

# California Plug Load Research Center

**WELCOME to**

## **The 16<sup>th</sup> CalPlug Workshop**

**3 C's: Climate Change, energy Consumption and disadvantage Communities during Covid19**

**November 16, 2020**



**Professor G. P. Li**

California Plug Load Research Center

California Institute for Telecommunications and Information Technology



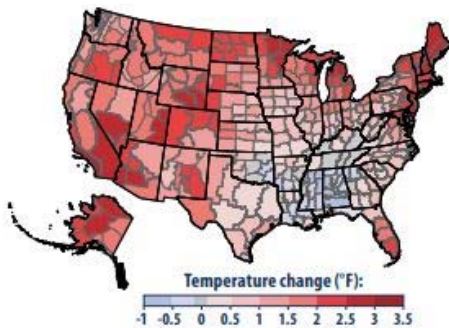
Creating Connections. Powering Innovation. Boosting Efficiency.



# Covid19

## Climate Change and Wild Fires

California's climate is changing. Southern California has warmed about three degrees (F) in the last century and all of the state is becoming warmer.



Rising temperatures in the last century. Southern California has warmed more than the rest of the state. Source: EPA, Climate Change Indicators in the United States.

## Energy Consumption



- California was the seventh-largest producer of crude oil among the 50 states in 2018, and, as of January 2019, it ranked third in oil refining capacity.
- California is the largest consumer of jet fuel among the 50 states and accounted for one-fifth of the nation's jet fuel consumption in 2018.
- California's total energy consumption is second-highest in the nation, but, in 2018, the state's per capita energy consumption was the fourth-lowest, due in part to its mild climate and its energy efficiency programs.
- In 2018, California ranked first in the nation as a producer of electricity from solar, geothermal, and biomass resources and fourth in the nation in conventional hydroelectric power generation.
- In 2018, large- and small-scale solar PV and solar thermal installations provided 19% of California's net electricity generation.

EIA, 2020

## Disadvantaged Communities

### Energy Insecurity in California



**3.3 million low-income households**

In California – about 2 out of 3 – are energy insecure.<sup>3</sup>

TURN, 2016

The Utility Reform Network

# CalPlug

“It’s (Climate Change) the number one issue facing humanity. And it’s the number one issue for me,”

From President-elect Joe Biden, episode of Pod Save America, October 24, 2020

“As awful as this pandemic is, climate change could be worse.”  
“If we start now, tap into the power of science and innovation, and ensure that solutions work for the poorest, we can avoid making the same mistake with climate change.”

From Bill Gates, GatesNotes, August 4, 2020

# CalPlug Workshop Program

- ☞ **9:00am: Director's CalPlug WELCOME**  
**GP Li, CalPlug** (California Plug Load Research Center)  
CAL INST. FOR TELECOMMUNICATIONS & INFORMATION TECHNOLOGY
- ☞ **9:05am: Joy Pixley, CalPlug**
- ☞ **9:30am: Michael Klopfer, CalPlug**
- ☞ **9:55am: Scott Hinson, Pecan Street Inc.**
- ☞ **10:20am: Steven Davis, UC Irvine**
- ☞ **cancelled Jem Porcaro, SE for All** (Sustainable Energy for All)
- ☞ **10:45am: Kim Trenbath, NREL** (National Renewable Energy Laboratory)
- ☞ **11:10am: Speaker Panel Discussion**
- ☞ **12:30pm: End of Workshop**

