



# Deploying Sustainable Energy during Transition Implications of Recovery, Renewal, and Rebuilding



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**Nidhi Thakar, Chief for Strategy and External Affairs  
California Public Utilities Commission**



# The New Normal

- **“We can’t fight nature, we have to learn how to get along with her.” – Gov. Brown, State of the State, January 25, 2018**
- Climate change is intensifying weather events. As a result, we are seeing an **increased severity** and **frequency of climate-related events**.
- **What does this mean?**
  - California is already experiencing dramatic changes in temperatures, sea level rise, drought, coastal storm surges, and wildfires.
  - Year-long wildfire season
  - Unprecedented weather events, i.e. Thomas Fire Southern California mudslides.



## Key Findings from Recent Research on Future Climate Impacts to California

- Extreme heat days in cities like Fresno will likely triple by 2030, with a 60% chance of at least 3 heat waves lasting more than 6 days. By 2050 it will be a 90% chance. (**Cal-adapt**)
- There is a 67% chance that sea levels in California will reach 6 inches by 2030 and one foot by 2050. Under current emissions scenarios, by 2100 sea levels could be up to 3.5 feet and potentially up to 10 feet. (**Scripps**)
- There is an 80% chance of having a 30-year drought in the Southwest under current emission trajectories. (**NASA**)
- Wildfires are expected to burn 77% more area by 2050. (**UCLA**)



# Innovative Approaches

- **Integrated Resource Planning process**
- **Diversity of resources**
- **Resource Adequacy**
- **GHG reduction targets**
- **Cap and trade**



## **Opportunities for the Deployment of Sustainable Energy Systems**

- **Pole and Conduit Census (Pole OII/OIR)**
- **Hardening of poles and undergrounding of wires**
- **Regionalization**
- **Governor's Resiliency Task Force**



# Research Gaps and Critical Barriers

- **Forecasting load with EVs coming online**
- **Lack of a pole database**
- **Need for flexible, quick-reacting, fast-ramping capacity**
- **Past is no longer the predictor of the future, making risk-based planning and investment more uncertain**



# Conclusion

- Like the rest of the country and the world, California is experiencing **unprecedented weather events**.
- Efforts **cannot remain stagnant**. We must continue to **innovate, adapt**, and accept that we are **entering a new normal**.