



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

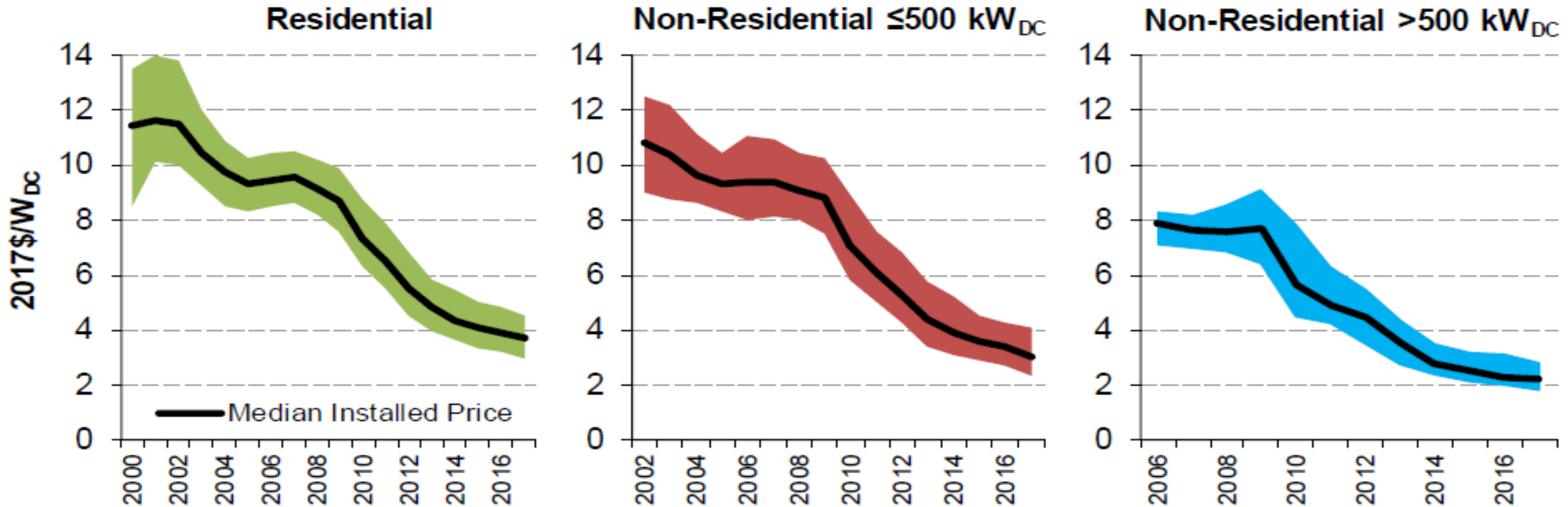
- **What is Load Flexibility**
- **Why it is an Equity Issue**
- **Engagement Opportunities**
 - ✓ Policy
 - ✓ Education
 - ✓ Standards







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







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

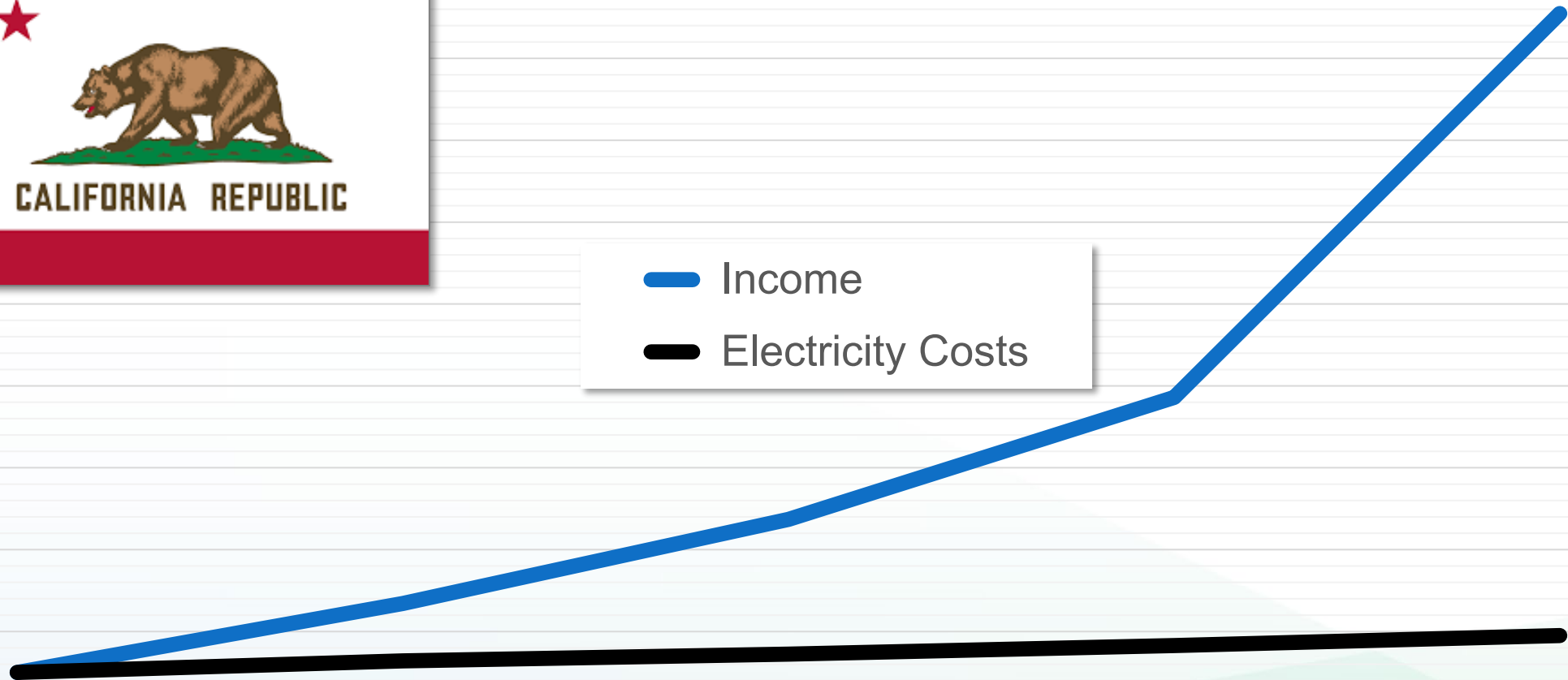
Hours

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



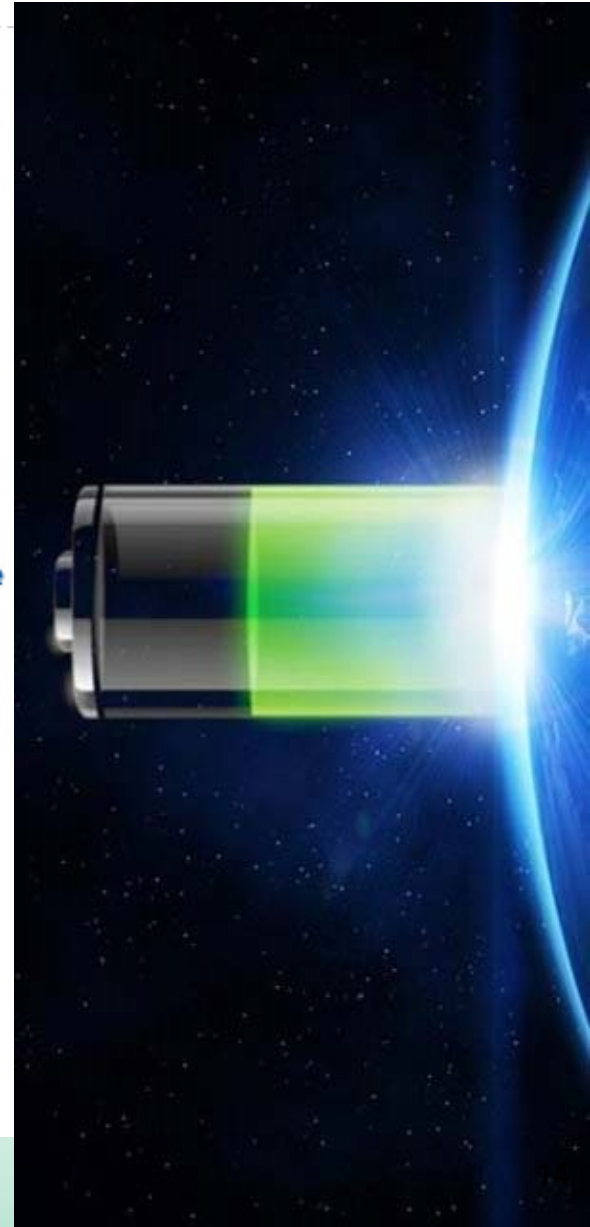
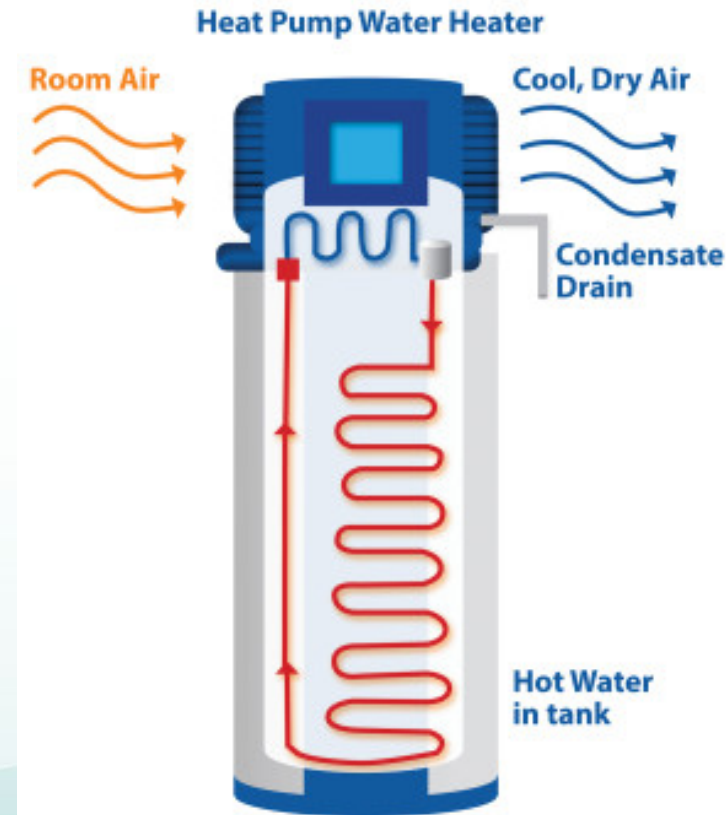
Building Energy Standards



Load Management Standards

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

- Energy Storage
- Automation
- Rates (recommendations)





Appliance Standards





Messay Betru

messay.betru@energy.ca.gov

Gabriel D. Taylor, P.E.

gabriel.taylor@energy.ca.gov

**Energy Efficiency Division
California Energy Commission**