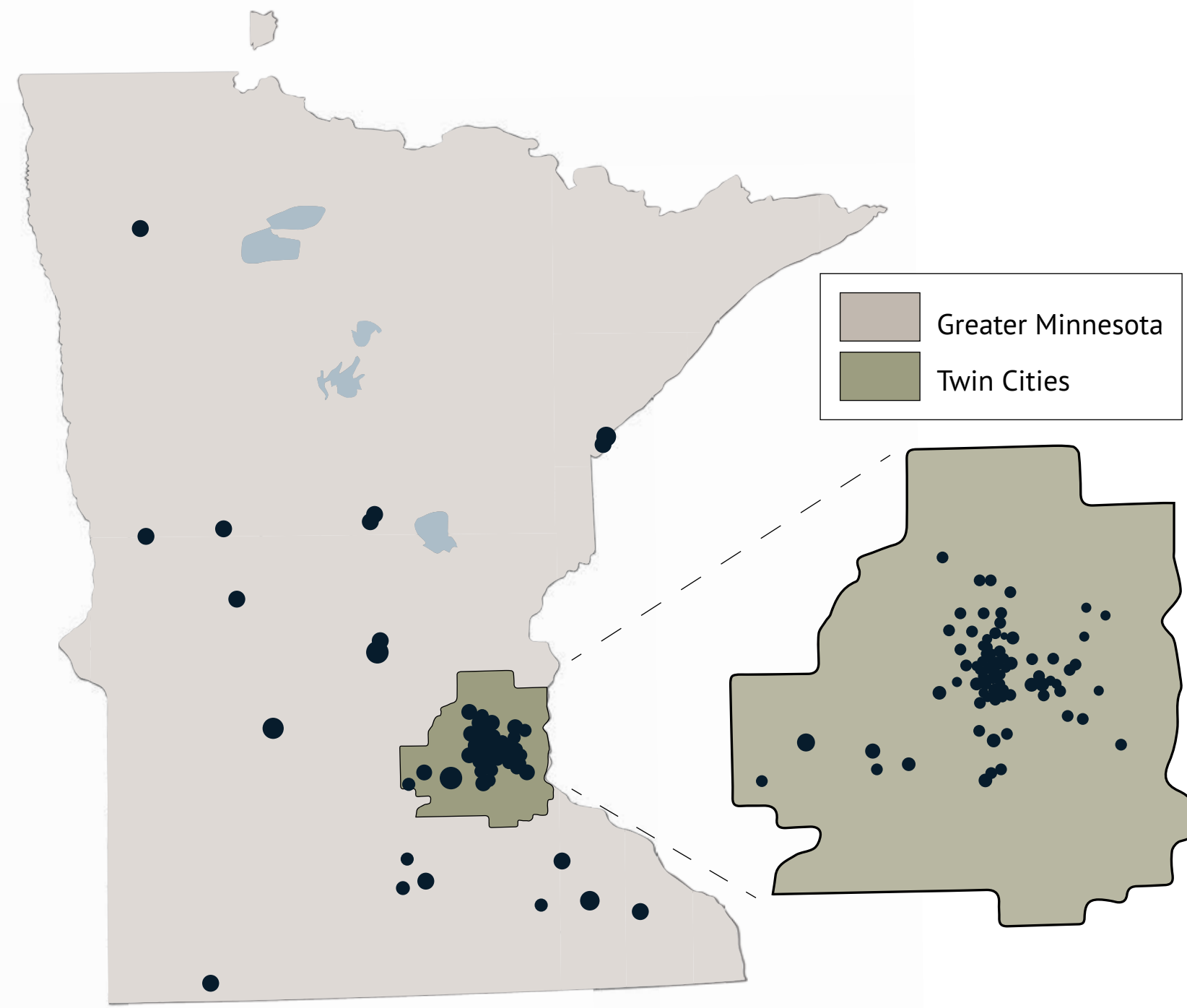


# METHODS

Data from 120 Buildings  
Stratified by Size and Geography



Participants recruited through postcard mailings, telephone calls, and local utility and agency contacts.

For each building, we gathered:

- On-site data: HVAC, shell, appliances and lighting, in common areas and selected apartments.
- Survey data:
  - Building owners and managers on ownership, purchase and maintenance practices, and investments in the building (N=112, 93% completion rate).
  - Tenants: demographics, attitudes, comfort, and energy behaviors (N=1,285, 35% completion rate).
- Energy and water utility data

## Best Practices in MF EE Programming

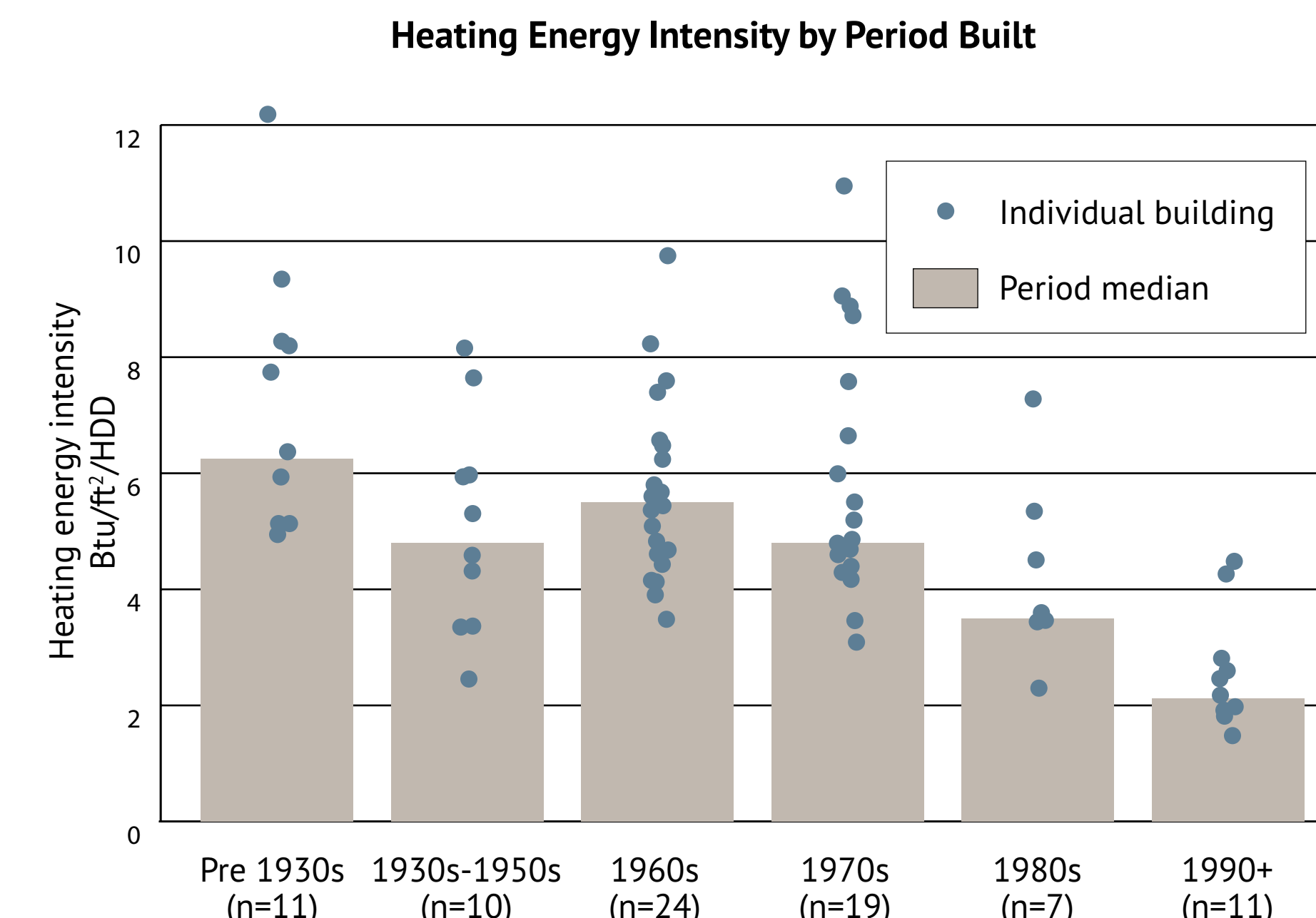
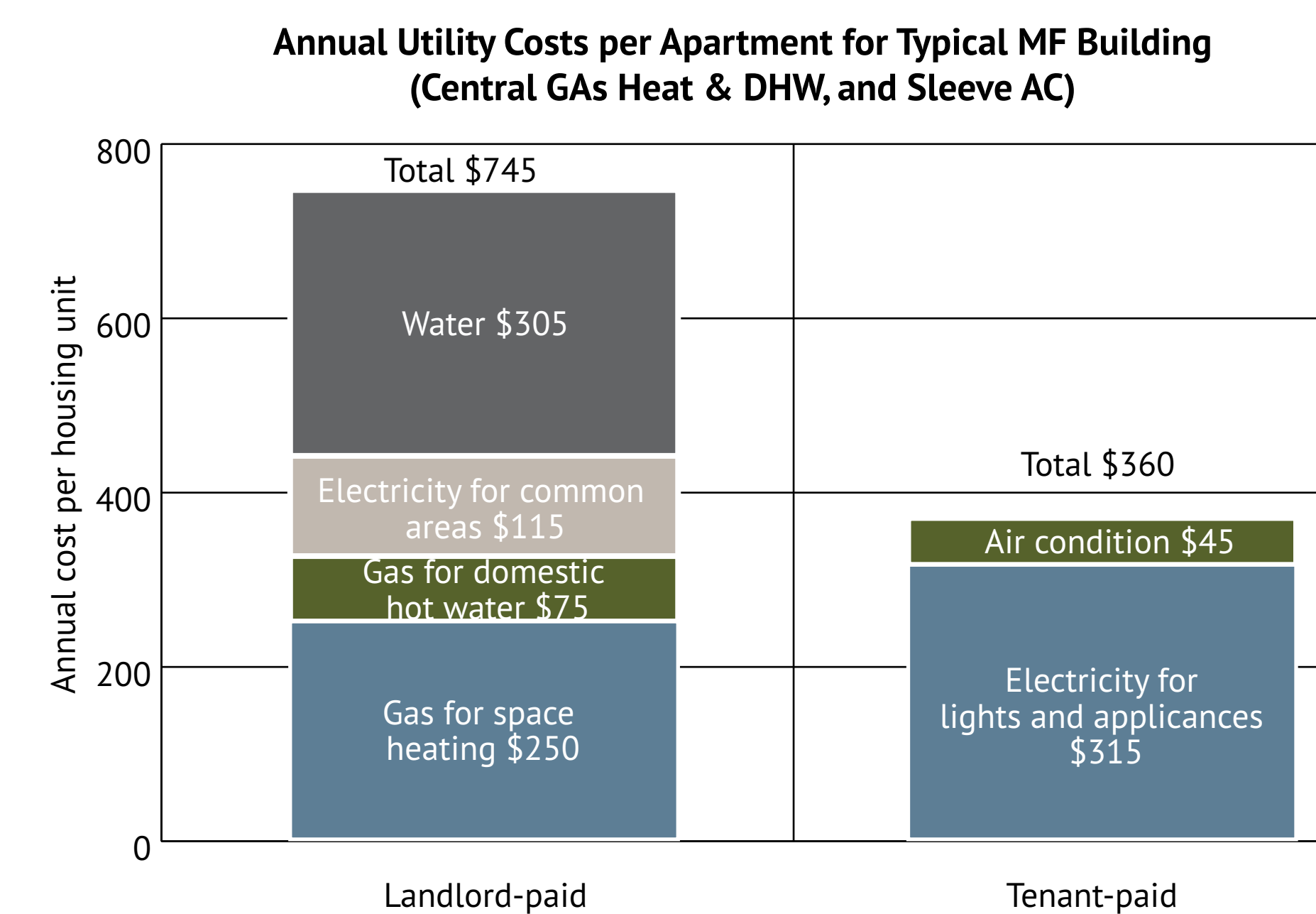
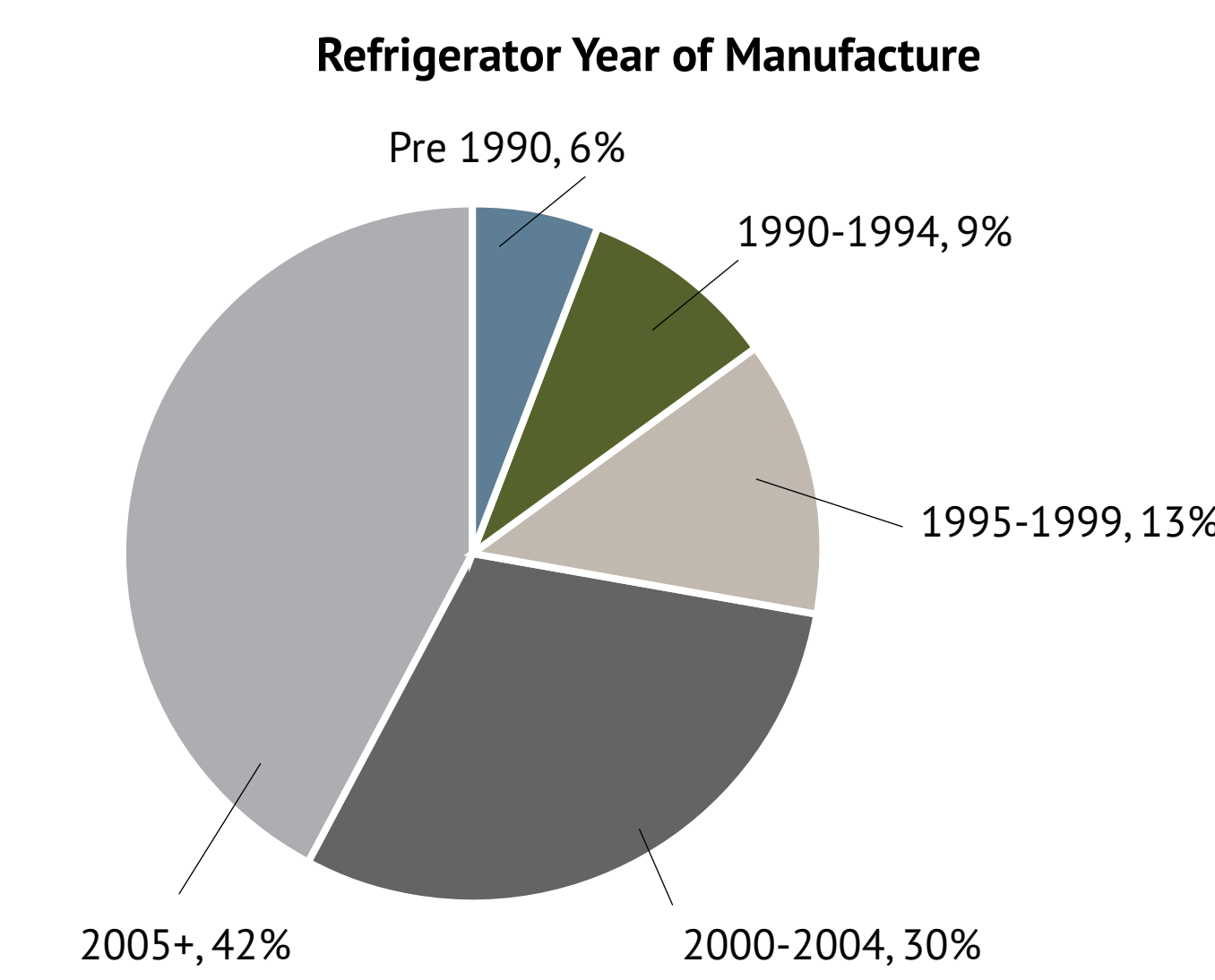
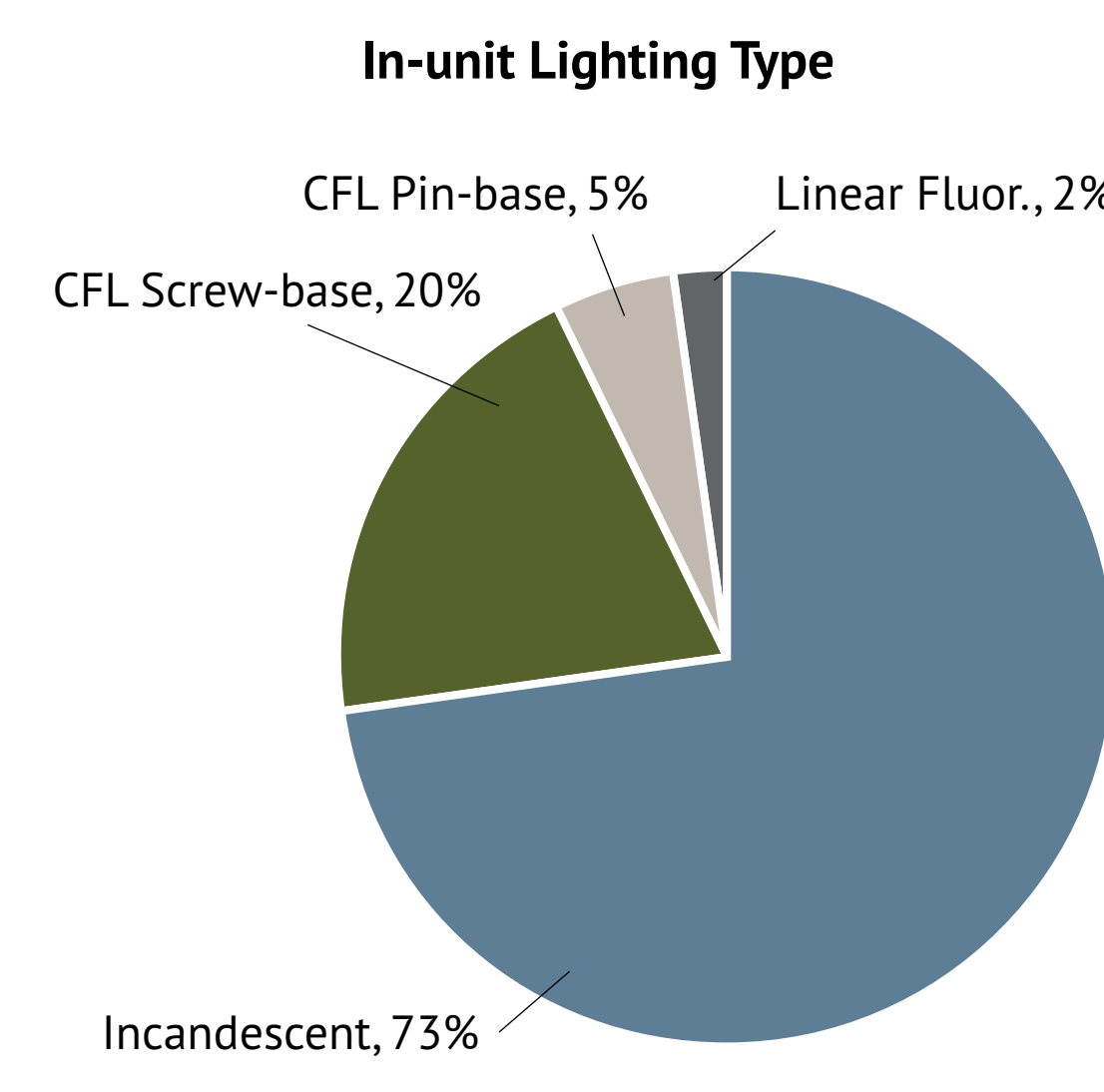
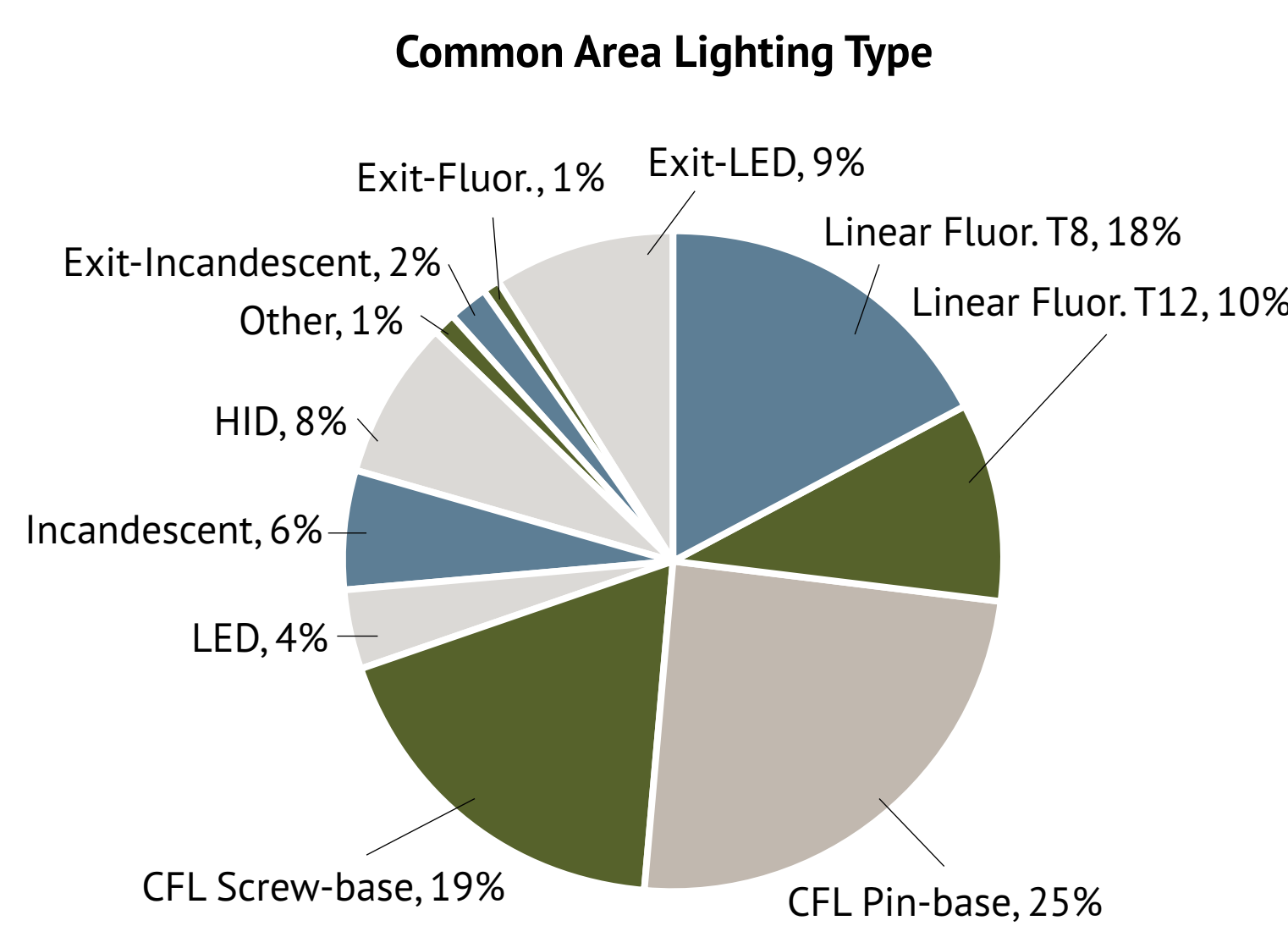
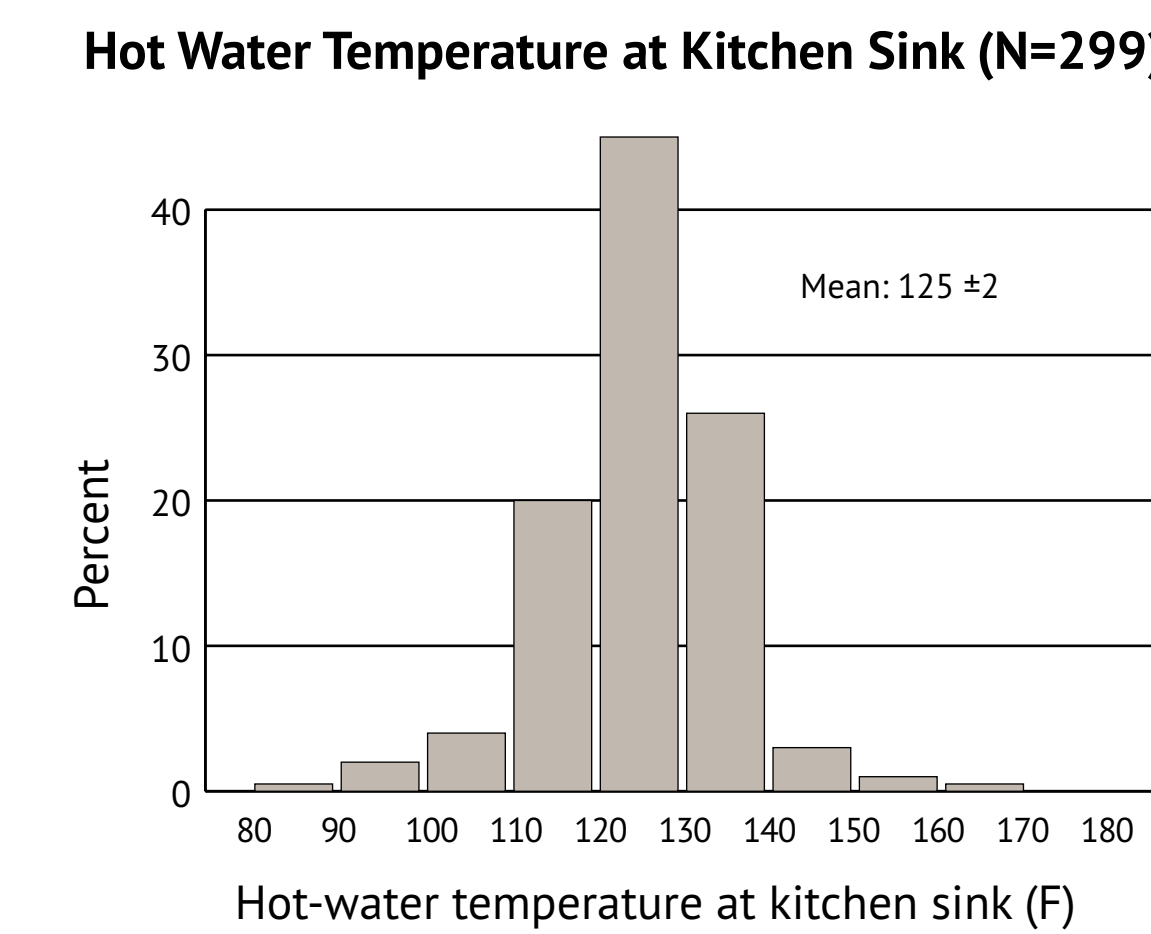
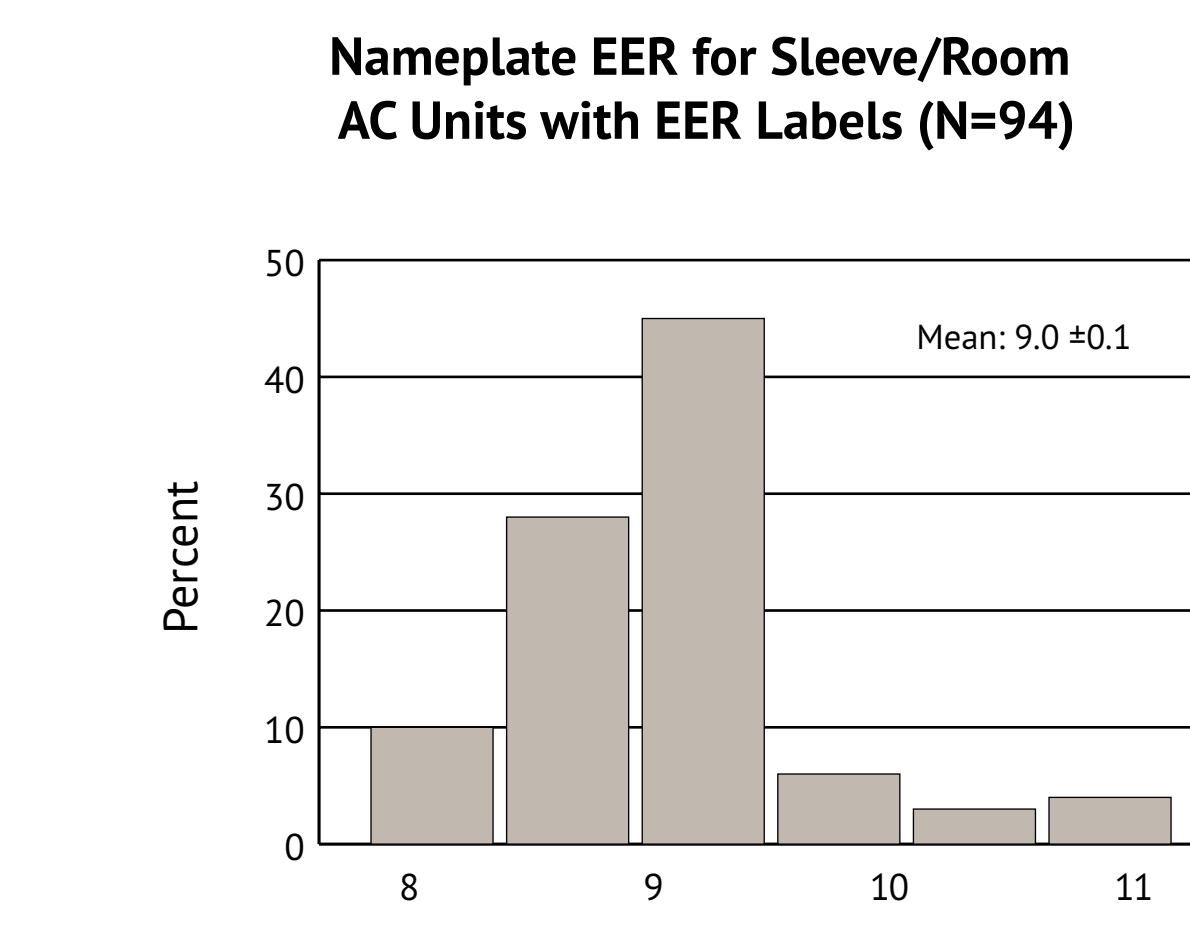
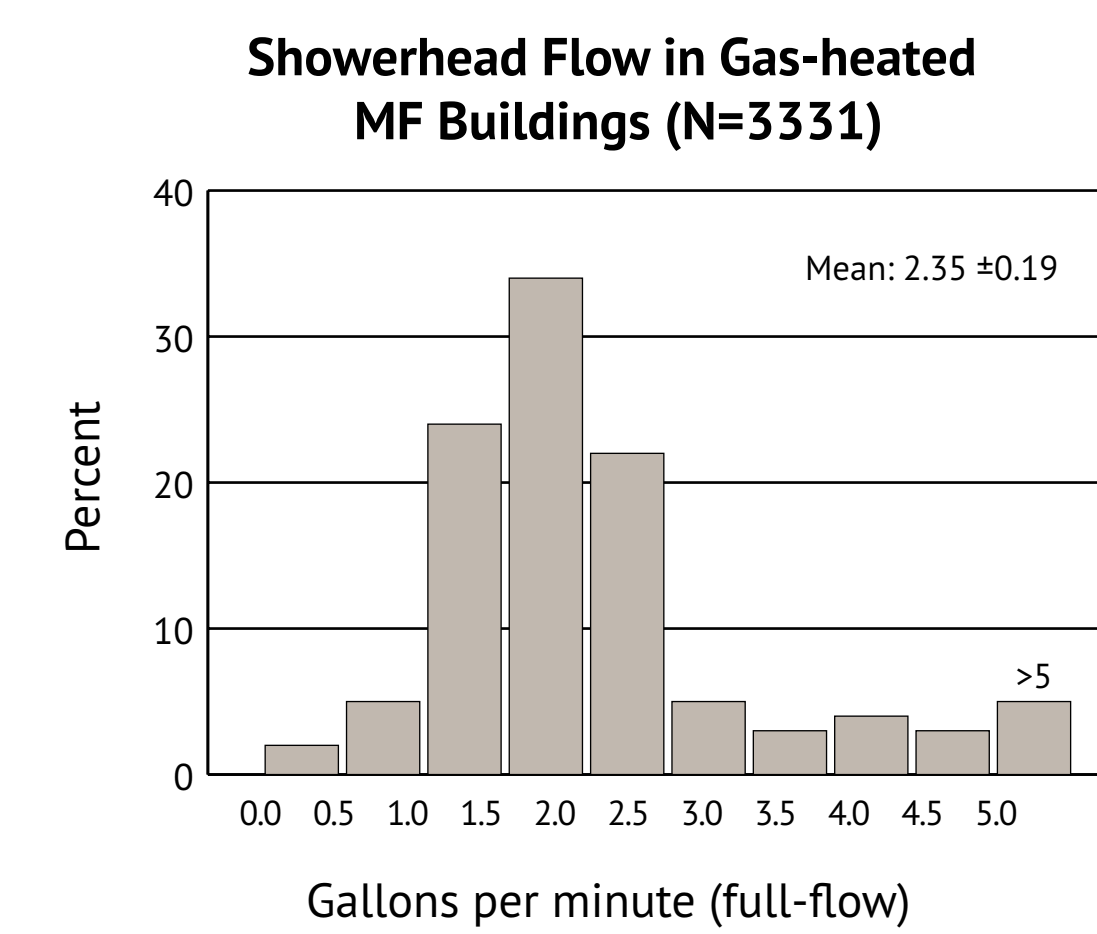
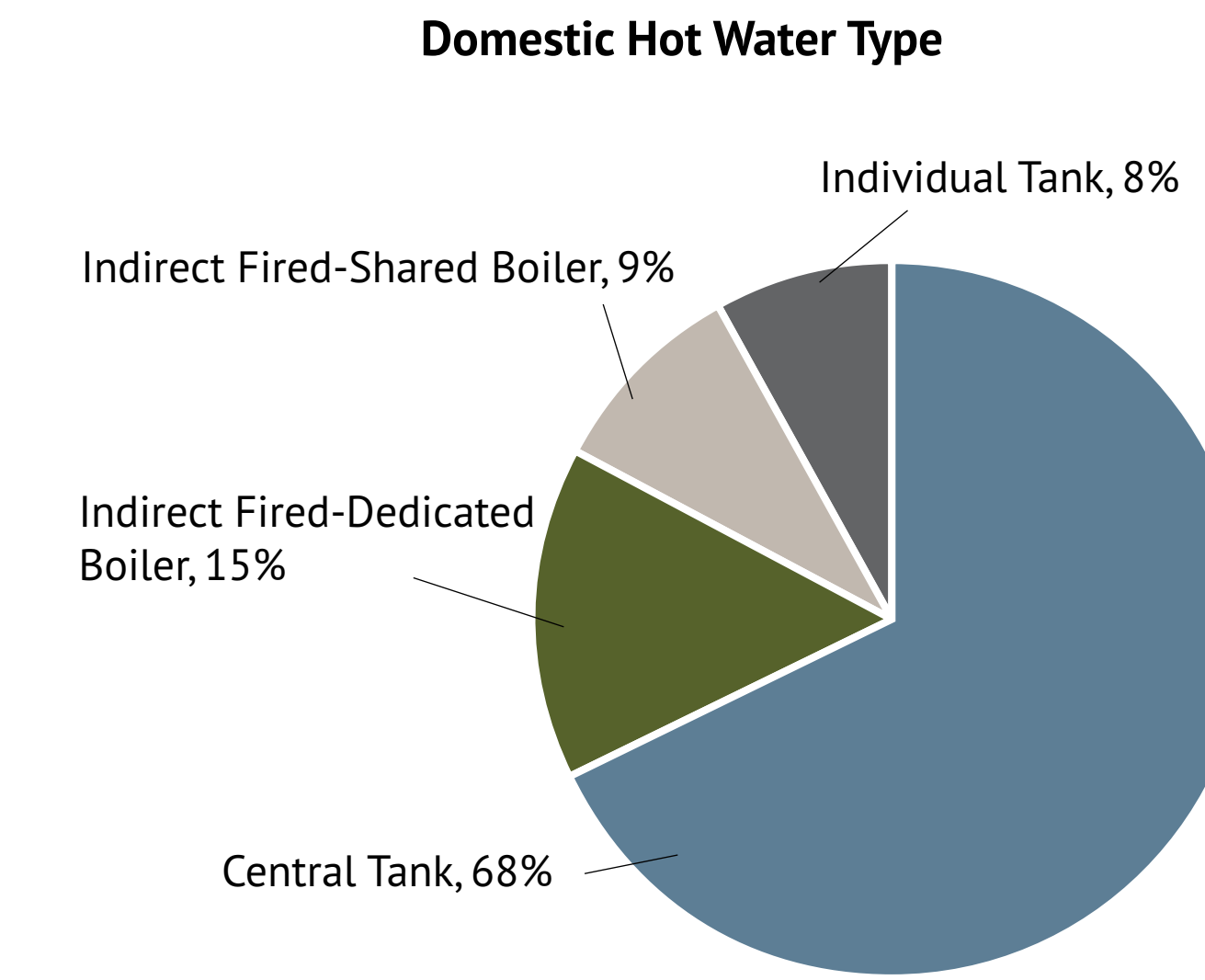
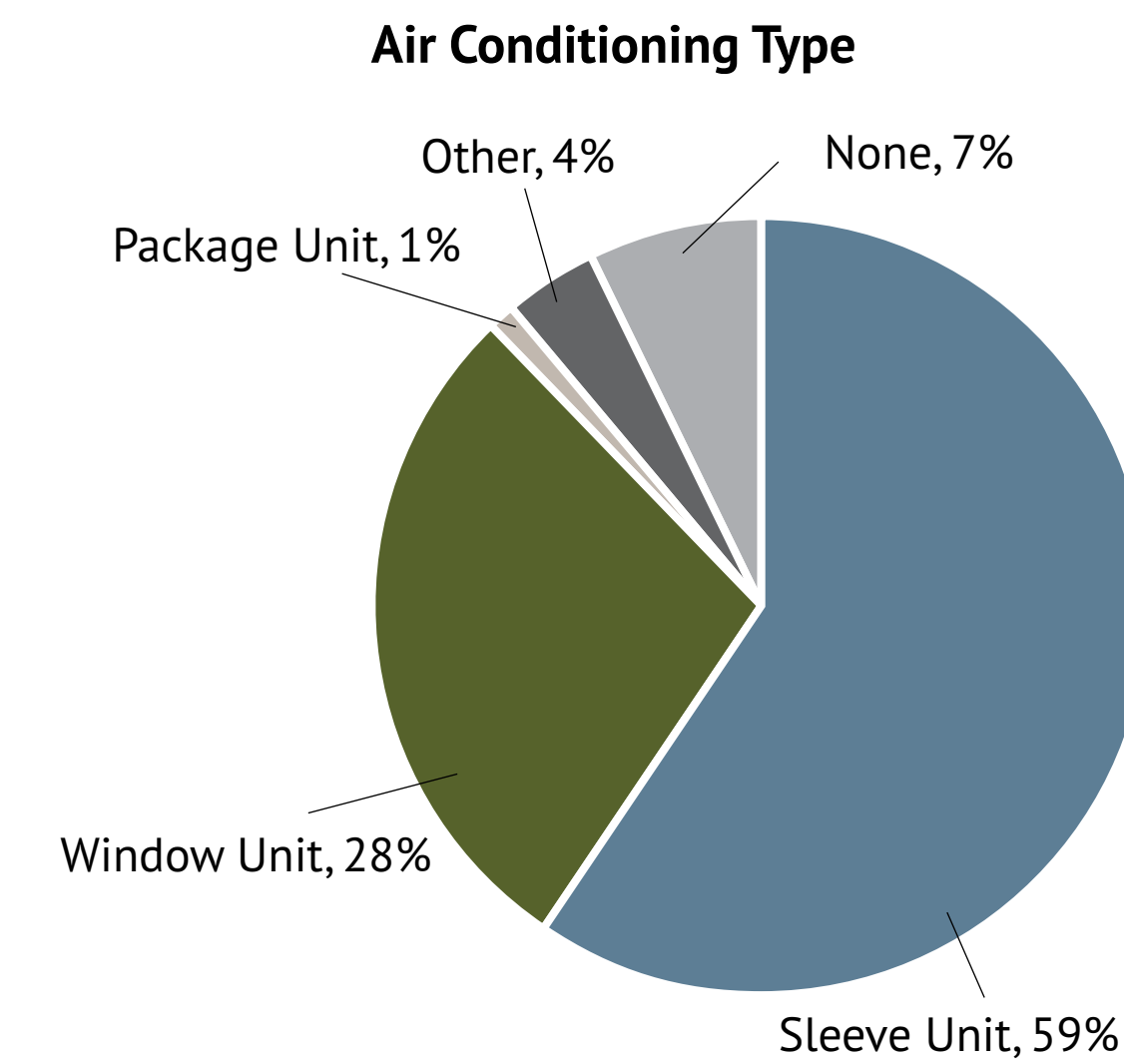
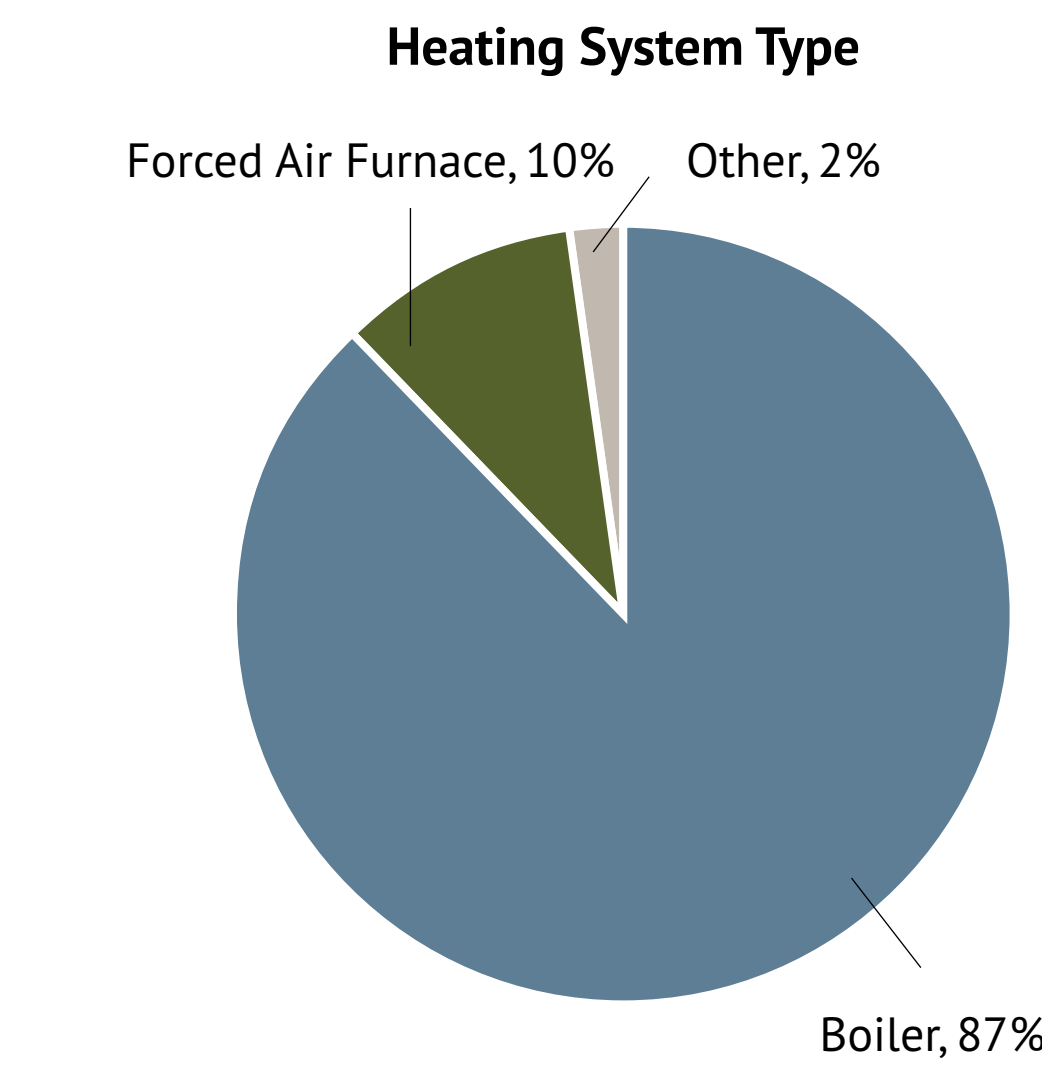
- Comprehensive retrofits can achieve energy savings of 15% to 20% or more.
- Decision makers can view program best practices at three levels:
  - Market: streamline engagement efforts and provide appropriate incentives that maximize impacts.
  - Program: engage stakeholders as partners to align timing and targeting to coincide with trigger events and project needs.
  - Policy: anticipate barriers to program success and adopt strategies and standards to align interests and provide program stability.
- Only a small proportion of programs promote comprehensive energy improvements. Programs can increase impact by broadening measure portfolios and adding flexibility to incentives to promote uptake (e.g., direct install programs) and deeper retrofits (e.g., performance-based incentives).



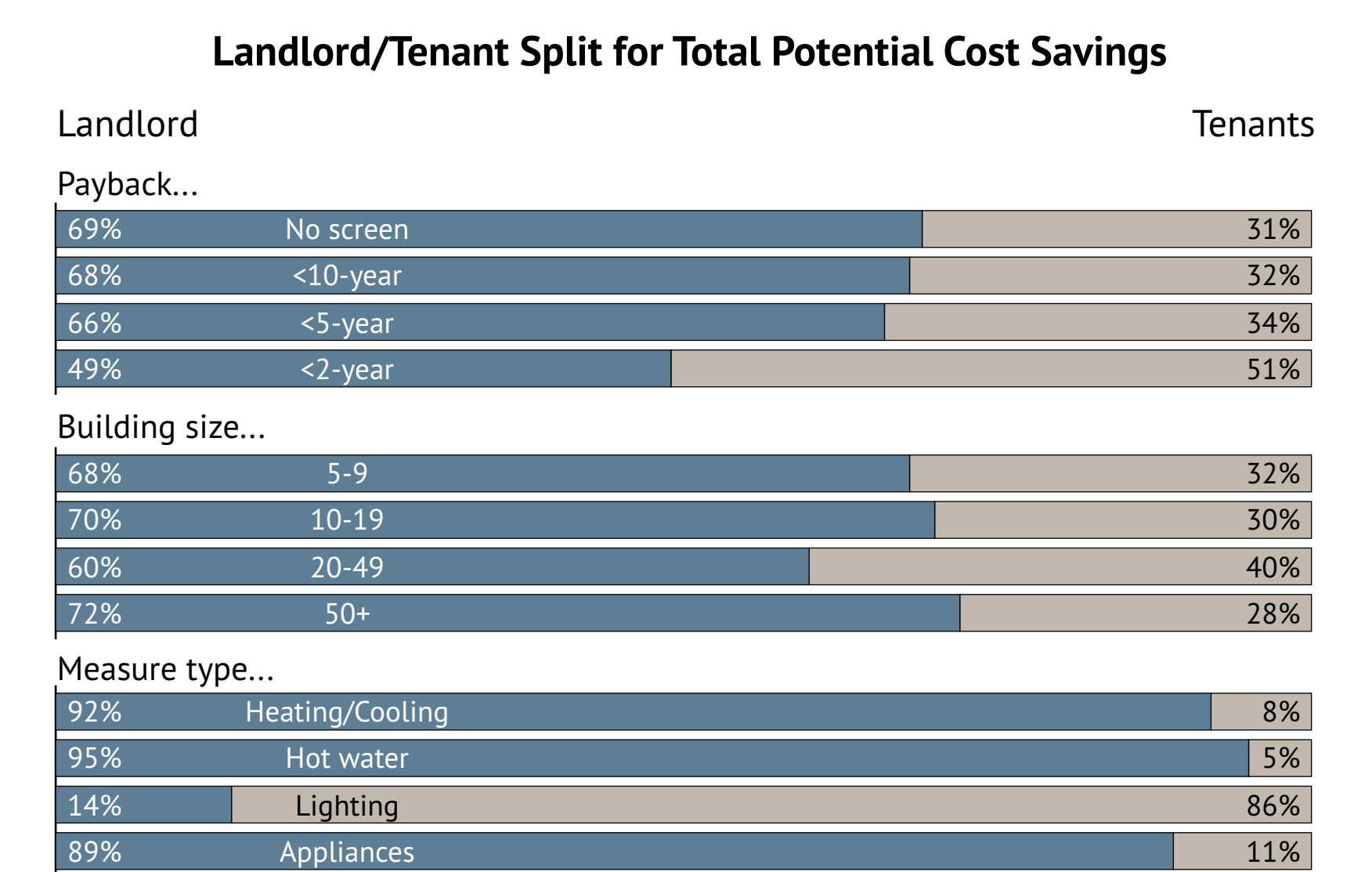
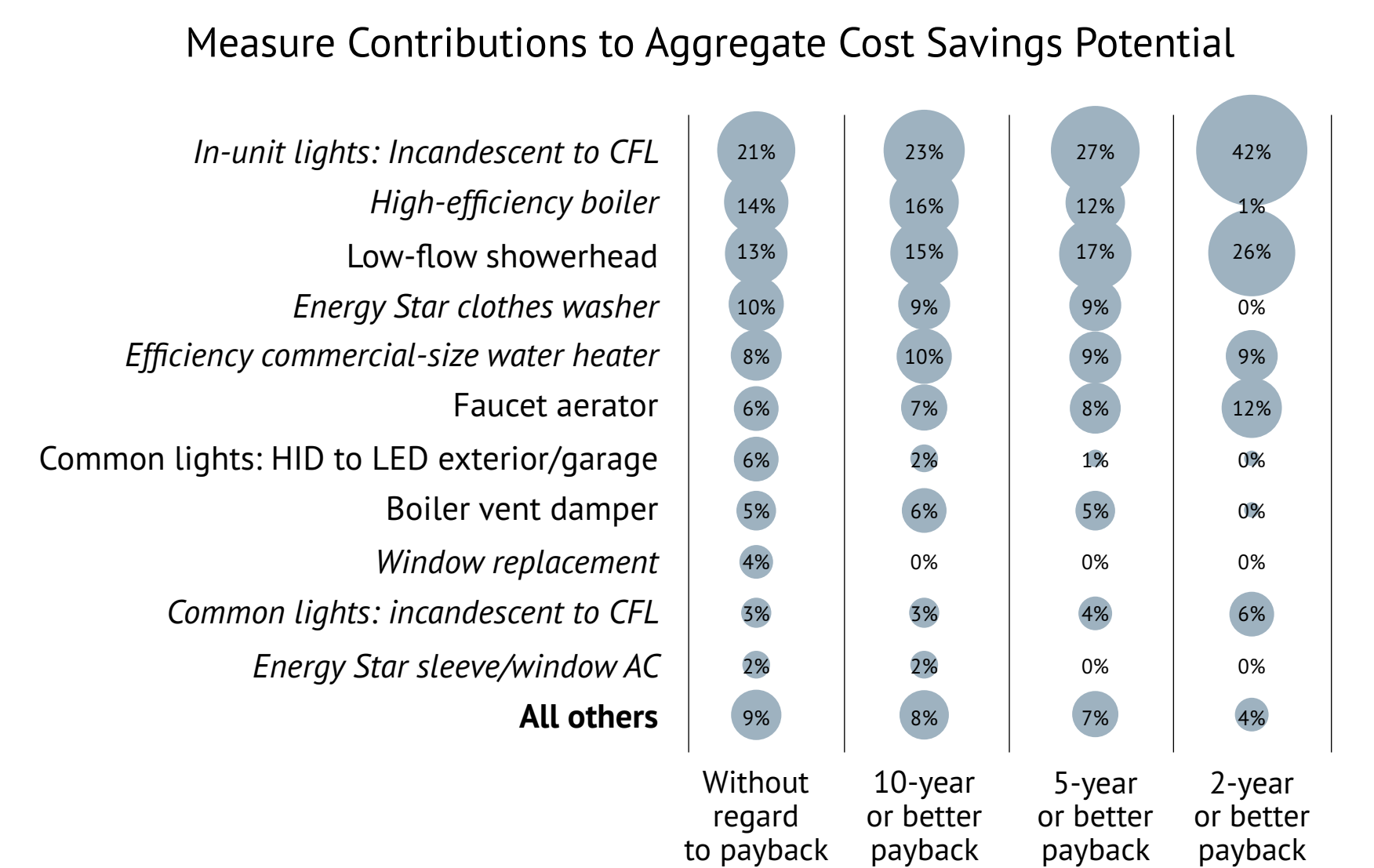
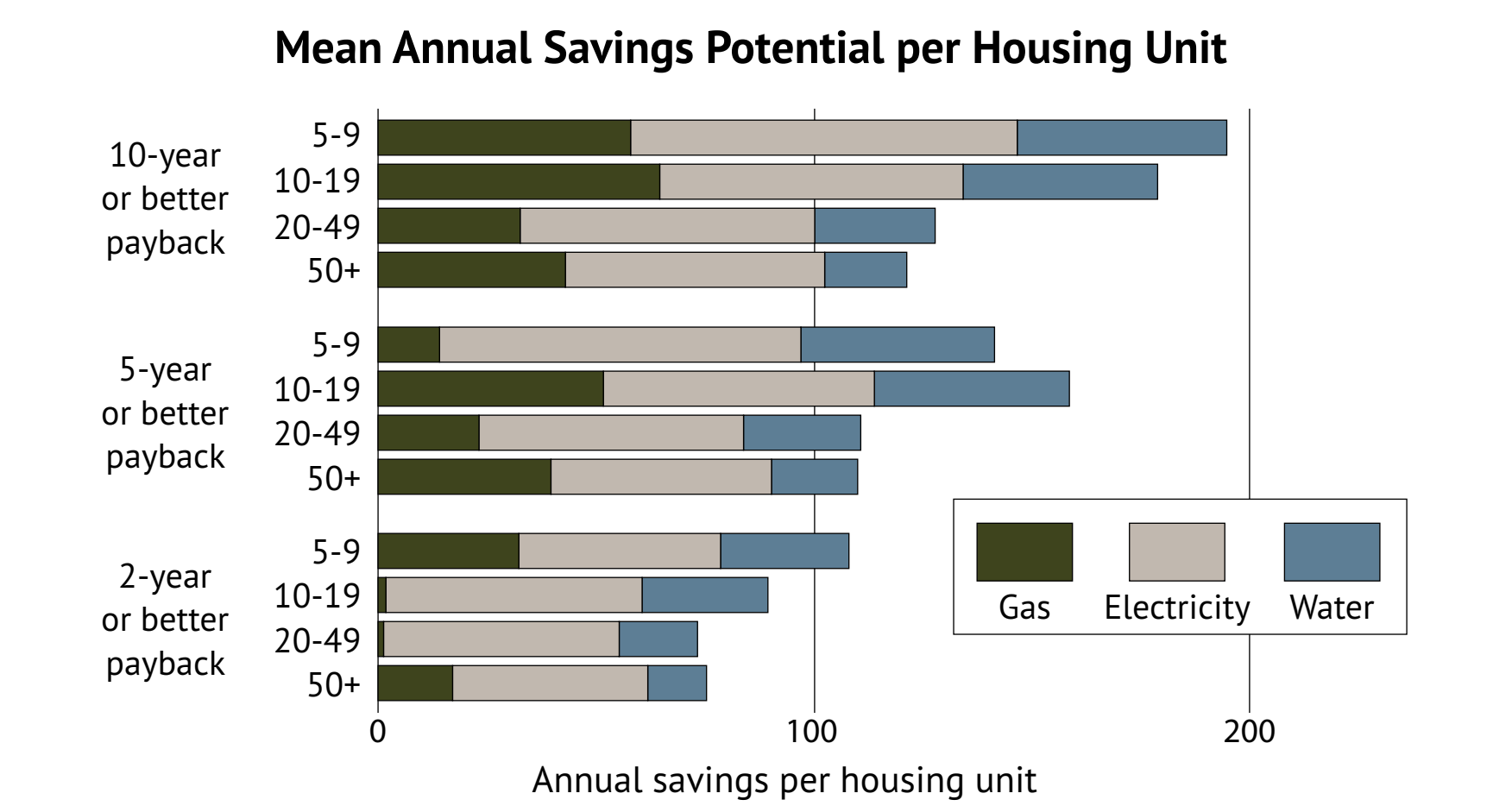
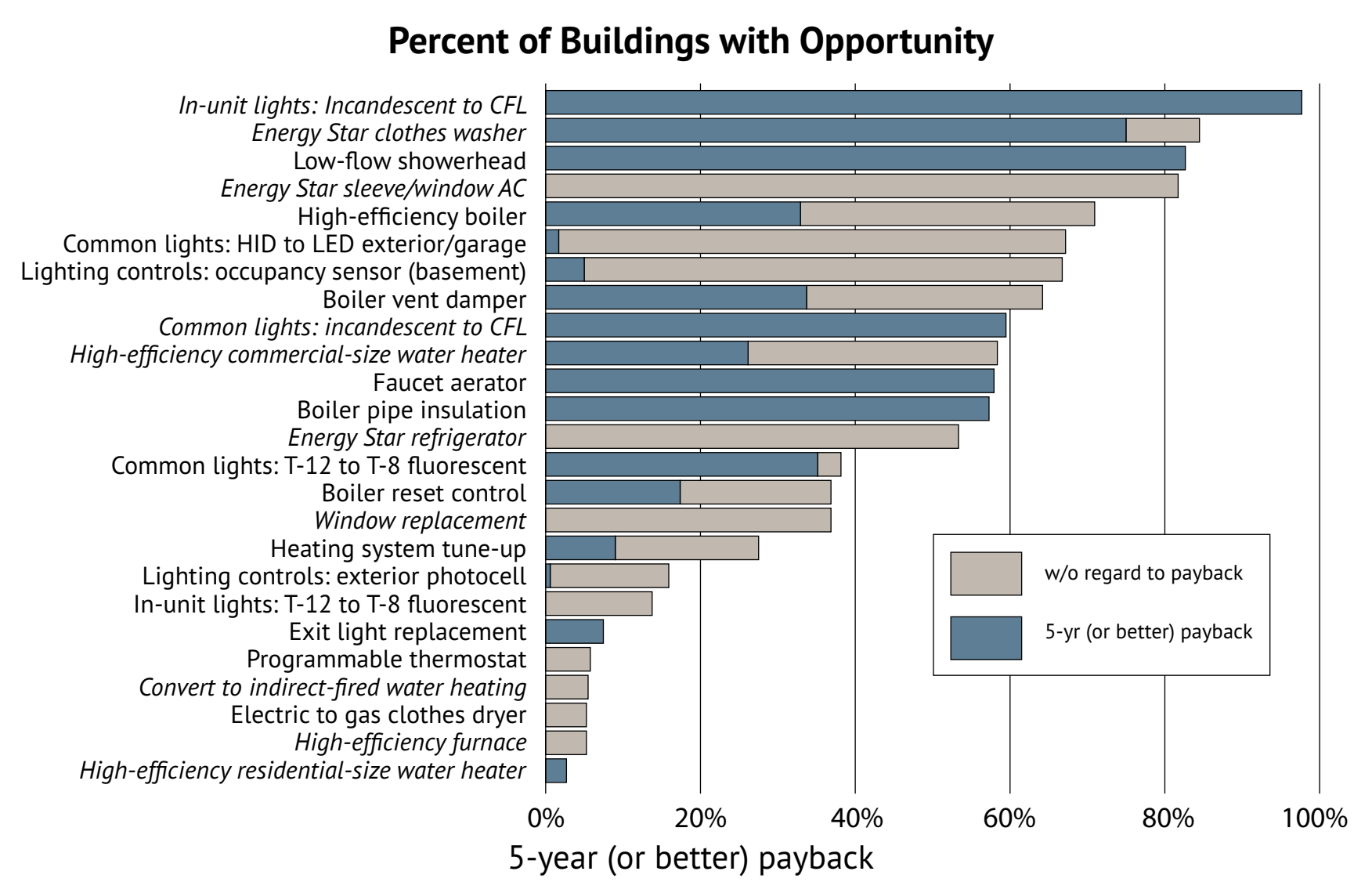
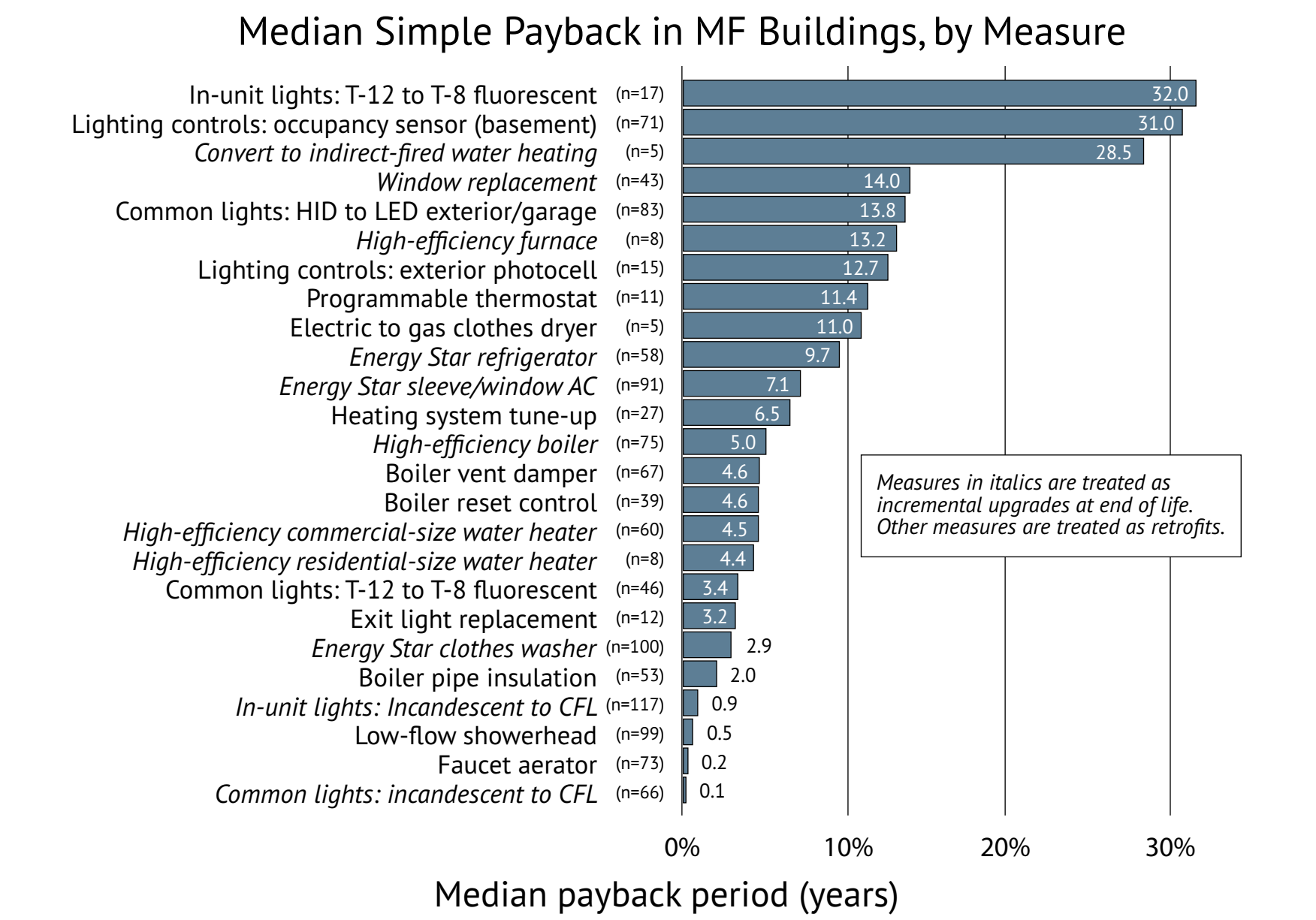
This project was supported in part (or in whole) by a grant from the Minnesota Department of Commerce, Division of Energy Resources through the Conservation Applied Research and Development (CARD) program.

# Minnesota Multifamily Rental Characterization Study

## FINDINGS



# OPPORTUNITIES



All results gathered and collected from Energy Center of Wisconsin and Franklin Energy, 2013, Minnesota Multifamily Rental Characterization Study.