



# THOUSAND HOME CHALLENGE RESULTS TO DATE

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*Results From First 32 Official Thousand Home  
Challenge Projects*



**Older homes  
from  
New England to  
California**







**Newer homes  
from  
Pennsylvania to  
New Mexico**





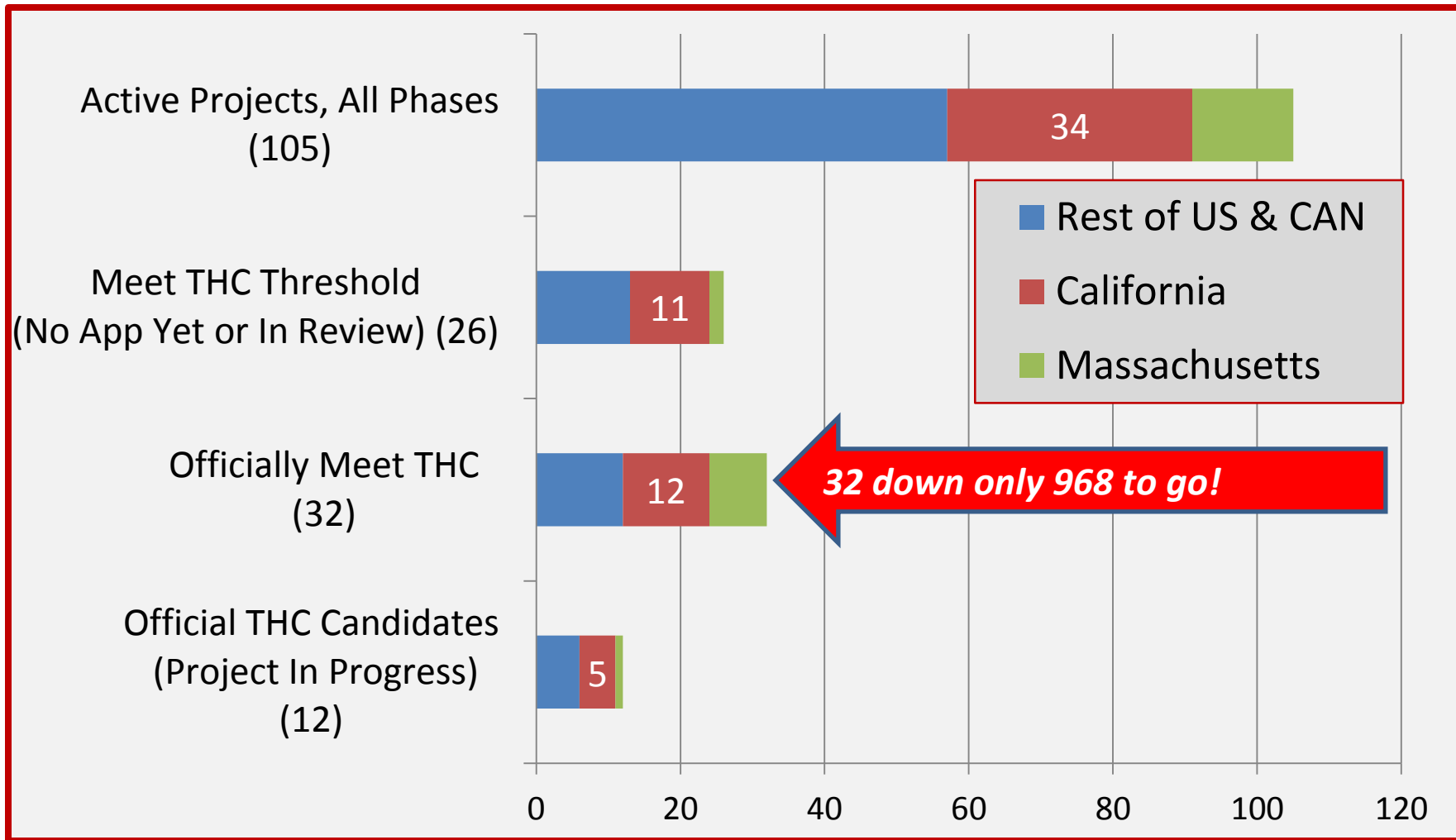
# 32 Projects Officially Meet the 1000 Home Challenge

## Project Characteristics

- **(9)** Net zero or better (site energy)
- **(8)** Also charge electric vehicles (EV)
- **(28)** Have PV (solar electricity)
- **(11 of 32)** Projects met the Thousand Home Challenge without PV (based on extrapolated, not measured data)
- **(161 kW)** Total installed PV capacity



# Thousand Home Challenge Project Summary (07-2020)





# 1<sup>st</sup> 32 House & Household Characteristics

- 1869 Oldest home; 2008 Newest home
- Year Built: (16%) 1850-1899; (34%) 1900-1930; (12.5%) 1931-1960; (31.25%) 1961-2000; (6.25%) 2001-2010
- Correlation between indicators of energy performance and age: **None!**
- 576 Ft<sup>2</sup> Smallest home; 3,650 Ft<sup>2</sup> Biggest single family home
- 2,253 Ft<sup>2</sup> Average house size (FFA) (per household)
- 2.79 Occupants: Average household size
- (29) Single-family homes; (3) Duplexes





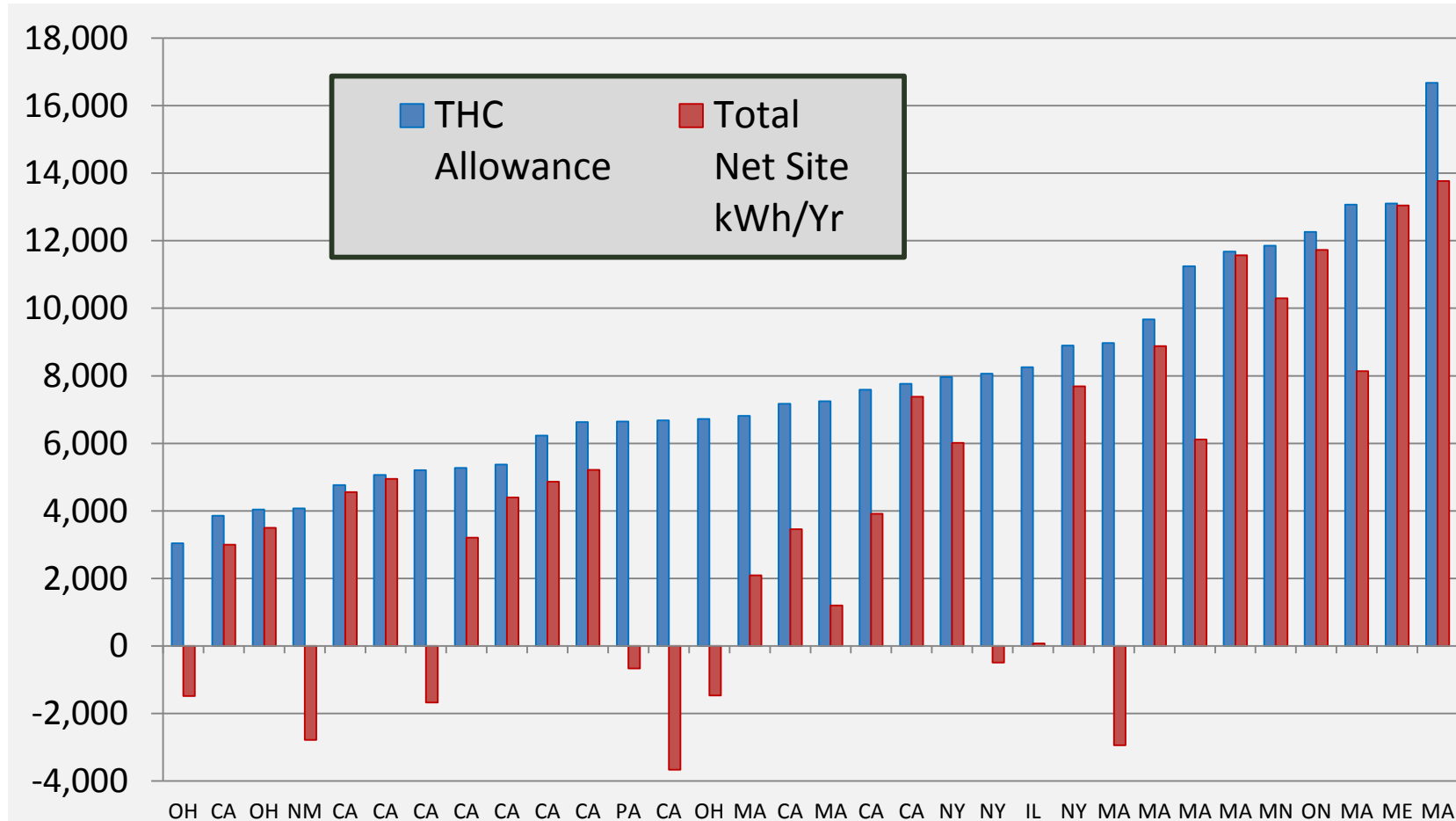
## Notes: 1000 Home Challenge – 32 House Summary Energy Use Graphs

- All energy use is reflected as site energy
- KWh does not *just* include household electrical use; total household energy is converted to kWh
- PV production is included in project energy use, or noted otherwise
- Energy use shown is verified 1 yr. household performance; not reduction from base year
- Household energy use is shown on left-hand axis
- Vertical bars show completed THC project energy use
- THC avg. & mean reflect 32 projects
- US & California avg. shown for comparison



# Threshold Vs. Actual (kWh/Yr)

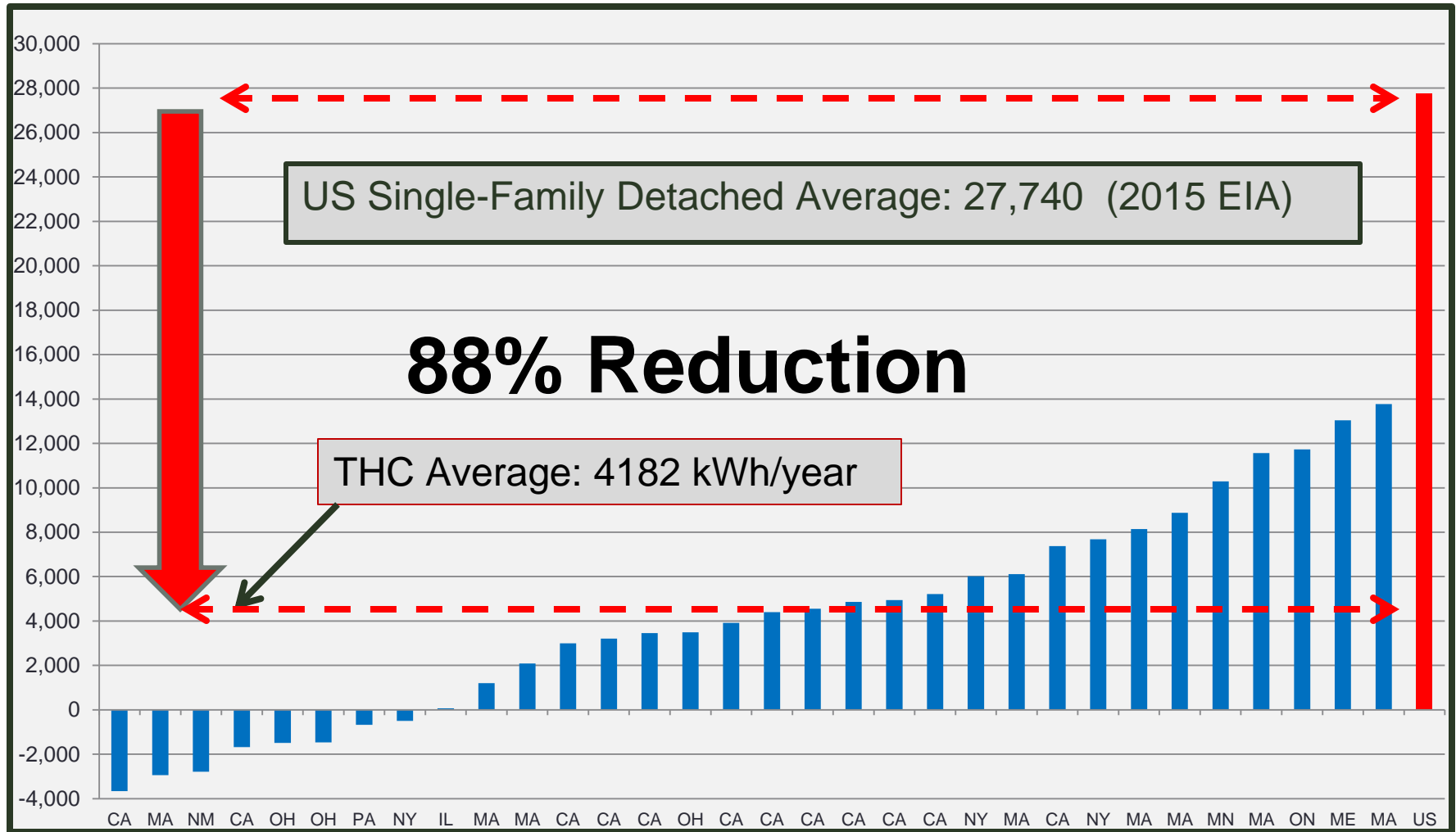
## Annual Net Site Project Energy Use of Project Participants



US single fam. detached avg. 27,740 kWh/yr. (2015 EIA); CA:20,000 kWh/yr.



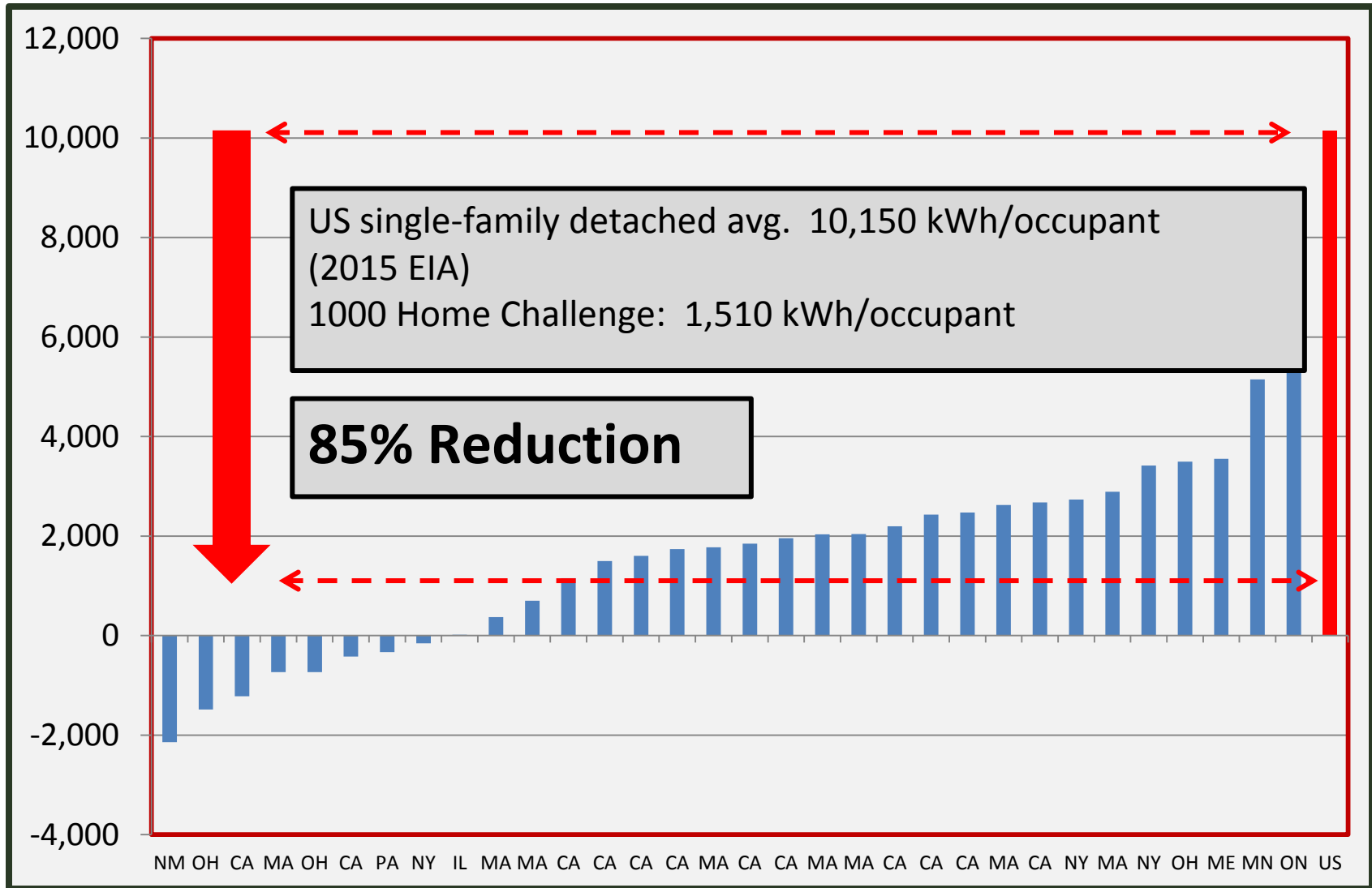
# Household Site Net Energy (kWh/Yr)



THC: 33 households (32 projects)

NOTE: CA avg. single-family energy use: 20,000 kWh/yr.

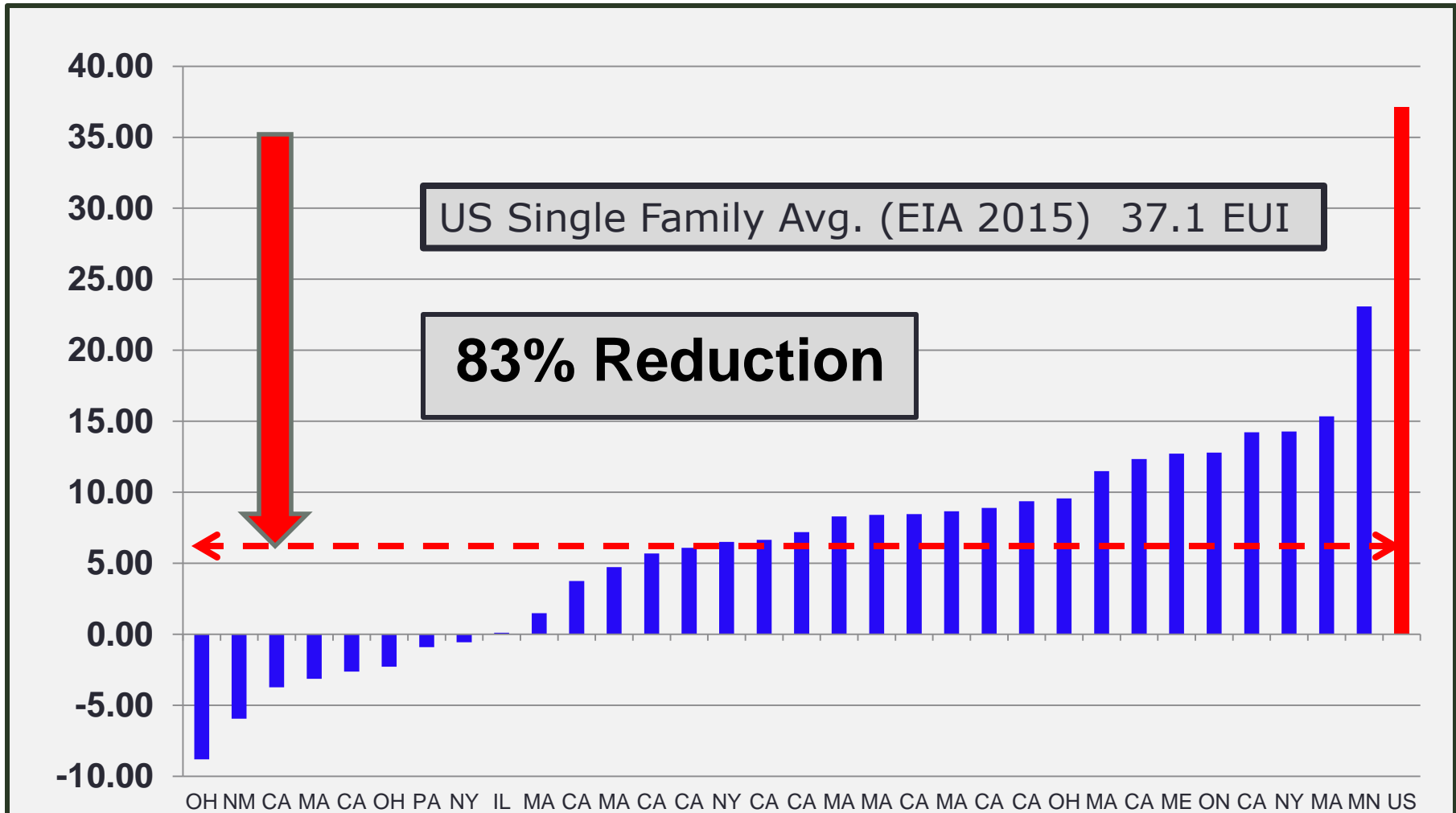
# kWh/Occupant





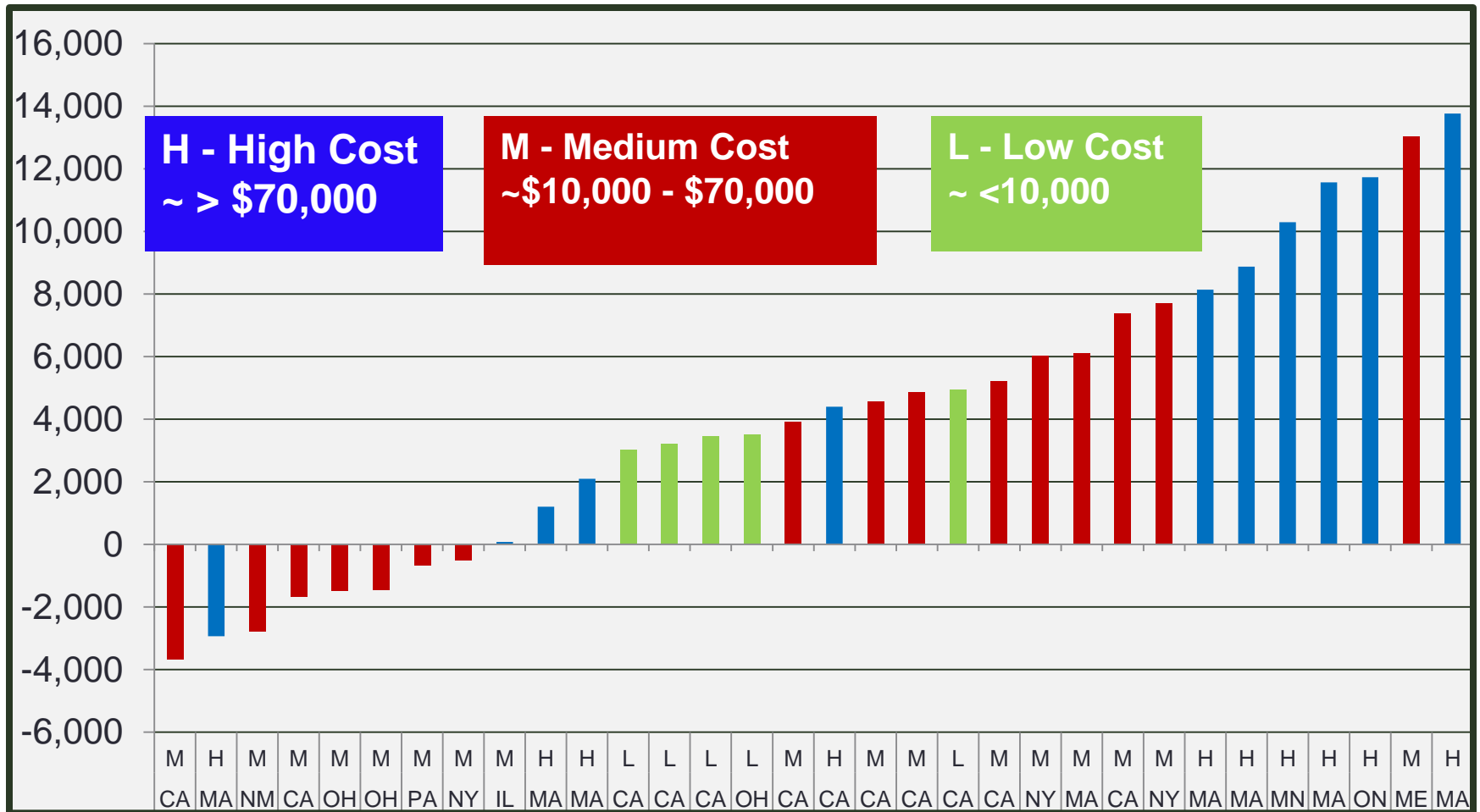
# Energy Use Index (EUI) KBtu/Ft<sup>2</sup>

Net Annual Energy Use (including renewables)



**UPDATE: 1000 Home Challenge 32 project avg.: 6.0 EUI**

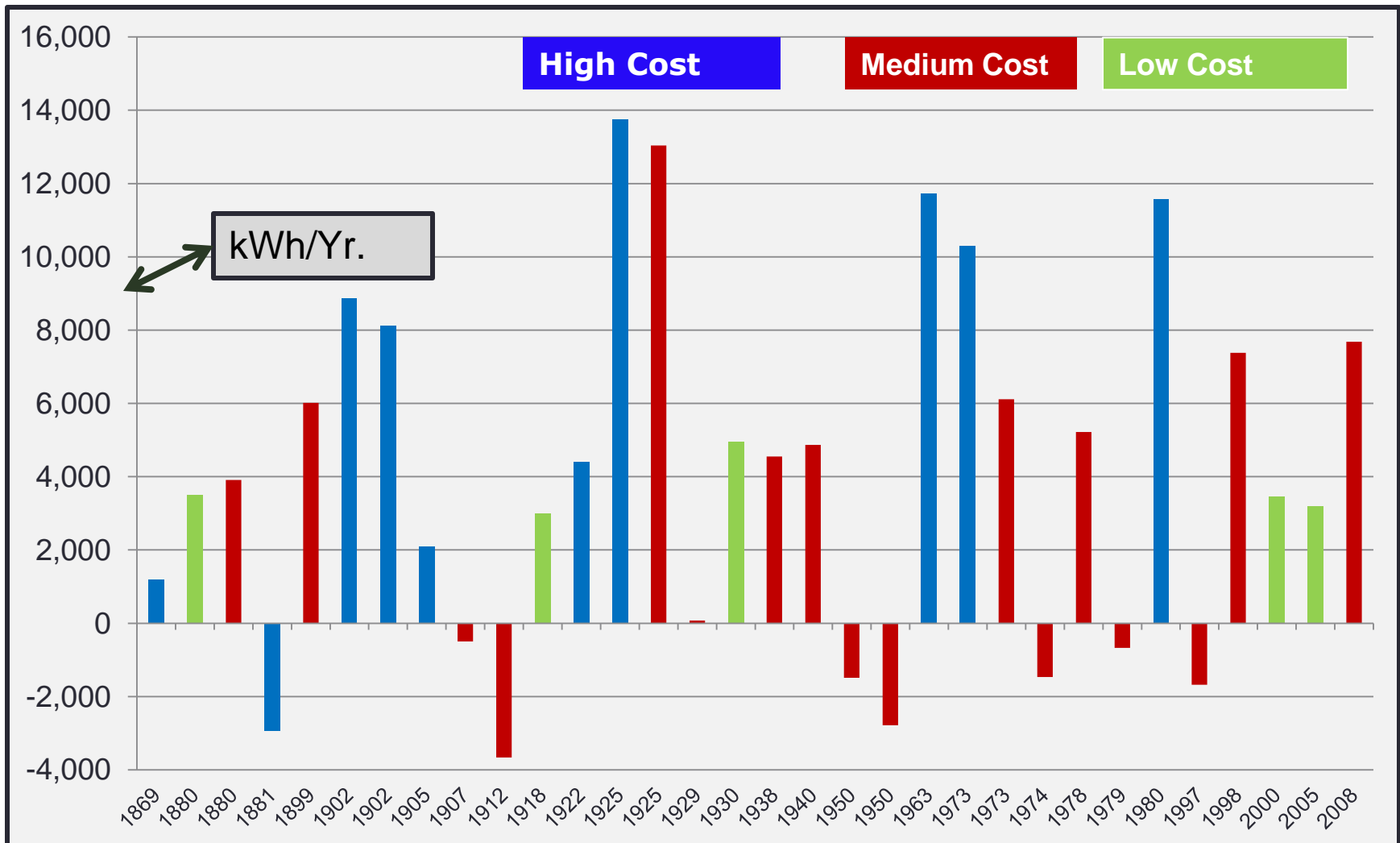
# Net KWh/site vs. Estimated Cost







# House Age & Project \$\$ by Net Site kWh/Yr





# FOR MORE INFO, CONTACT:



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