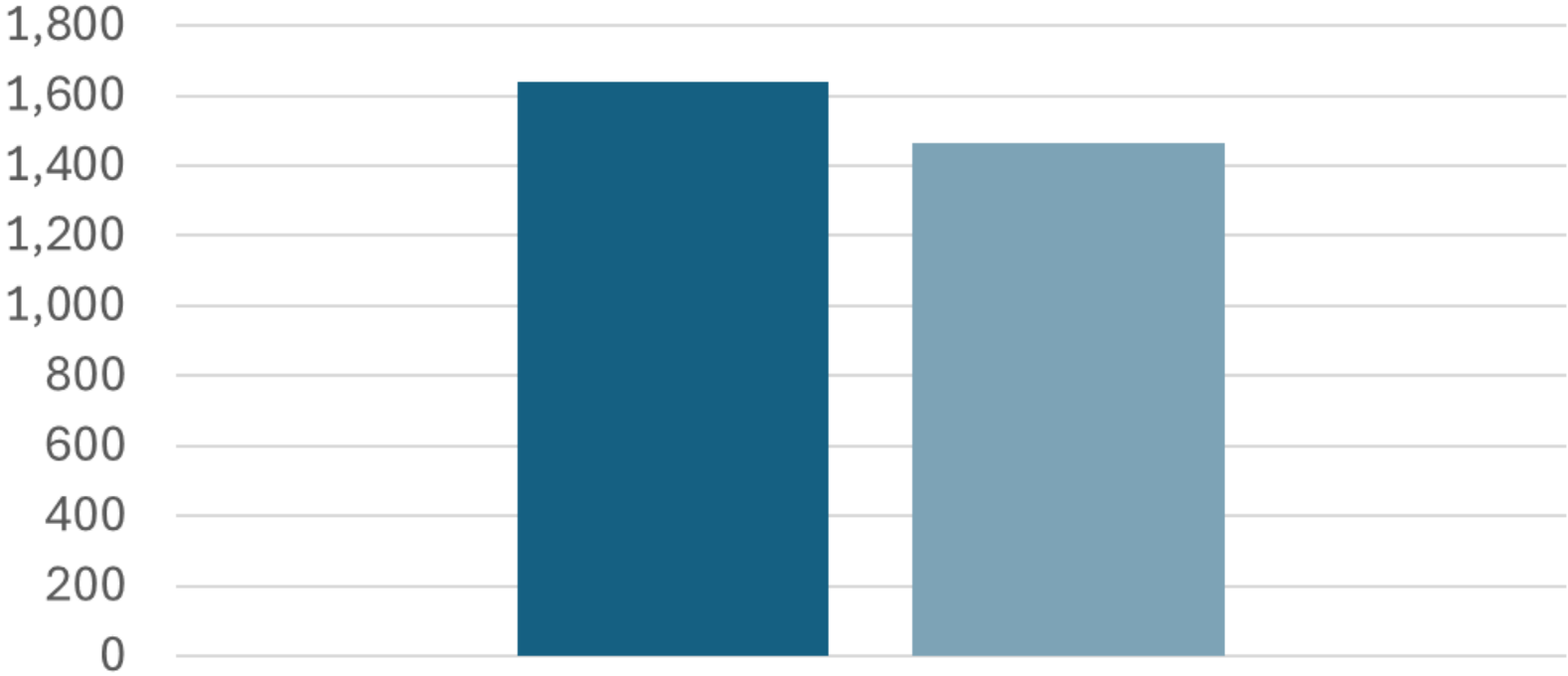
WHHPs rebated 9/18/2023 to 2/28/2024

Approximate Heat Load Offset per Home (MMBtu)



+84%

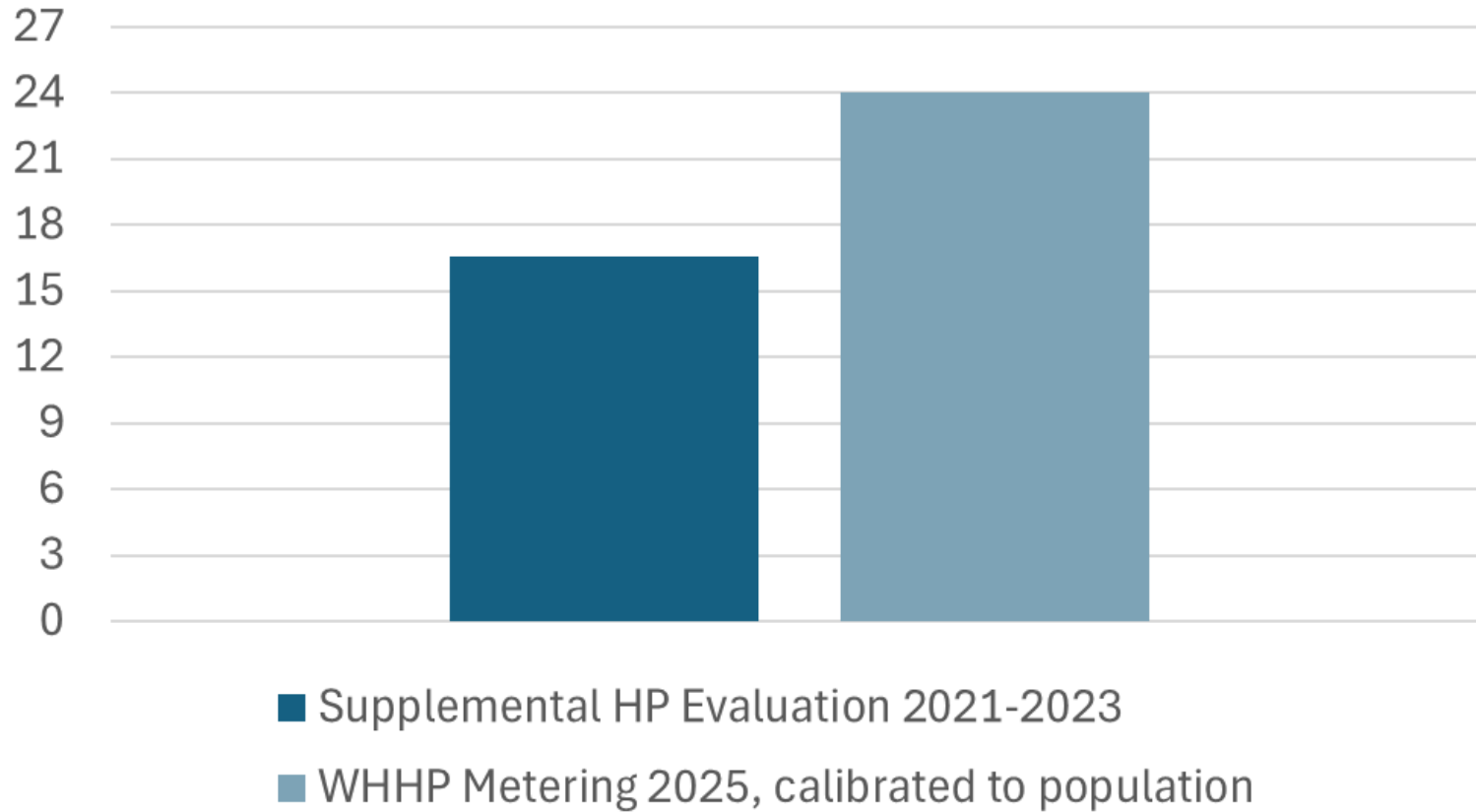
Average Home Size (square feet)



- Supplemental HP Evaluation 2021-2023
- WHHP Metering 2025, calibrated to population

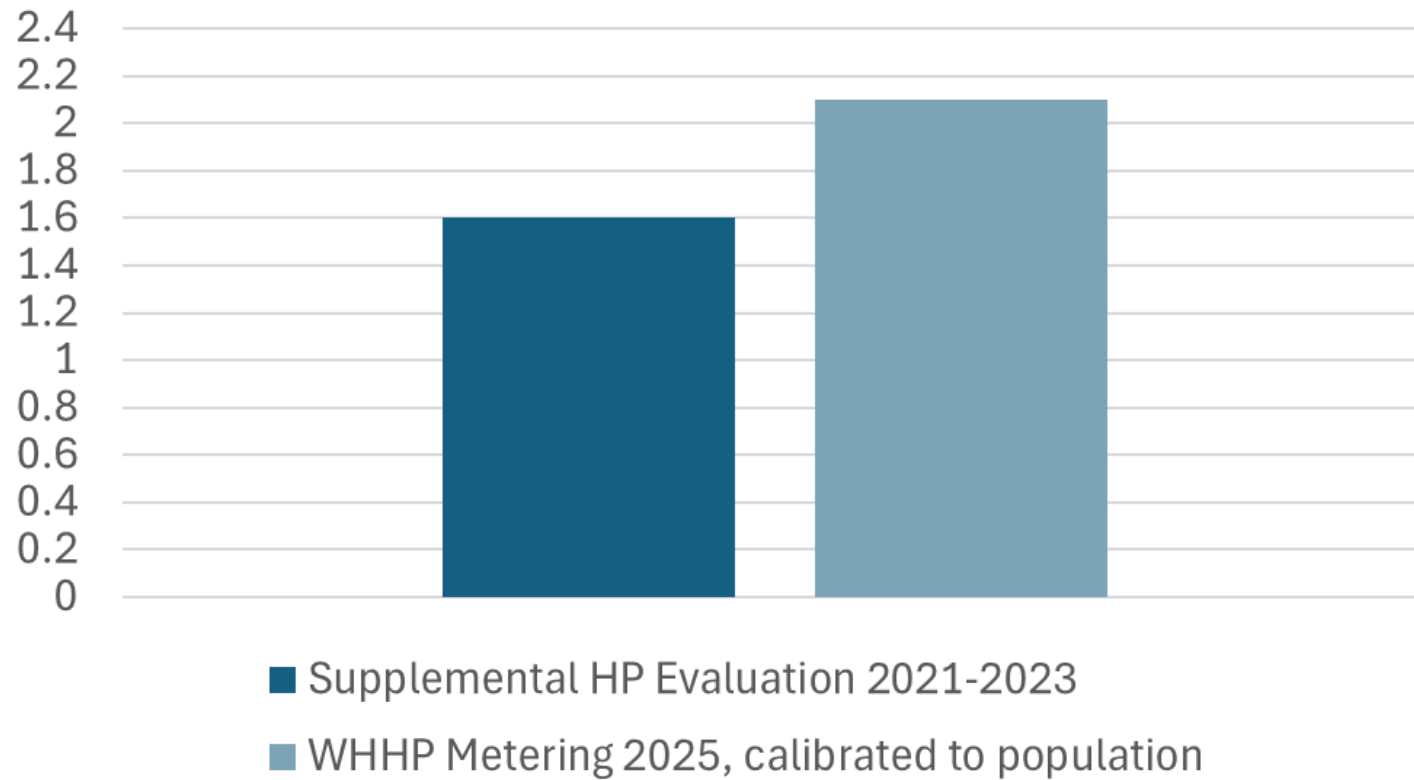
-11%

Average Heat Load Offset per HP (MMBtu)



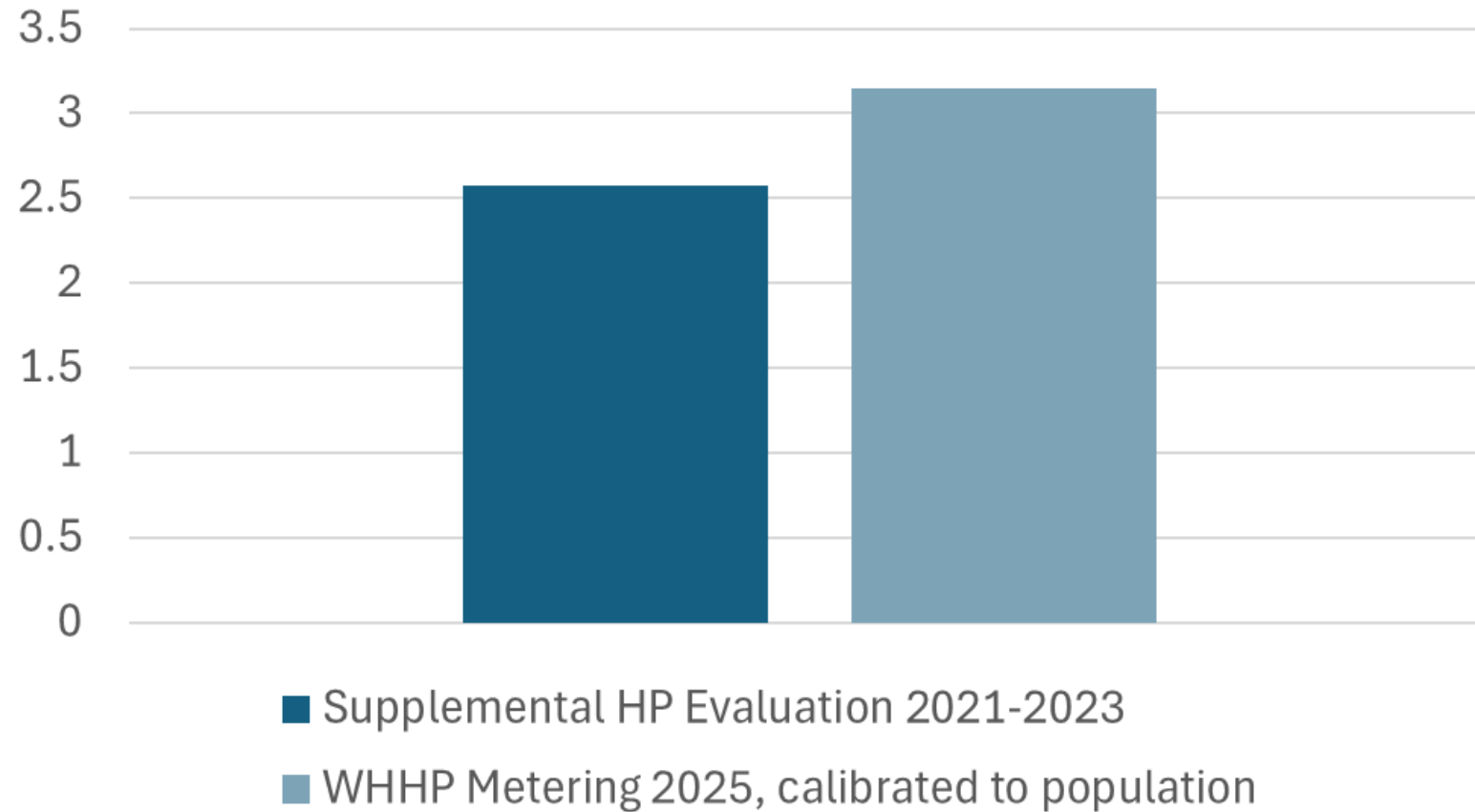
+45%

Average Quantity of HPs per Home



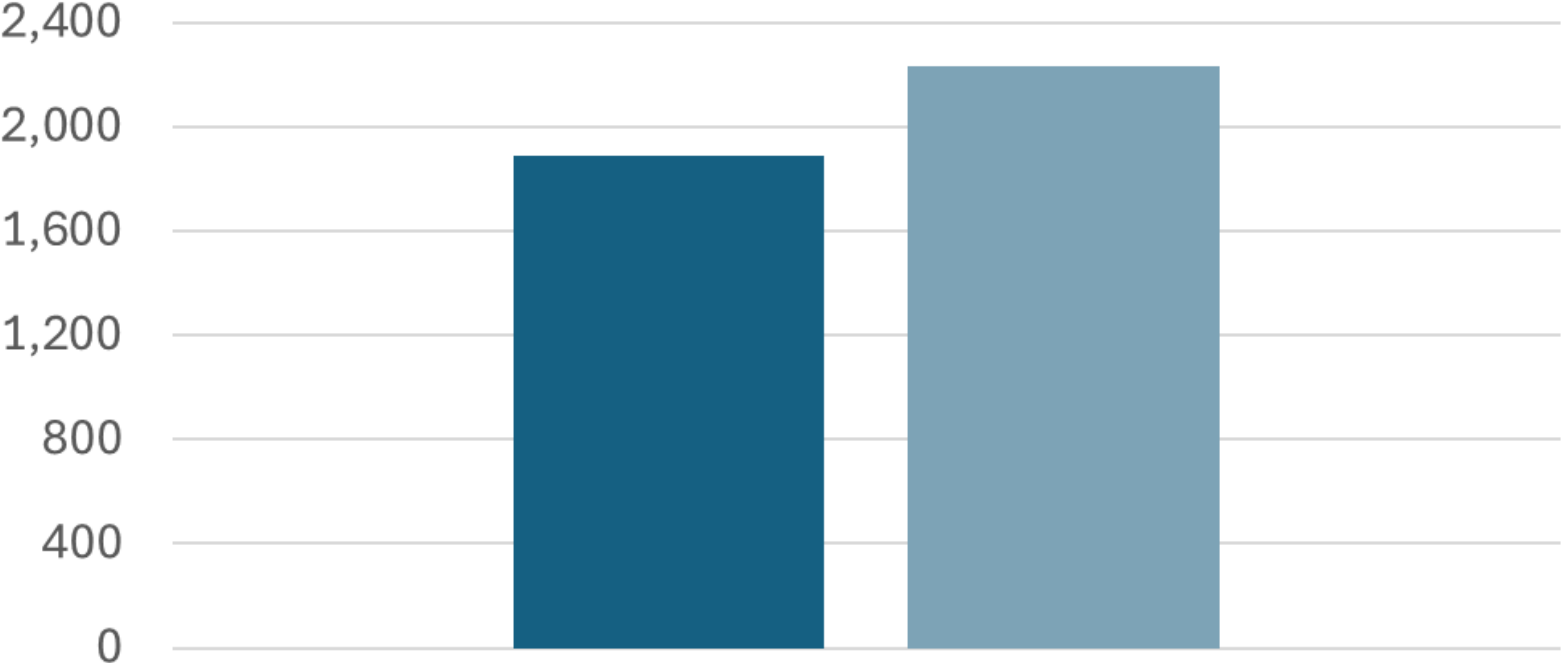
+31%

Seasonal COP (1= 100% efficient)



+23%

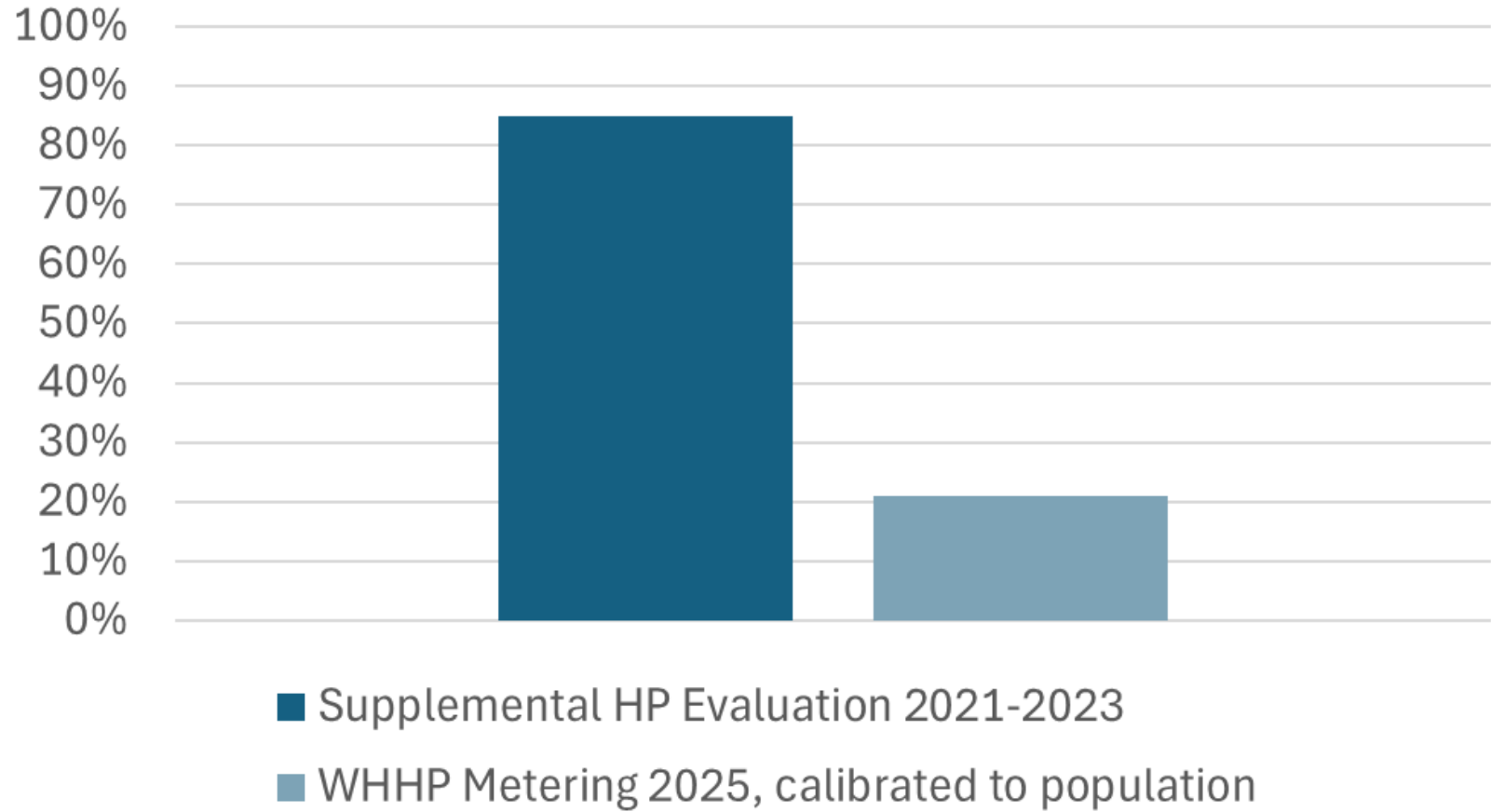
Average kWh Consumed per HP



- Supplemental HP Evaluation 2021-2023
- WHHP Metering 2025, calibrated to population

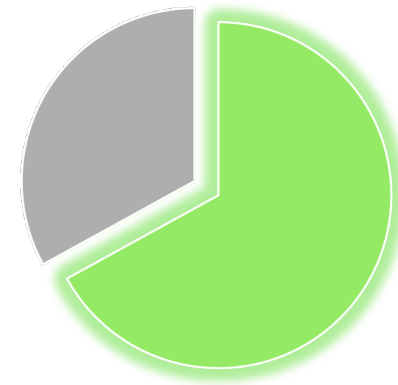
+18%

Percent of Heat Pumps Turned Off by Users at -5°F

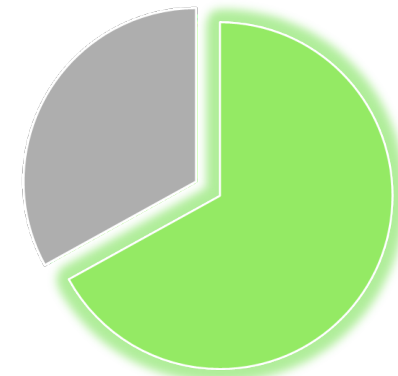
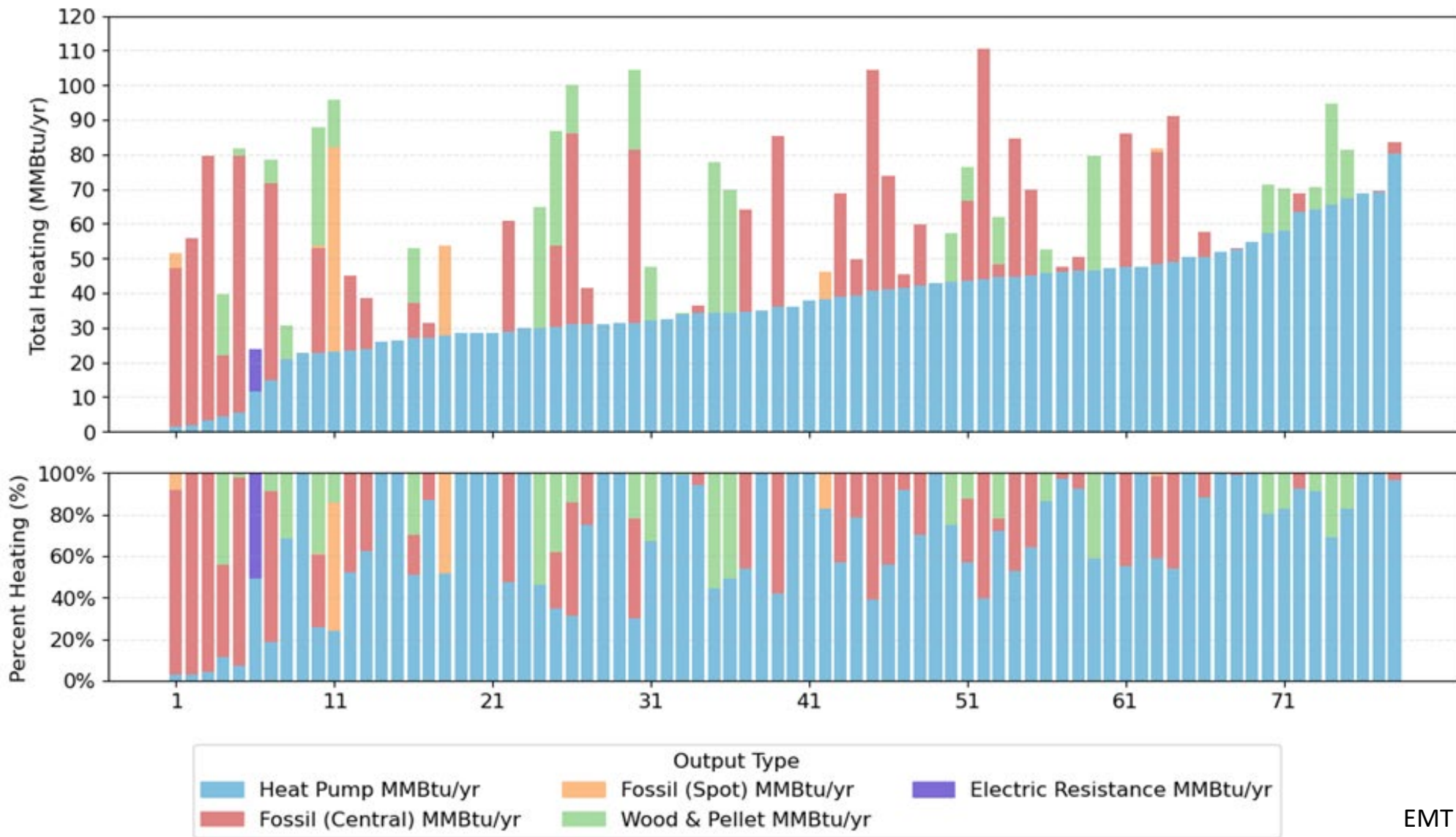


-75%

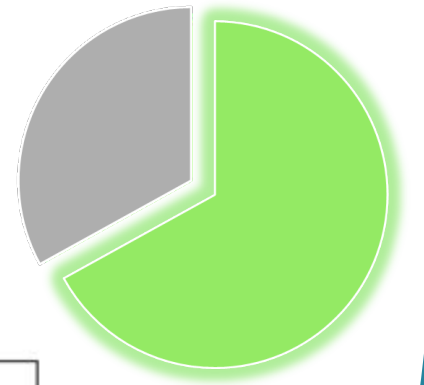
Deeper Dive



Heating by Heat Source per Home, Ordered by Heat Pump Heating Output



Comparing Homeowner Intent with the Portion of Home Heating by Heat Pumps



Questions?