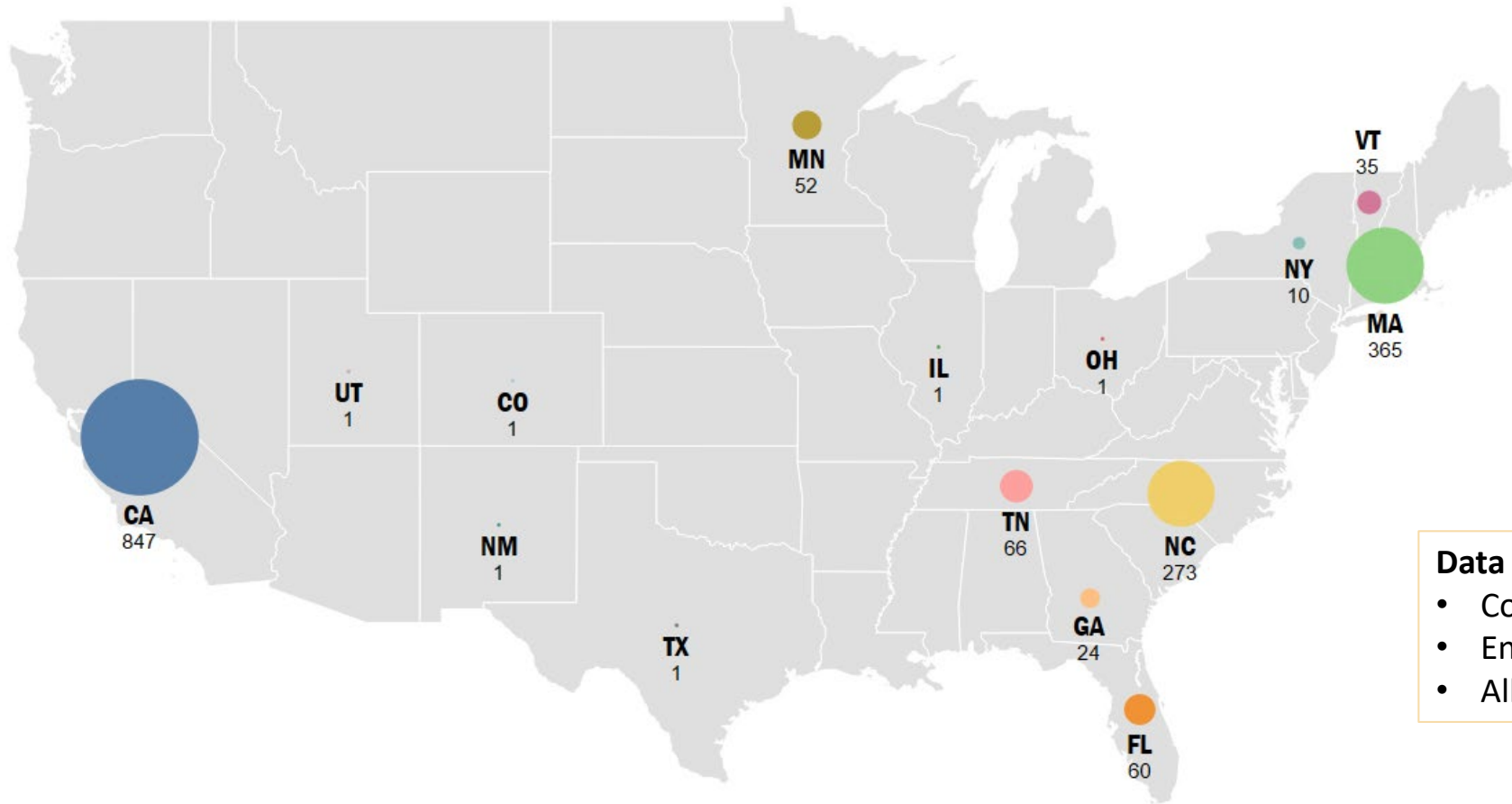


Performance and Costs of Air Sealing and Ventilation Measures for Home Decarbonization in the US

Iain Walker
Núria Casquero Modrego
Brennan Less



Part of Larger Home Decarbonization/Energy Project Looking for Big Savings



Sample of convenience:

- Most data voluntarily provided by energy programs
- Paid contributions for 475 homes

Data included:

- Costs - Broken down by measure
- Energy (and calculated CO₂) savings
- All costs in \$2019 and nationally averaged

12 Programs

1,739 Projects

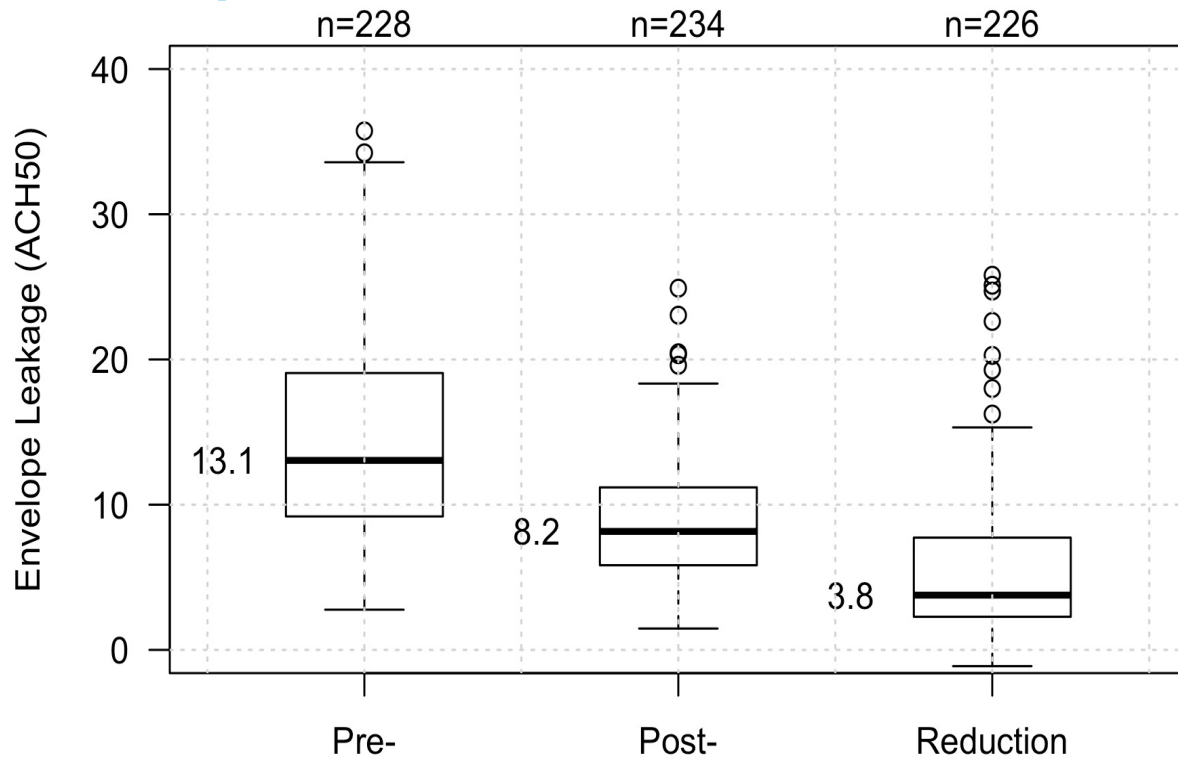
10,512 Measures

3,294,946 ft²

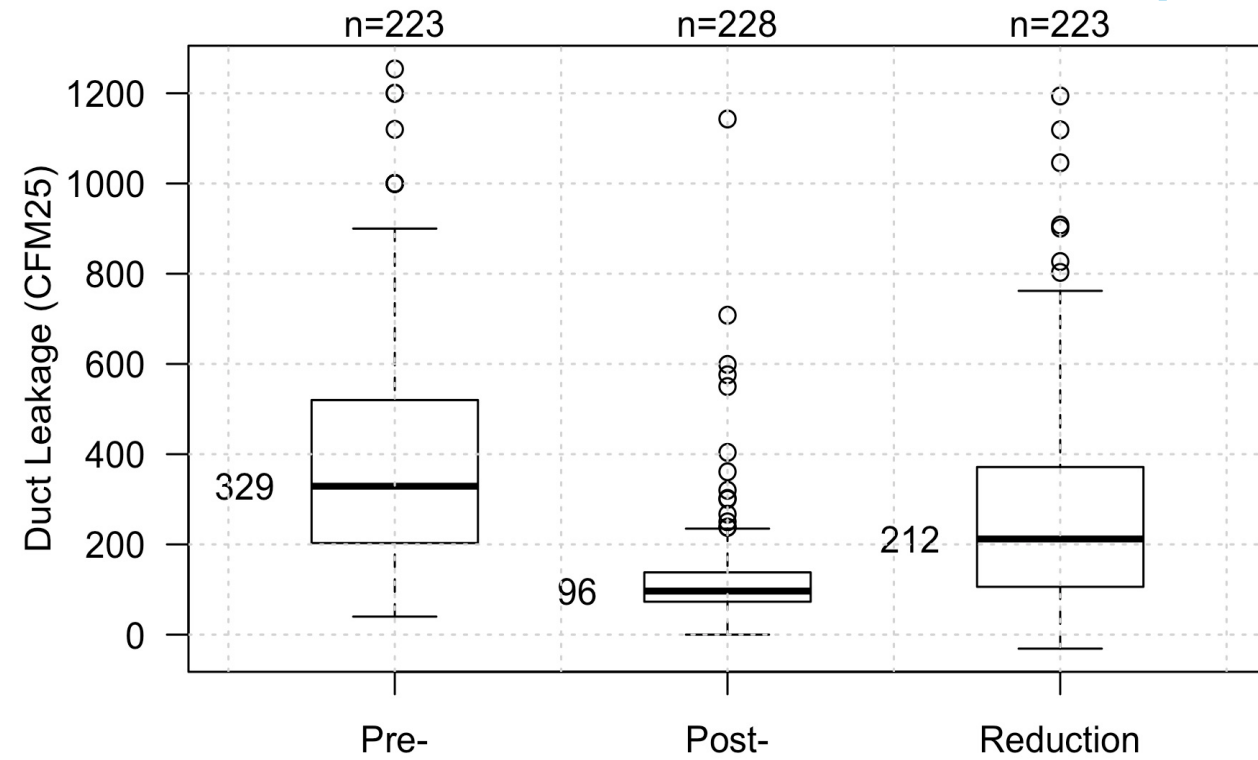
\$24,689,213



Leakage reductions



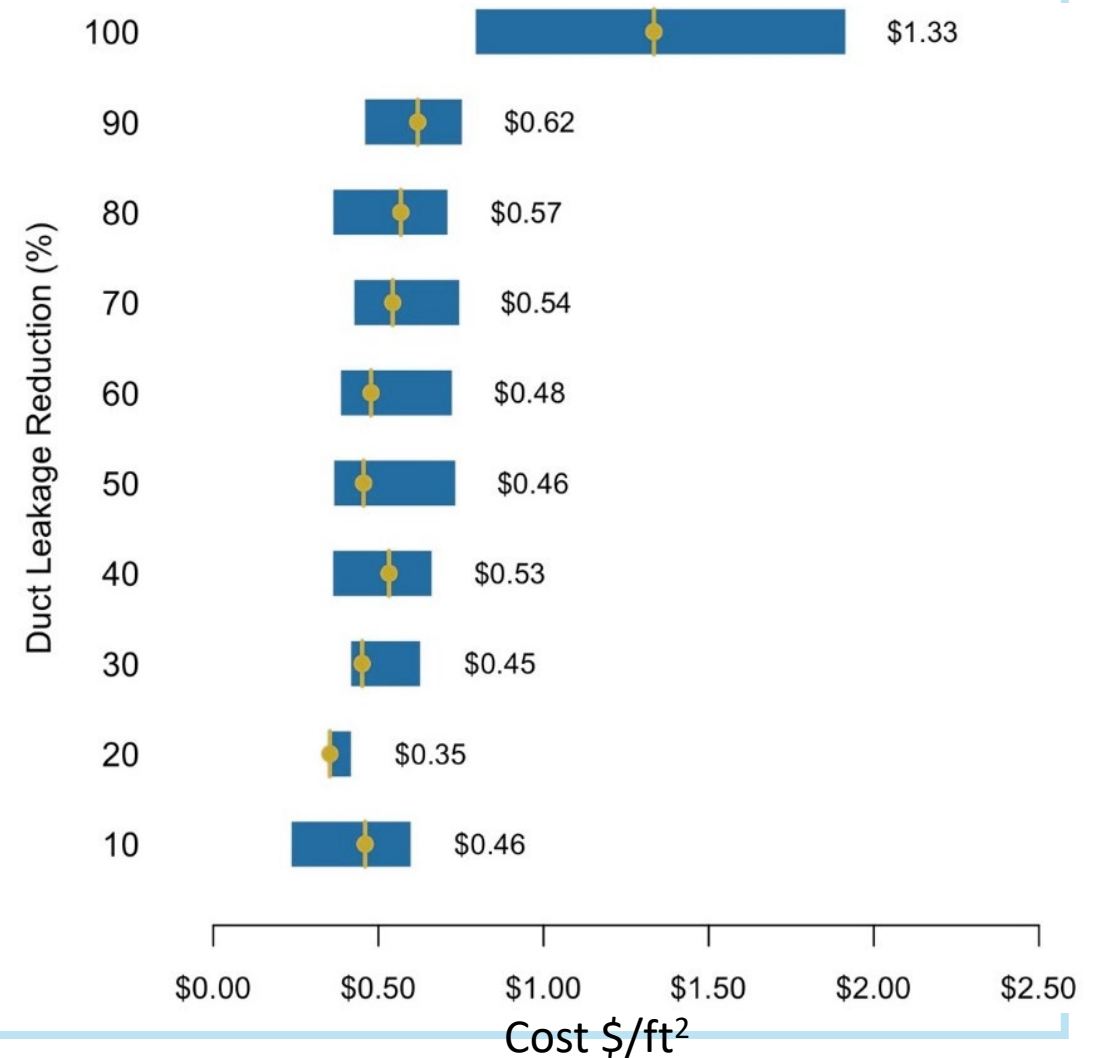
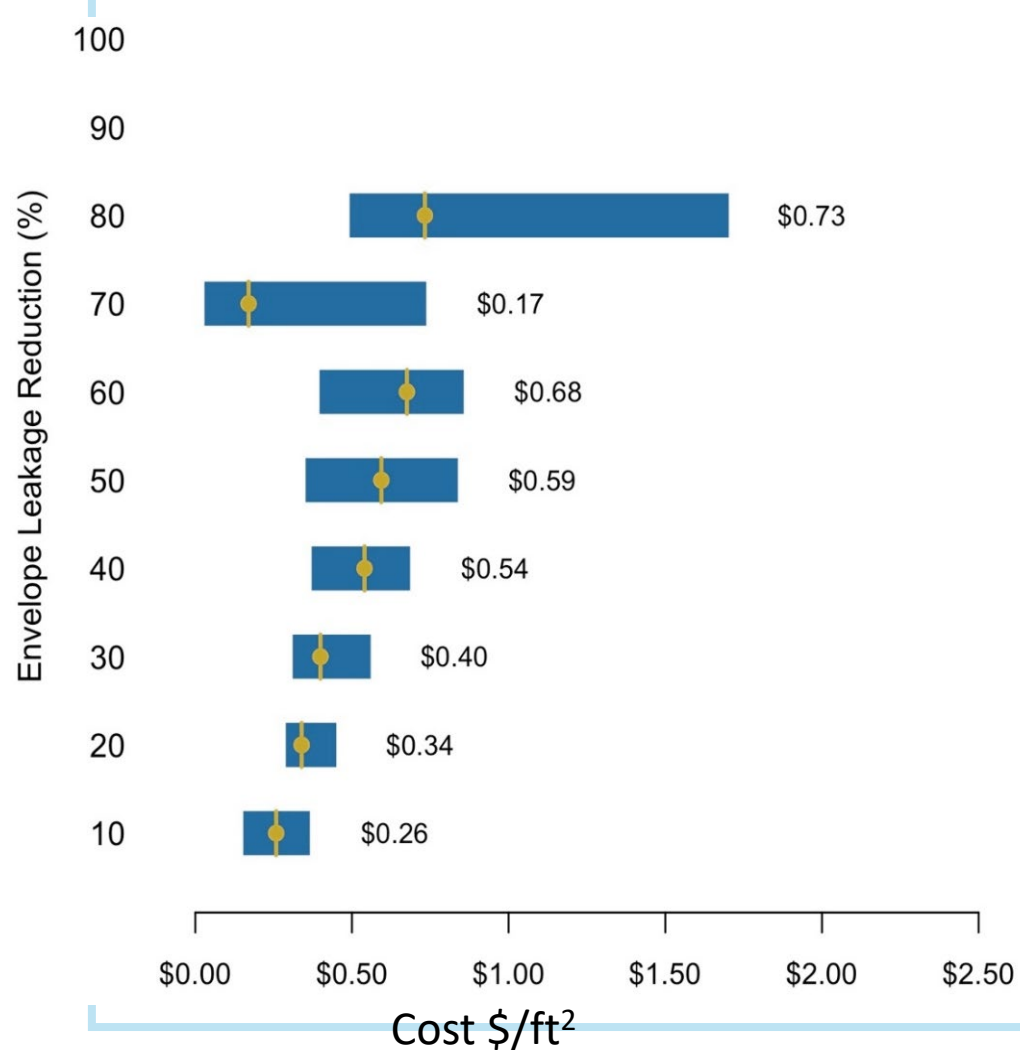
Building Envelope = 27% reduction



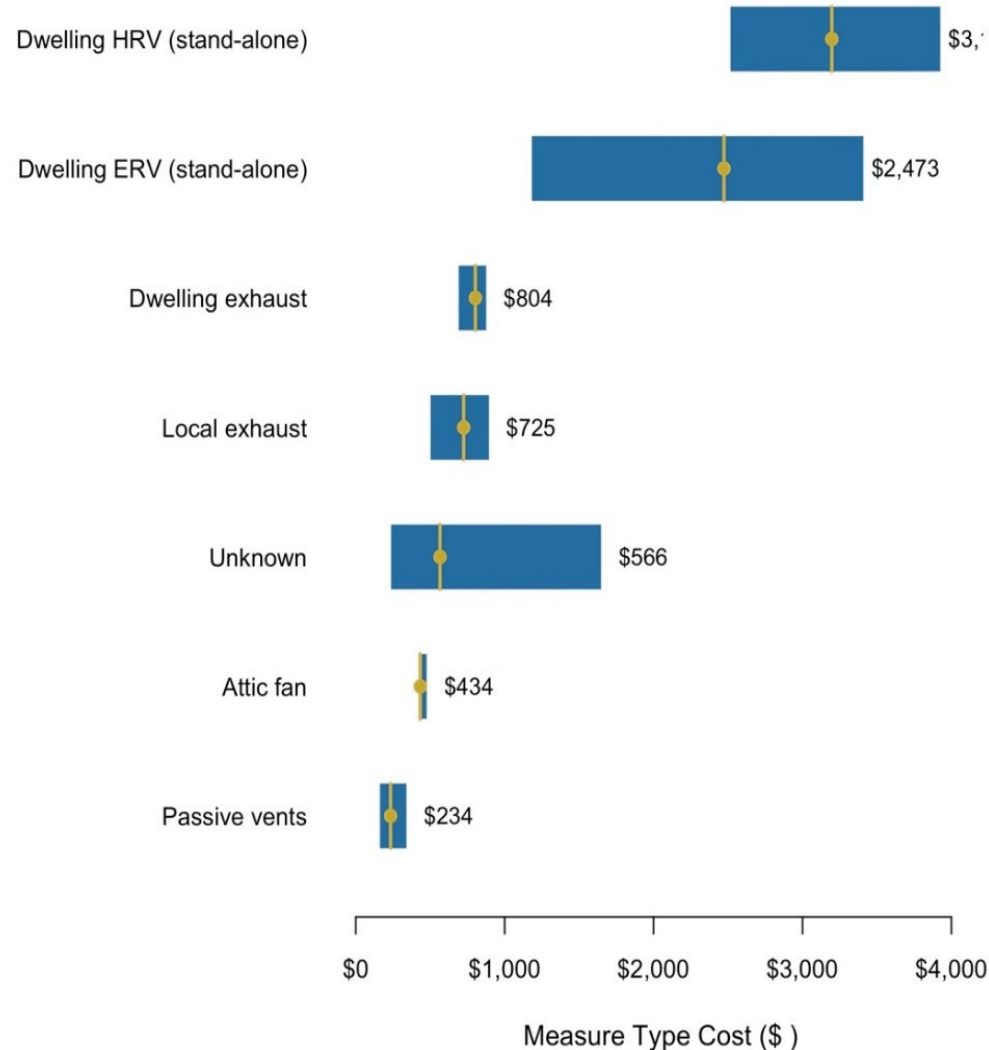
Duct System = 64% reduction

Leakage Reduction Costs

Typical Costs about \$750/home – much lower than other measures, e.g., heat pumps, solar PV, etc.



Mechanical Ventilation



Mechanical Ventilation installation was rare: 65 out of 1,739 projects

Needs more attention in decarbonization/energy efficiency projects

Typical simple exhaust system costs about the same as air sealing



Questions?

iswalker@lbl.gov

