

**DOCKETED**

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# ITEM 5

## Load Flexibility Part 1

Gabriel Taylor, Efficiency Division,  
CEC



# Electric Load Flexibility

**An Equitable Transition to a Clean Energy Future**

Gabriel Taylor, P.E. & Messay Betru  
*California Energy Commission*

July 16, 2021



# Goals for Today

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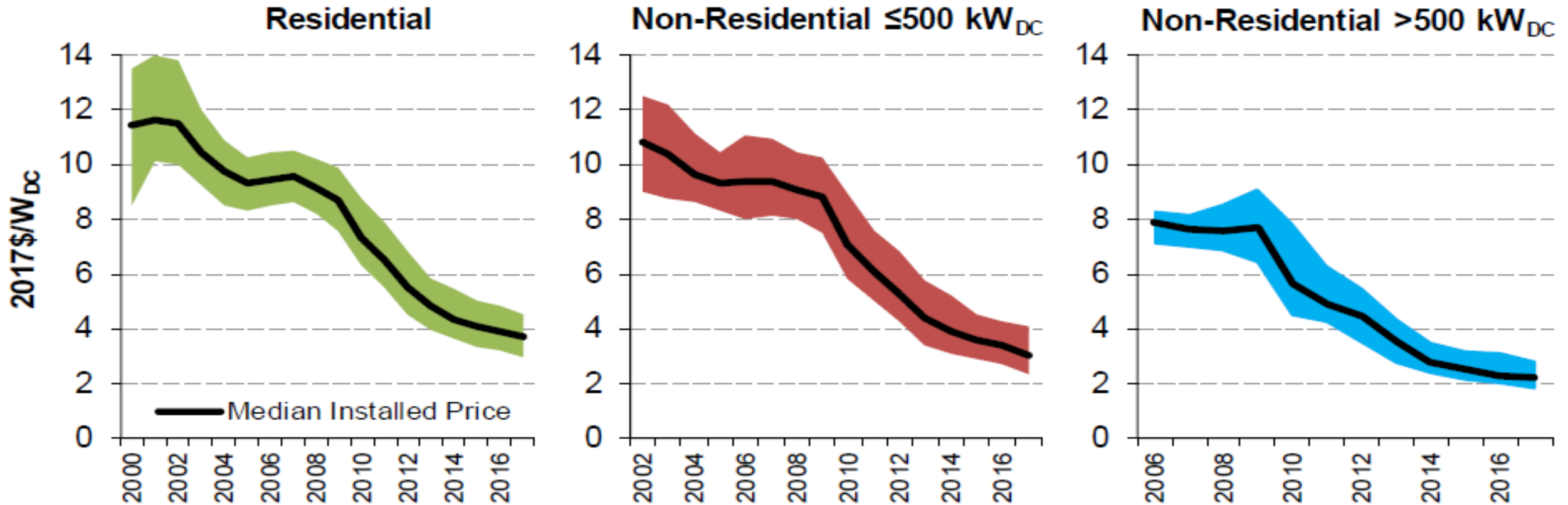
- **What is Load Flexibility**
- **Why it is an Equity Issue**
- **Engagement Opportunities**
  - ✓ Policy
  - ✓ Education
  - ✓ Standards







# Solar Costs



Source: *Tracking the Sun: Installed Price Trends for Distributed Photovoltaic Systems in the United States – 2018 edition*, September 2018, Lawrence Berkeley National Laboratory  
[https://emp.lbl.gov/sites/default/files/tracking\\_the\\_sun\\_2018\\_edition\\_final\\_0.pdf](https://emp.lbl.gov/sites/default/files/tracking_the_sun_2018_edition_final_0.pdf)



Kent Porter /The Press Democrat via AP







# What is Load Flexibility?

- **The Value of Energy**
- **Voluntary & Automatic**
- **Save Money & Reduce Impacts**

A voluntary change in electric demand *while maintaining or improving* service quality.

# Load Flexibility

SHAPE

SHIFT

SHED

SHIMMY



Years

Seasons

Days

Day/Night

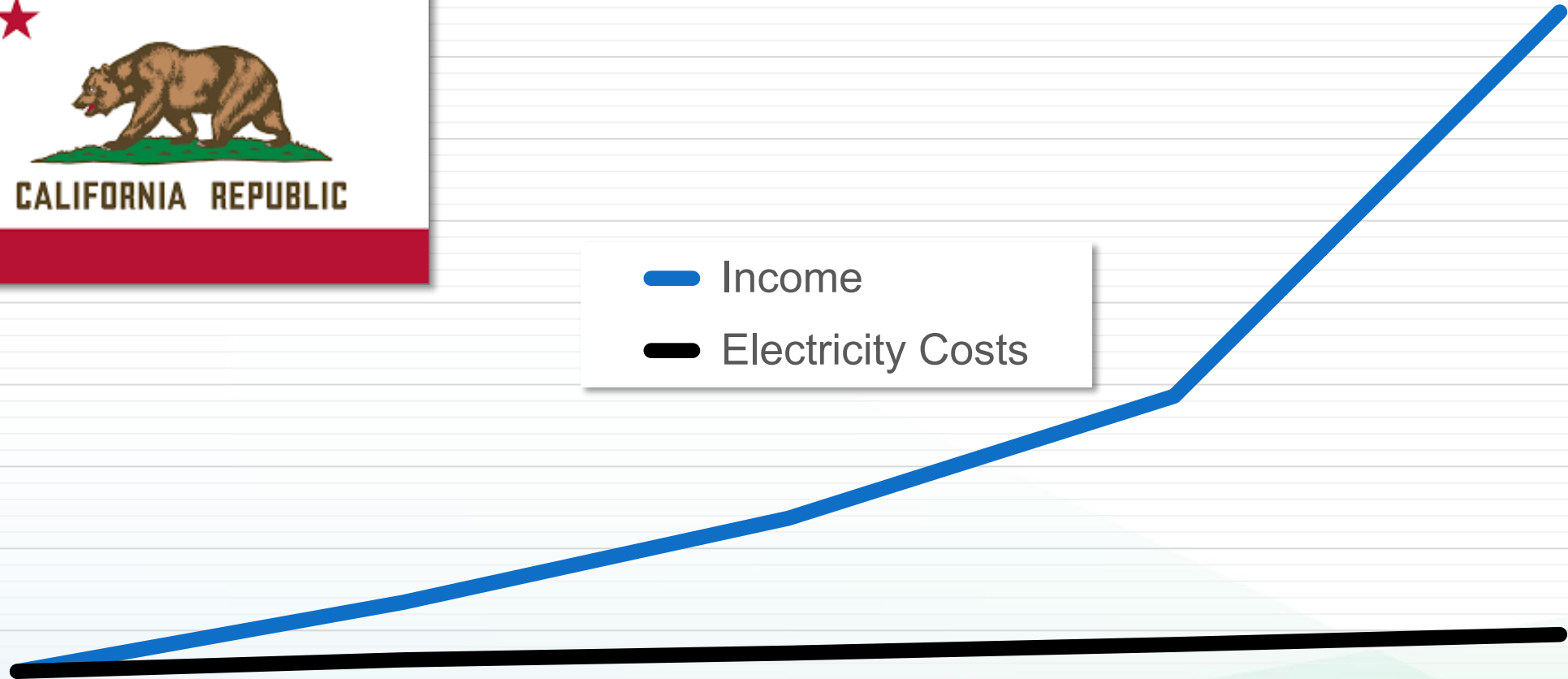
Hours

Minutes

Seconds



# Income vs. Electricity Costs



**Source:** U.S. Bureau of Labor Statistics, California Consumer Expenditure Survey in 2017-2018  
Source data at <https://www.bls.gov/cex/2017/research/income-ca.htm>



# Engagement Opportunities





# Transportation Electrification





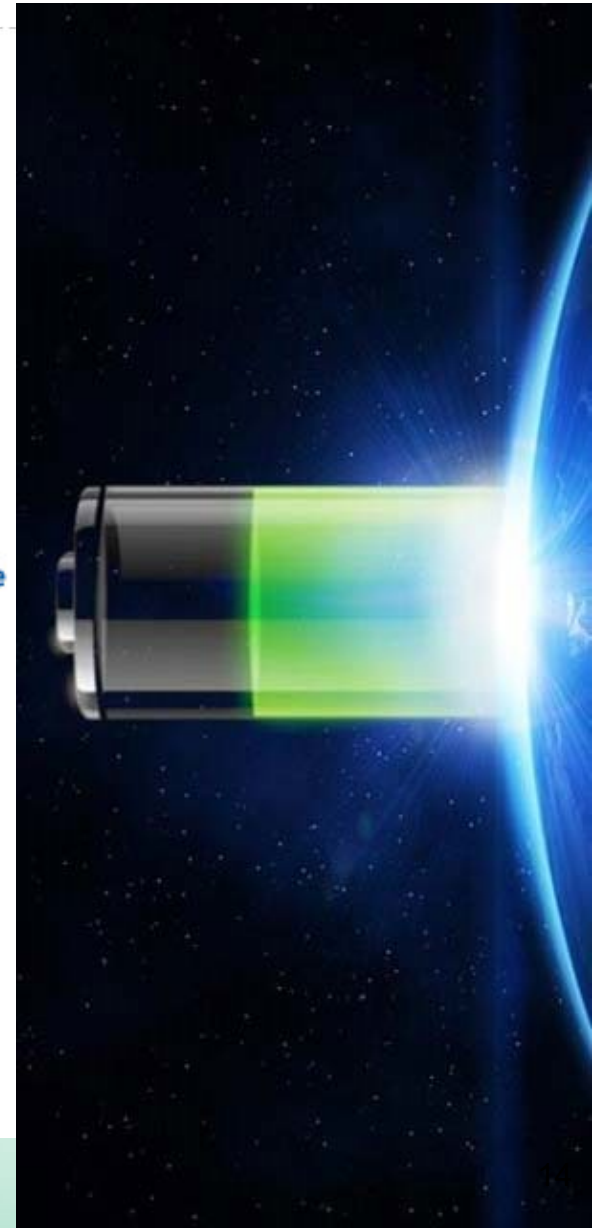
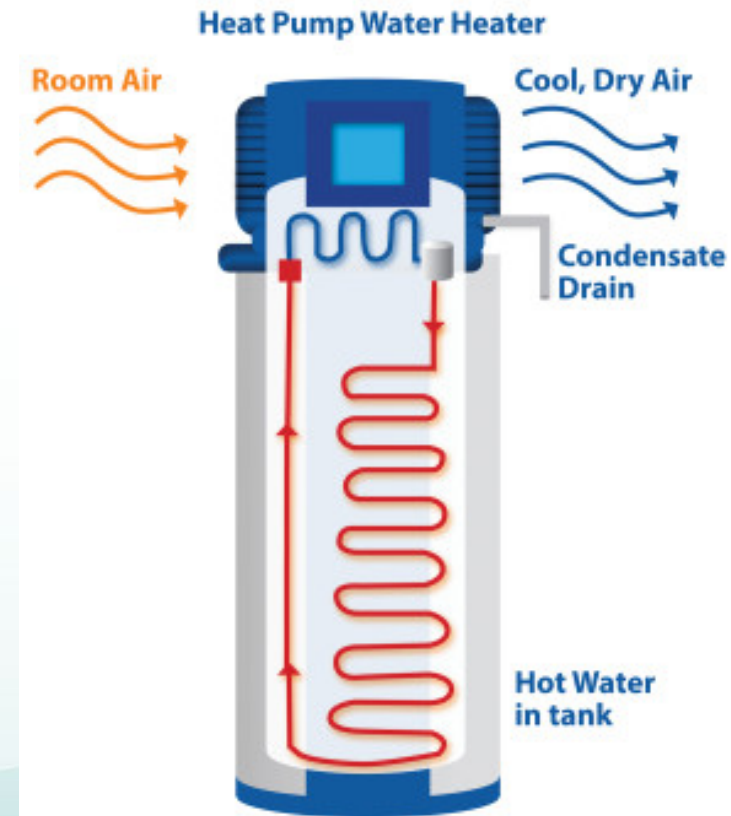
# Building Energy Standards



# Load Management Standards

*...a program of electrical load management for each utility...*

- Energy Storage
- Automation
- Rates (recommendations)





# Appliance Standards







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