

Cool Fixes for Hot Cities

Part 1: San Antonio

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Hosted by:

U.S. EPA Heat Island Reduction Program



Cool Fixes for Hot Cities webcast series
City of San Antonio's Under 1 Roof program

PERFORMANCE ASSESSMENT OF HIGH-SOLAR REFLECTANCE ROOFS IN SAN ANTONIO

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PROJECT OBJECTIVES

- Project has two major objectives:
 - Assess impact of high solar-reflectance roofs on attic temperatures in different seasons.
 - Assess impact of high solar-reflectance roofs on home electricity use intensity.

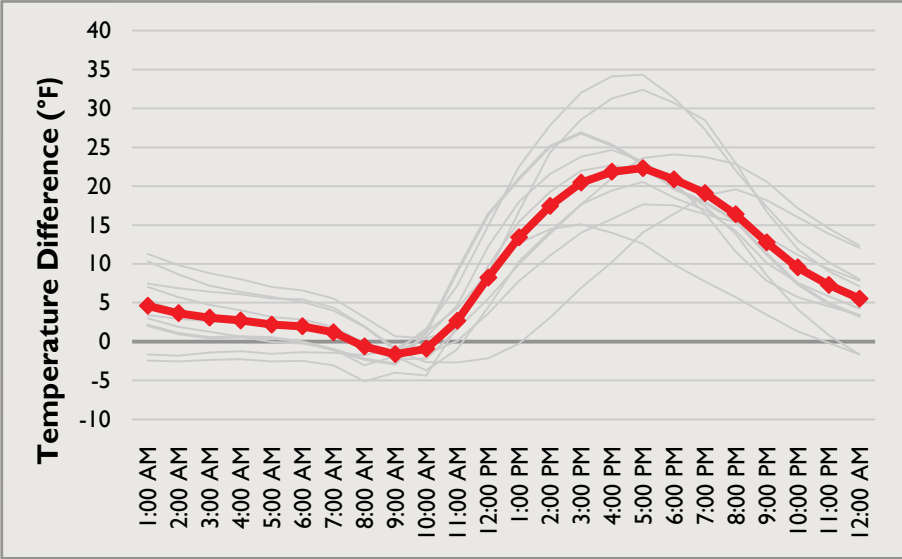


PROJECT METHODOLOGY

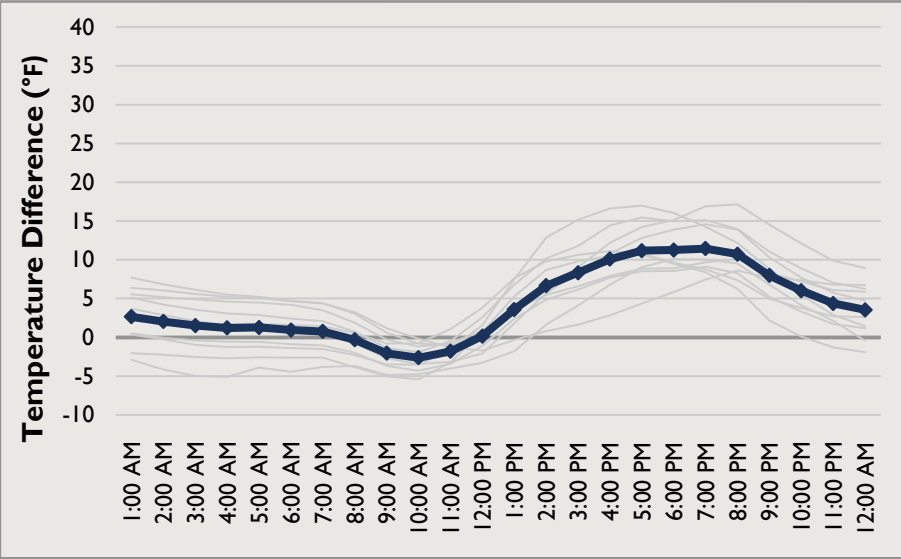
- Phase I includes the monitoring and performance analysis of 30 homes. An additional 30 homes are currently being monitored.
- The study included three major parts:
 - Using dataloggers to monitor, analyze and compare average home attic temperatures pre- and post- roof installation.
 - Analyzing home electricity use (billing) information to assess the impact of the cool roof installation on electricity use. Utility data were normalized for weather.
 - Surveying home-owners to identify any external factors that may have affected electricity use.



ATTIC TEMPERATURE – SUMMER

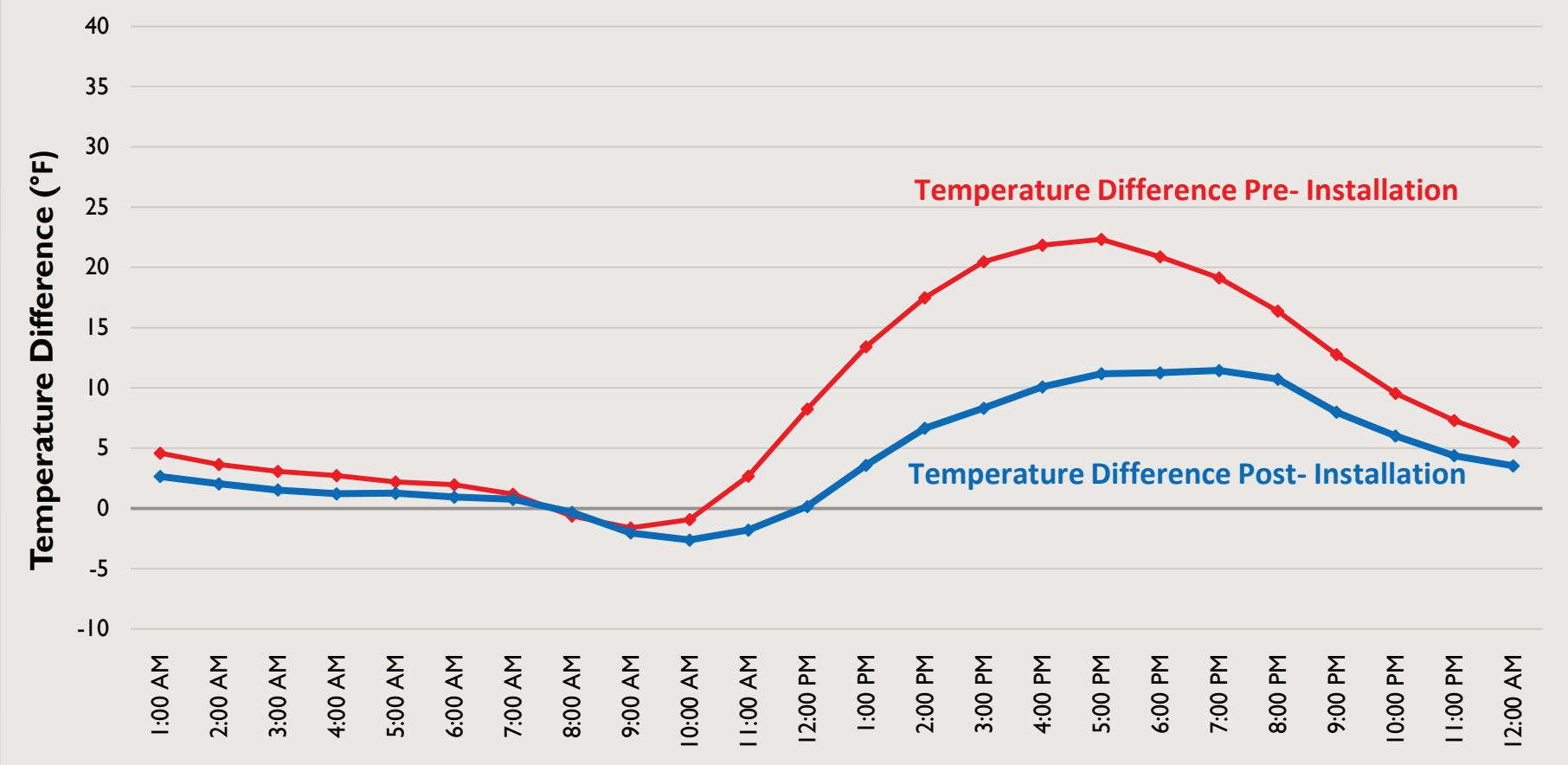


Average Summer Temperature Difference between Attic & Outdoor – Pre-Installation



Average Summer Temperature Difference between Attic & Outdoor – Post-Installation

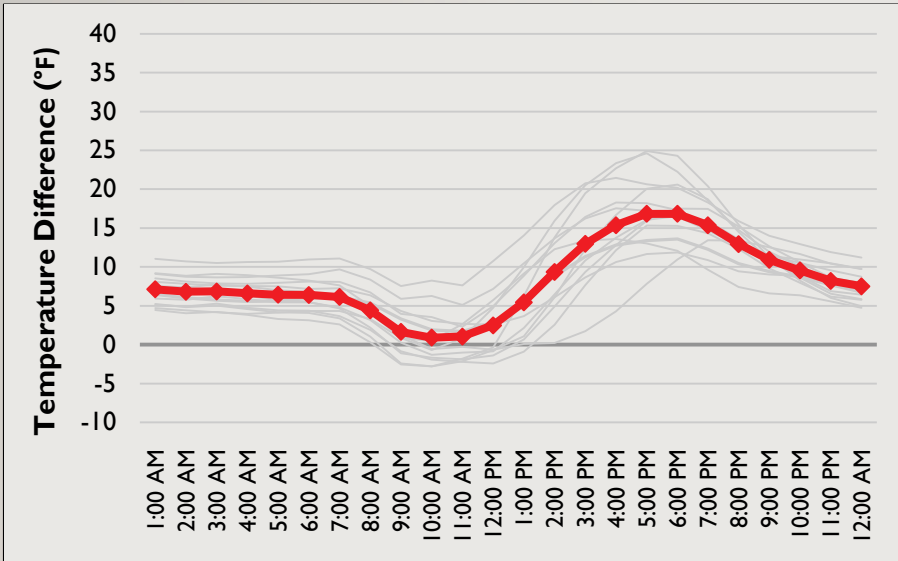
ATTIC TEMPERATURE – SUMMER



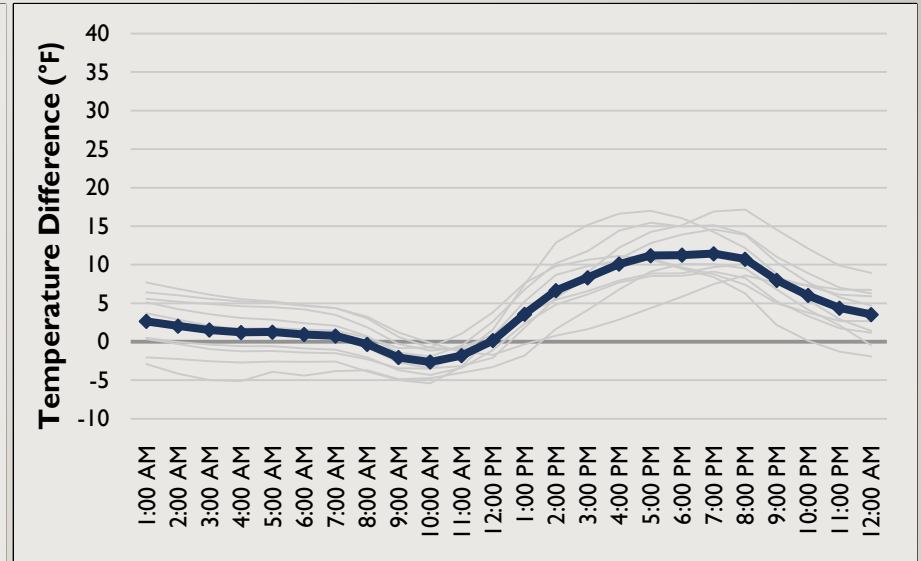
Summer Temperature Difference Pre- and Post-Installation



ATTIC TEMPERATURE – WINTER



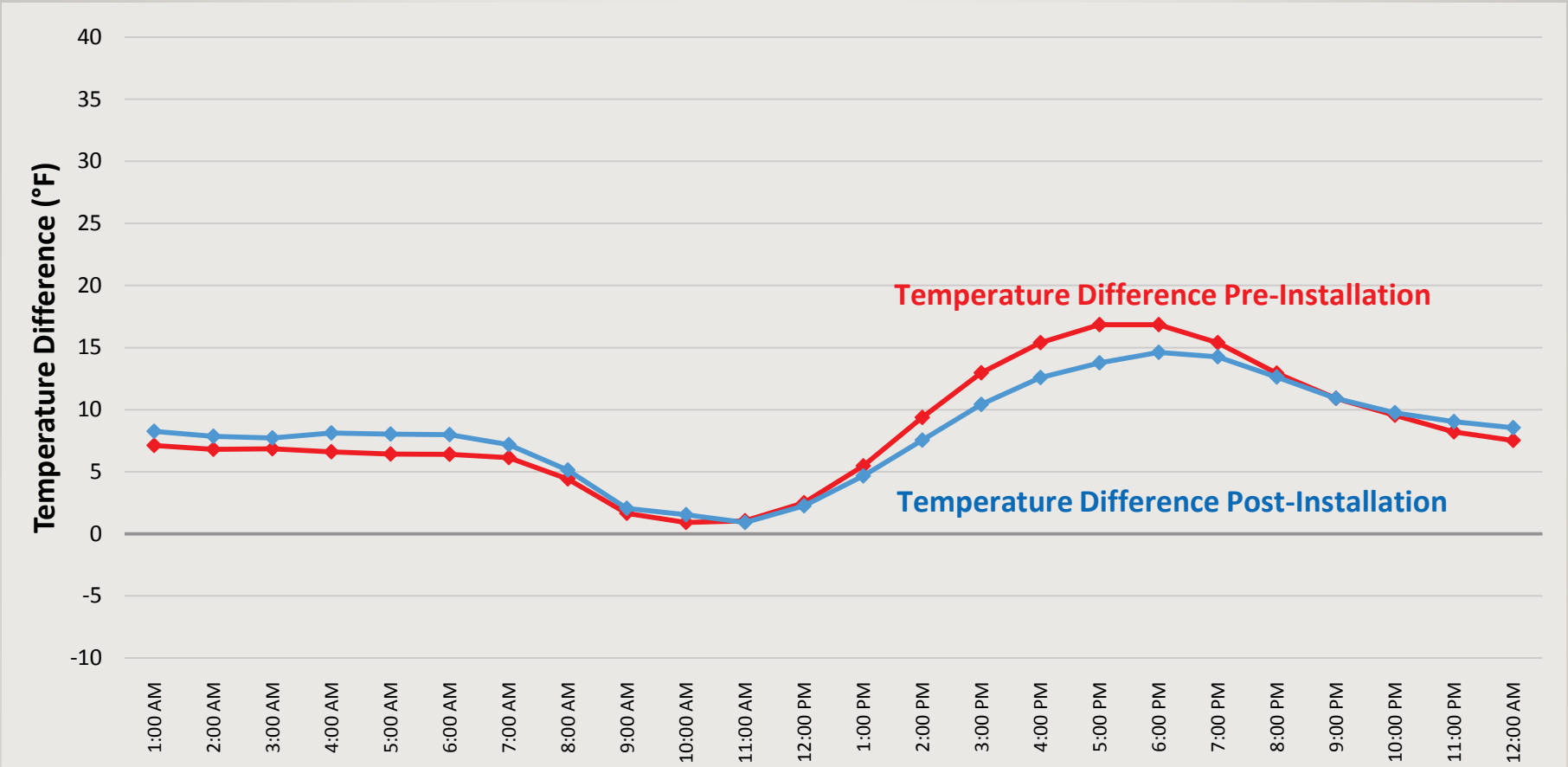
Average Winter Temperature Difference between Attic & Outdoor – Pre-Installation



Average Winter Temperature Difference between Attic & Outdoor – Post-Installation



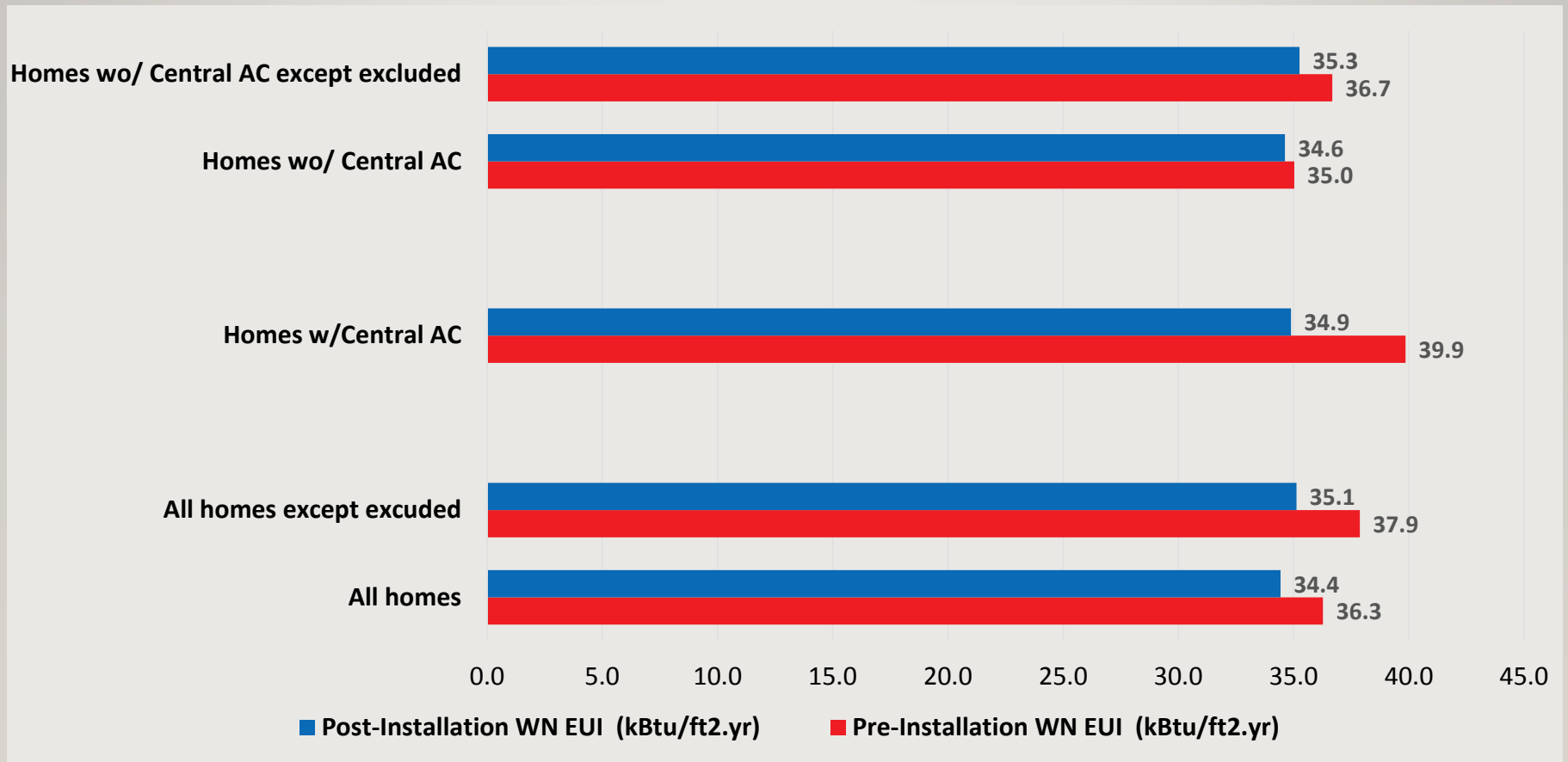
ATTIC TEMPERATURE – WINTER



Winter Temperature Difference Pre- and Post-Installation

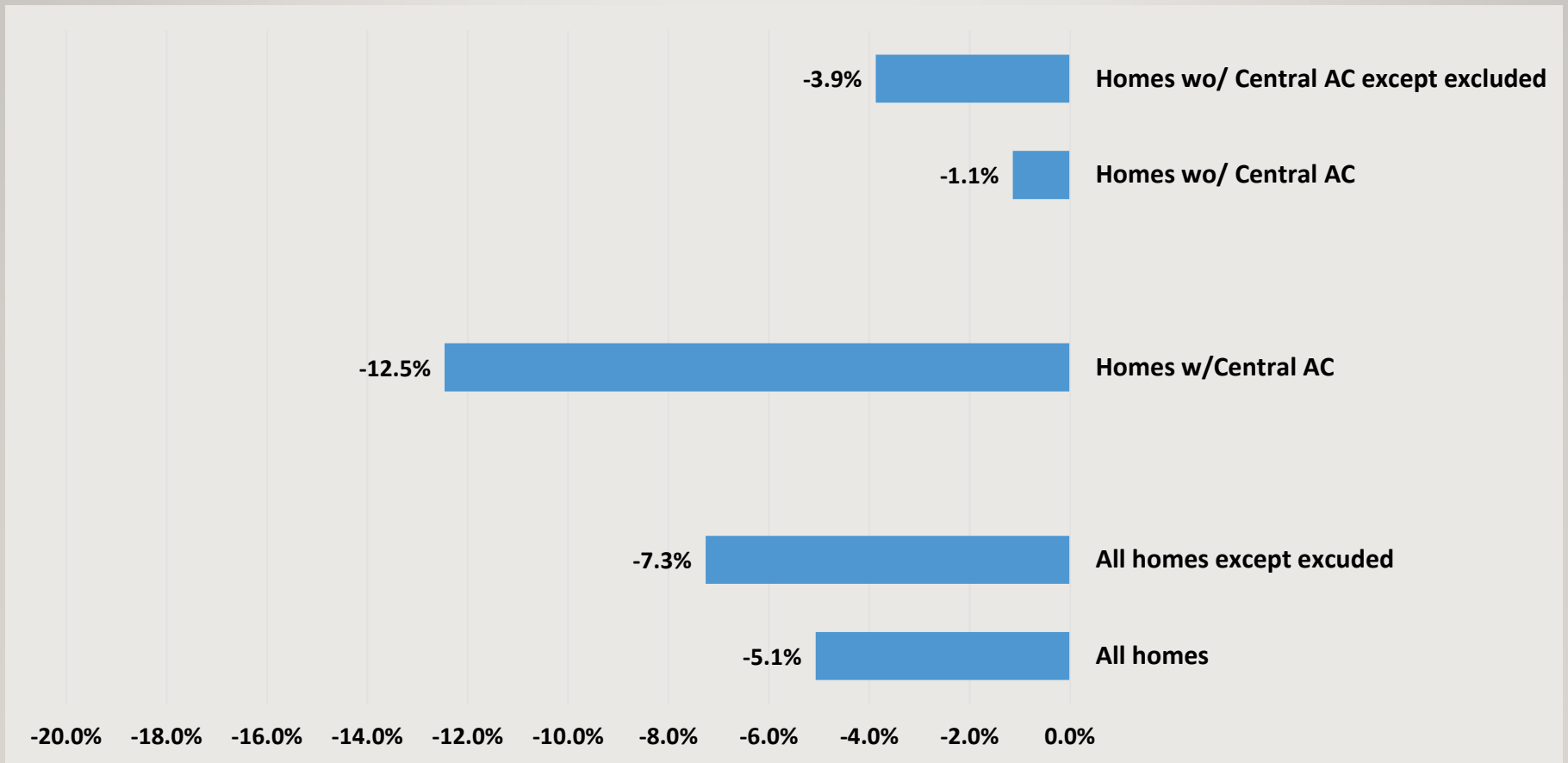


HOME ELECTRICITY USE INTENSITY



Pre-and Post-installation EUI for Phase I Homes

HOME ELECTRICITY USE INTENSITY



Percentage of Reduction in EUI for Phase I Homes

THANK YOU

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