

## DOCKETED

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# 2017 Integrated Energy Policy Report

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California Energy Commission



# Background

**The Energy Commission prepares an IEPR every two years, an update in intervening years. The Energy Commission:**

- Issued *2017 IEPR Scoping Order* on March 6, 2017
- Adopted Order Instituting Information Proceeding for *2017 IEPR* on March 8, 2017
- Held 35 IEPR public workshops and webinars between January and December 2017

Draft report, workshop materials, and transcripts available at:

[http://www.energy.ca.gov/2017\\_energy\\_policy/](http://www.energy.ca.gov/2017_energy_policy/)



# California's Leadership in Climate Change

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- Impacts already being felt and expected to worsen
- The time is now- need to rapidly reduce emissions within the next 3 years
- Governor Brown continues to be an international leader





# California's Goals to Reduce GHG Emissions

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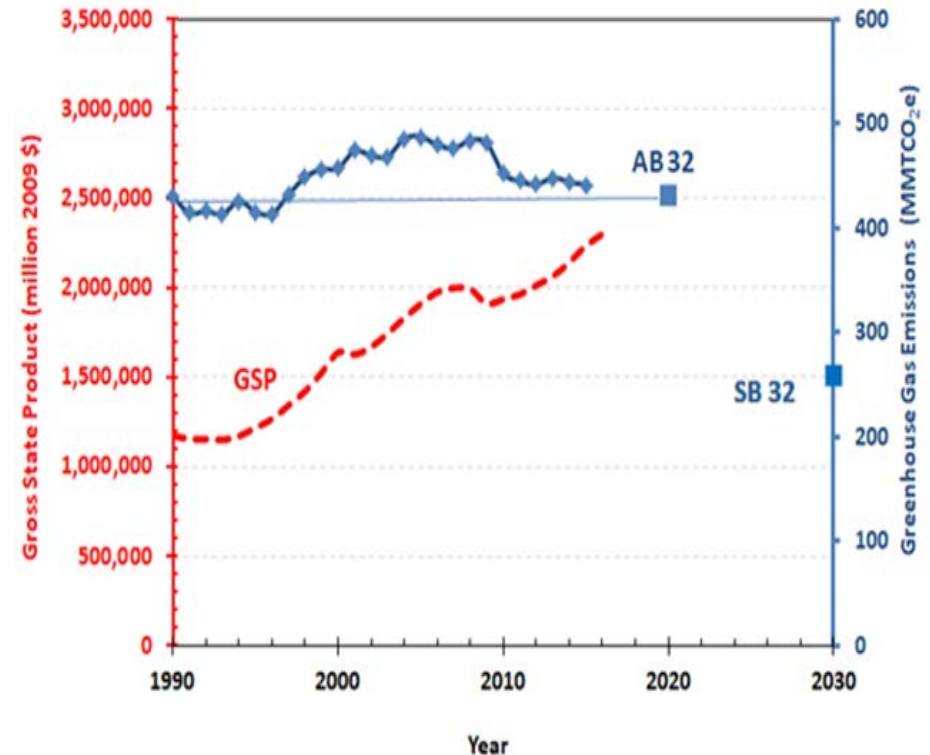
- Governor Brown's 2015 inaugural address set key goals
- Executive Order B-30-15 and Senate Bill 32 (Pavley, Chapter 249, Statutes of 2016) set a greenhouse gas (GHG) emissions reduction goal of 40% below 1990 levels by 2030
- Senate Bill 350 (De León, Chapter 547, Statutes of 2015):
  - Increases California's renewable procurement from 33% to 50% by 2030
  - Doubles the energy efficiency savings by 2030
  - Encourages transportation electrification
  - Addresses increasing low-income and disadvantaged communities' access to clean technologies





# Reducing Emissions While Growing the Economy

- Since 2001, GHG emissions per gross state product declined 33%, economy grew 37%
- Electricity sector emissions down 24% below 1990 levels
- Transportation accounts for about 50% of state GHG emissions





# Implementation of SB 350

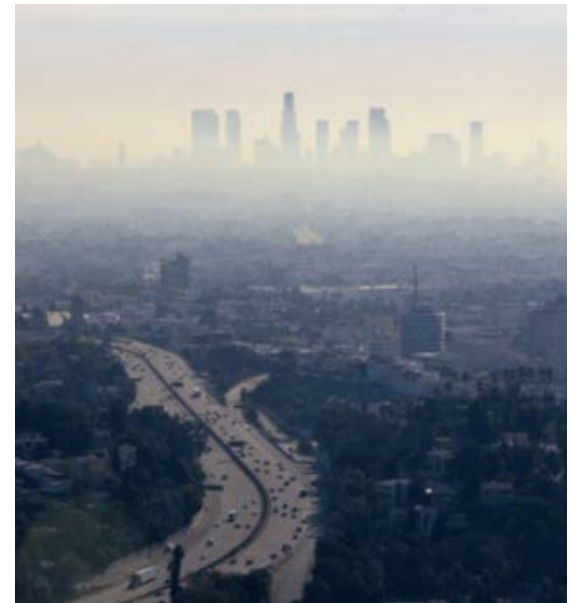
- Comprehensive energy planning through integrated resource planning
- Energy Commission has proposed annual targets to achieve statewide cumulative doubling of EE savings by January 1, 2030
- RPS of 50% by 2030 rules in place
- Energy Commission is improving forecasting capabilities
- The state is advancing transportation electrification
- Addressing barriers (next slide)





# Address Barriers to Clean Energy for Low-Income Californians and Disadvantaged Communities

- *Low-Income Barriers Study Part A: Overcoming Barriers to Energy Efficiency and Renewables for Low-Income Customers and Small Business Contracting Opportunities in Disadvantaged Communities (Barriers Study)*
- *Low-Income Barriers Study Part B: Overcoming Barriers to Clean Transportation Access for Low-Income Residents*
- *Barriers Study* recommendations address 3 key objectives:
  - Expand access
  - Increase investment
  - Improve resilience







# California's Evolving Electricity Sector

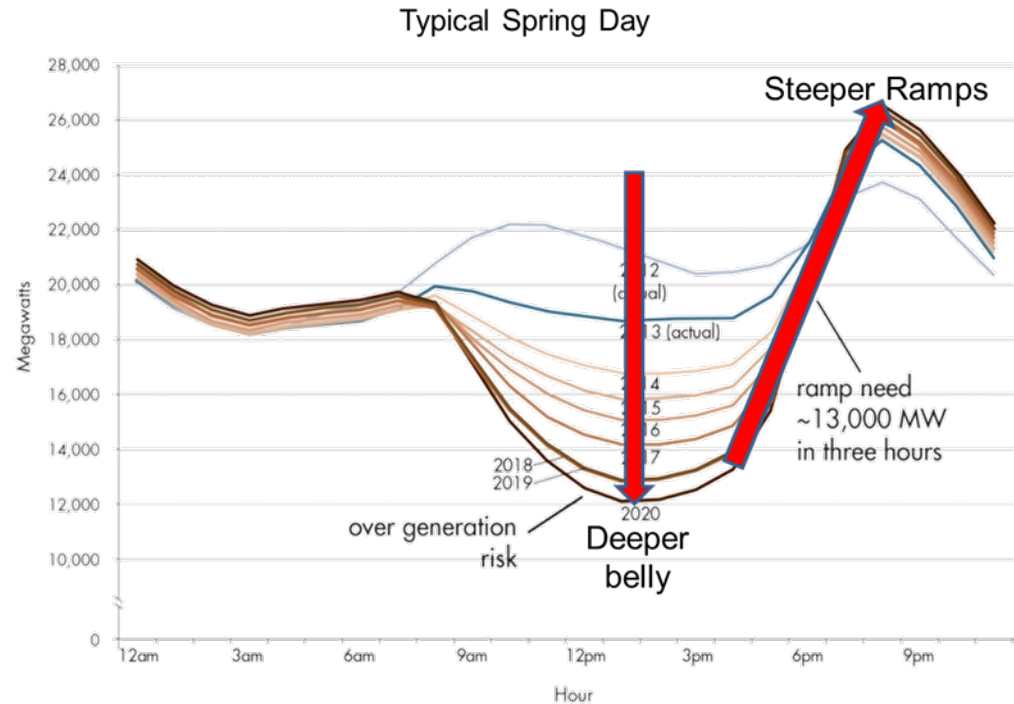
- Many Californians are installing rooftop solar and community choice aggregators (CCAs) are growing
- IOU retail electric load could drop by 85% in next decade
- Uncertainty about who will invest in energy infrastructure, energy efficiency, R&D, services for low-income customers...





# Operational Challenges in Electricity Sector

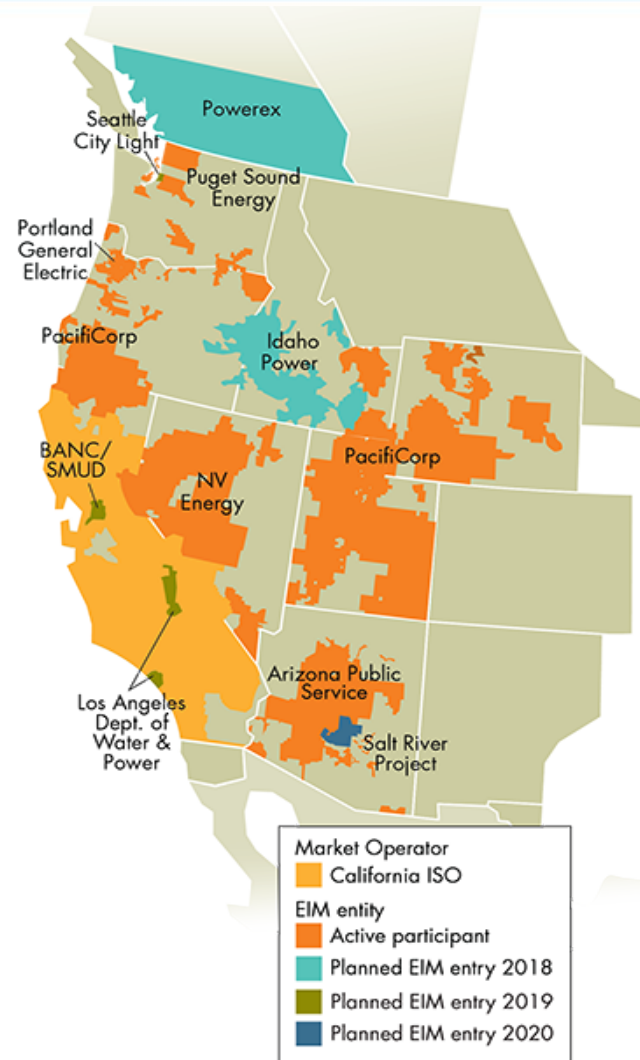
- Mid afternoon overgeneration
- Evening ramping
- More flexibility and resiliency needed





# Solutions to Increase Resiliency on the Grid

- Regional diversity
- Fast-ramping natural gas power plants
- Time-of-use rate design
- Demand response
- Electricity storage
- Smart inverters
- Electric vehicle smart charging





# Exploring Renewable Gas as a Tool to Reduce Emissions

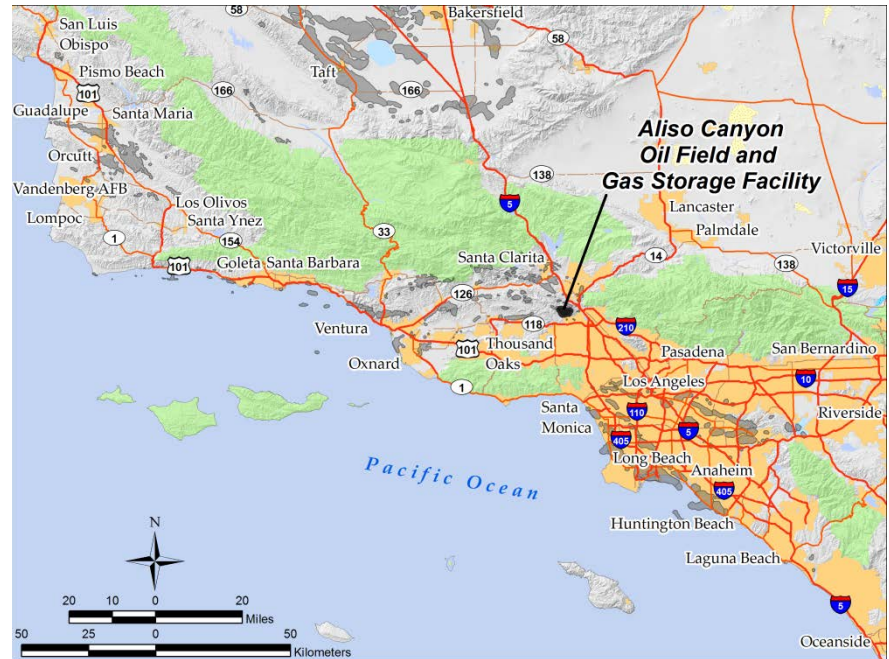
- SB 1383 requires the Energy Commission, in consultation with CARB and the CPUC, to:
  - Develop recommendations for the development and use of renewable gas, including biomethane and biogas
  - Identify cost-effective strategies that are consistent with existing state policies and climate change goals by considering priority end uses of renewable gas
- Renewable gas production can generate up to 4 times the revenue for transportation fuel use compared to electricity generation
- Renewable gas is being considered as part of early planning for the long-term future of natural gas





# Energy Reliability in Southern California

- SWRCB approved deferred retirement of Encina power plant while replacement is completed
- Continued focus on Aliso Canyon and beginning to plan for closure of facility over the next 10 years





# Preparing for Climate Change

- Climate change has already begun
- More is set in motion by previous decades of GHG emissions
- Ongoing scientific analysis is needed to increase California's resiliency to Climate change







# California Energy Commission

Request adoption of the  
*2017 IEPR*  
with errata

Thank You!