DOCKETED

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Appendix 2 - CGNP's Recommendation for 3 Points to Emphasize in The Final Version of the 2015 IEPR

Attached find for the convenience of CEC Staff and Commissioners Appendix 2 of 2 of supporting materials regarding CGNP's recommendation for three points to emphasize in the final version of the 2015 IEPR. As a consequence of file size limitations, the Appendix was split in two parts.

Additional submitted attachment is included below.

Loading Order in the Scoping Plan Update

Note that the term “nuclear” doesn’t appear. – GAN

http://www.camsdev.net/CALDESAL/2014Conference/SessionV/Rob%20Oglesby%20-%20Loading%20Order%20and%20H2O.ppt

Robert Oglesby
Executive Director
California Energy Commission

CalDesal 3rd Annual Conference (http://www.caldesal.org/)
Monterey
October 7,2014

Scoping Plan Update: H2O Loading Order

"Establishing a conservation-first policy for water-sector investment and action would help to sustain declining per-capita usage. This policy would be similar to the State's "loading order" policy for energy, which prioritizes investments in energy efficiency ahead of developing new power supplies. The conservation-first policy could be implemented through legislation or joint-agency action."

ARB Chair Nichols Letter

- "…analogy to the loading order used by the energy sector, and the intent was not to require a loading order for the water sector."
- "…not in Key Recommended Actions for this sector."

Energy Loading Order; a common sense approach

1. Energy efficiency and demand response

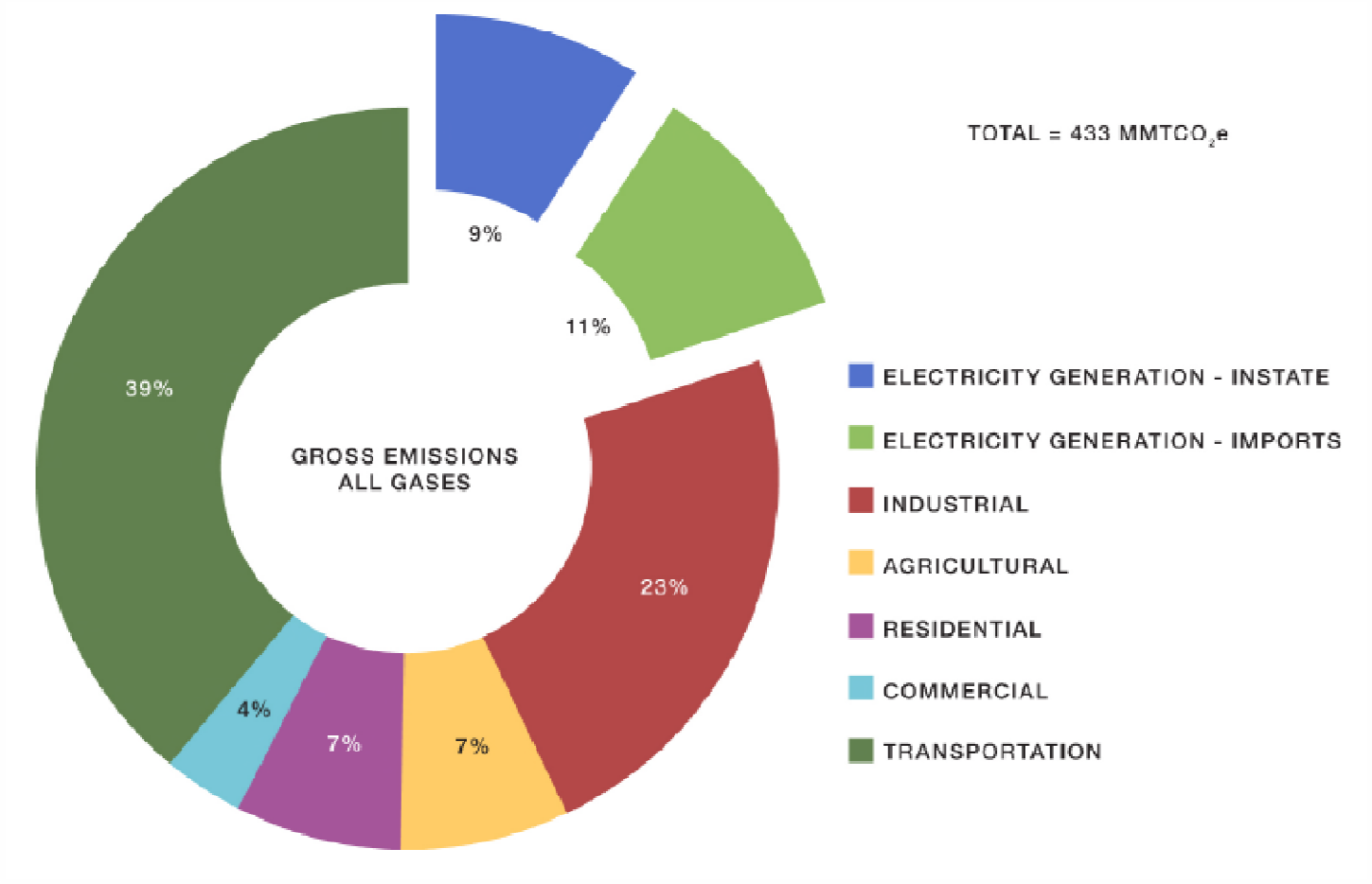
   "…new generation is both necessary and desirable…"

2. New generation needs met first by renewable energy resources and distributed generation

3. Additional clean, fossil fuel, central-station generation

Why a Loading Order?

GHG Emissions by Sector



Sources: California Energy Commission 2013 IEPR CA IMPORTS 33% GWH

http://www.camsdev.net/CALDESAL/2014Conference/SessionV/Rob%20Oglesby%20-%20Loading%20Order%20and%20H2O.ppt

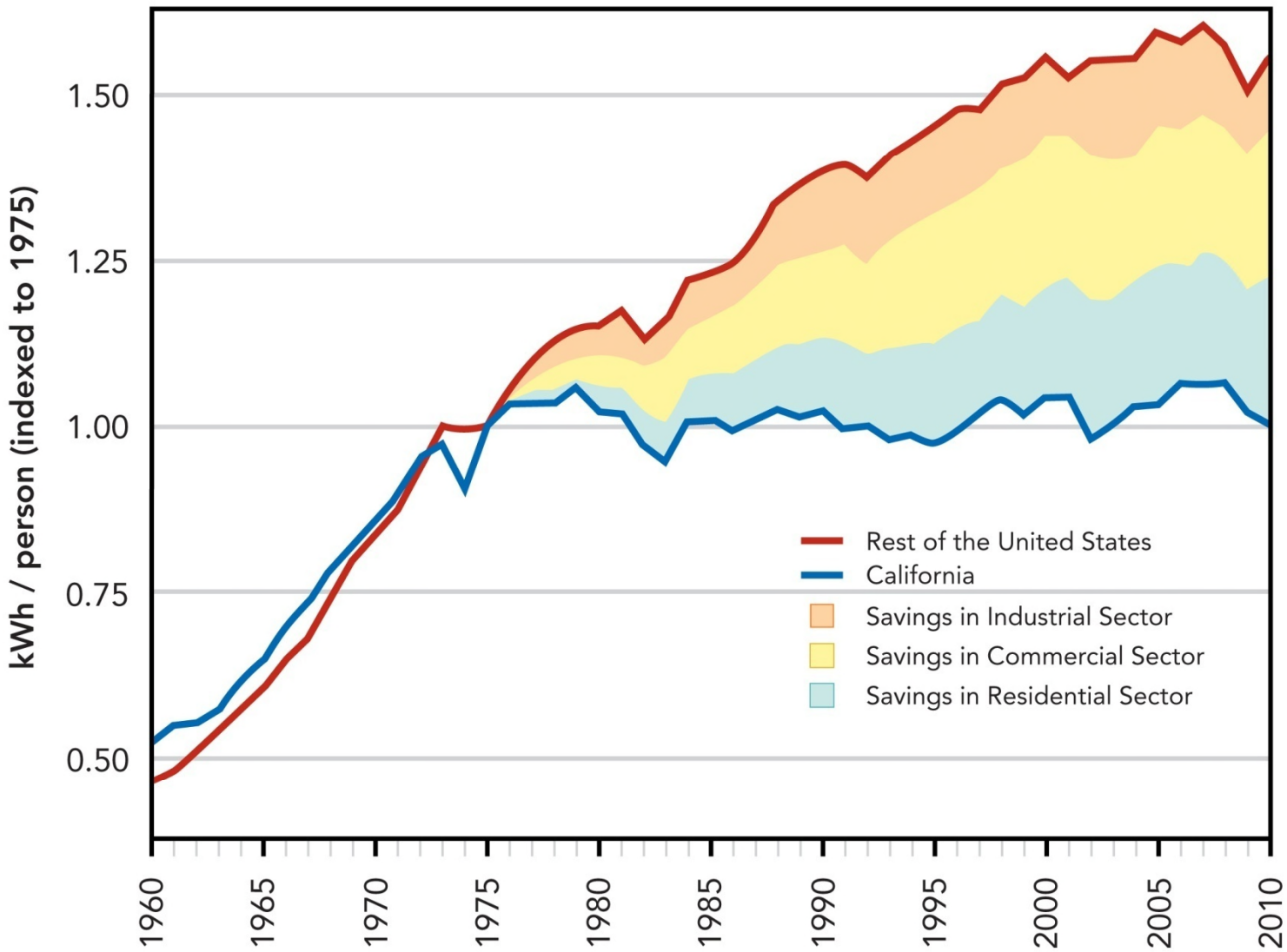
Fossil Generation

Coal

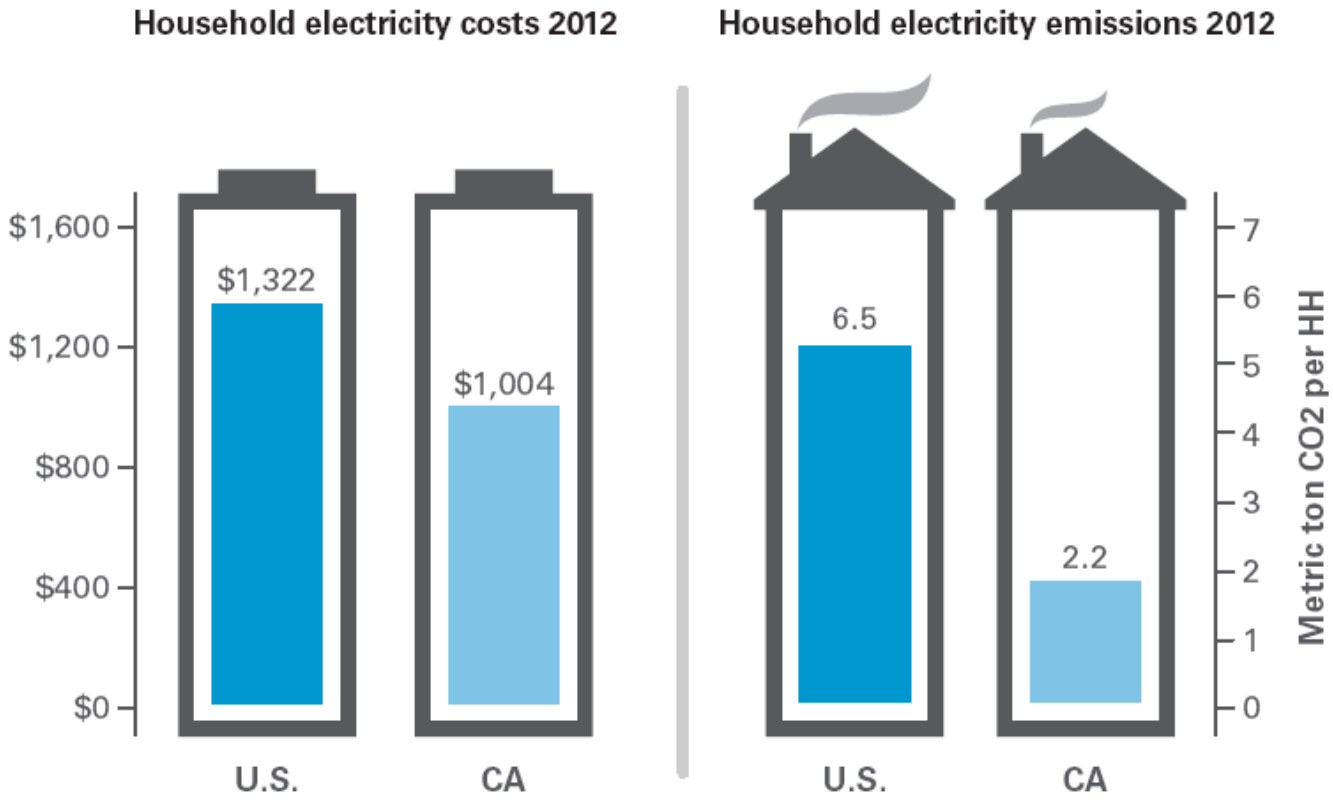
Natural Gas

Energy Outcomes

1. Efficiency


kWh / person (indexed to 1975)
1.50
1.25
1.00
0.75
0.50
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
Rest of the United States
California
Savings in Industrial Sector
Savings in Commercial Sector
Savings in Residential Sector

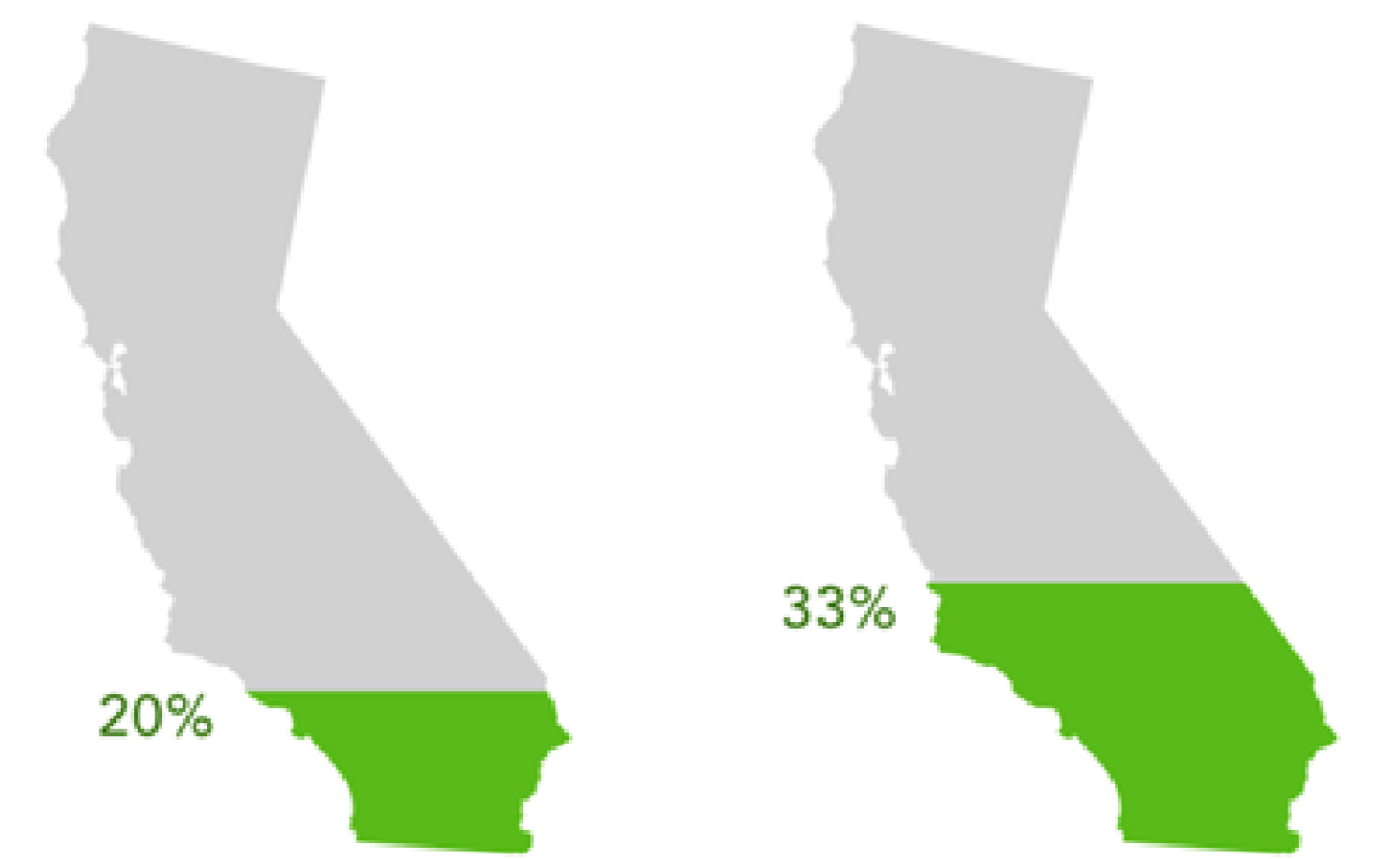
Average Household Electricity Expenditures and Associated GHGs; U.S. vs. California



Sources: U.S. Energy Information Administration [EIA] and ARB

2. Renewables and Distributed Generation

On Track to 33% Renewables



2013 2020

World's Largest Wind Project

Alta Wind Energy Center
1550MW
Kern County

World's Largest Geothermal Power Plant

Geysers Geothermal Power Plant, 955MW
Napa County, CA

World's Largest Solar Thermal Power Plant (Tower)

Ivanpah Solar Thermal Project, 370MW
San Bernardino County, CA

World's Largest Thin Film Solar PV Project

Desert Sunlight Solar Project
550 MW
Riverside County, CA

World's Largest Silicon PV Project

Solar Star Project, 579 MW

Kern County, CA

World's Largest Solar Thermal Power Plant (Parabolic Trough)

Solar Energy Generating System (SEGS), 310 MW
San Bernardino County, CA

D.G. - CA Leads in Rooftop Solar

Rocklin Zero Energy Community

3. Clean Fossil Generation

Contra Costa (2017)
Pittsburg (2017)
Moss Landing (2017)
Diablo Canyon (2024)*
Mandalay (2020)
Ormond Bch (2020)
El Segundo (2015)
Scattergood (2015&24)
Redondo Bch (2020)*
Harbor (2029)
Alamitos (2020)
Haynes (2013, 2029)
Huntington Bch (2020)
Encina (2017)

- - - - - retired - - - - - -

Morro Bay (2013)
Humboldt Bay (2010)
San Onofre (2012)
Potrero (2010)
South Bay (2010)

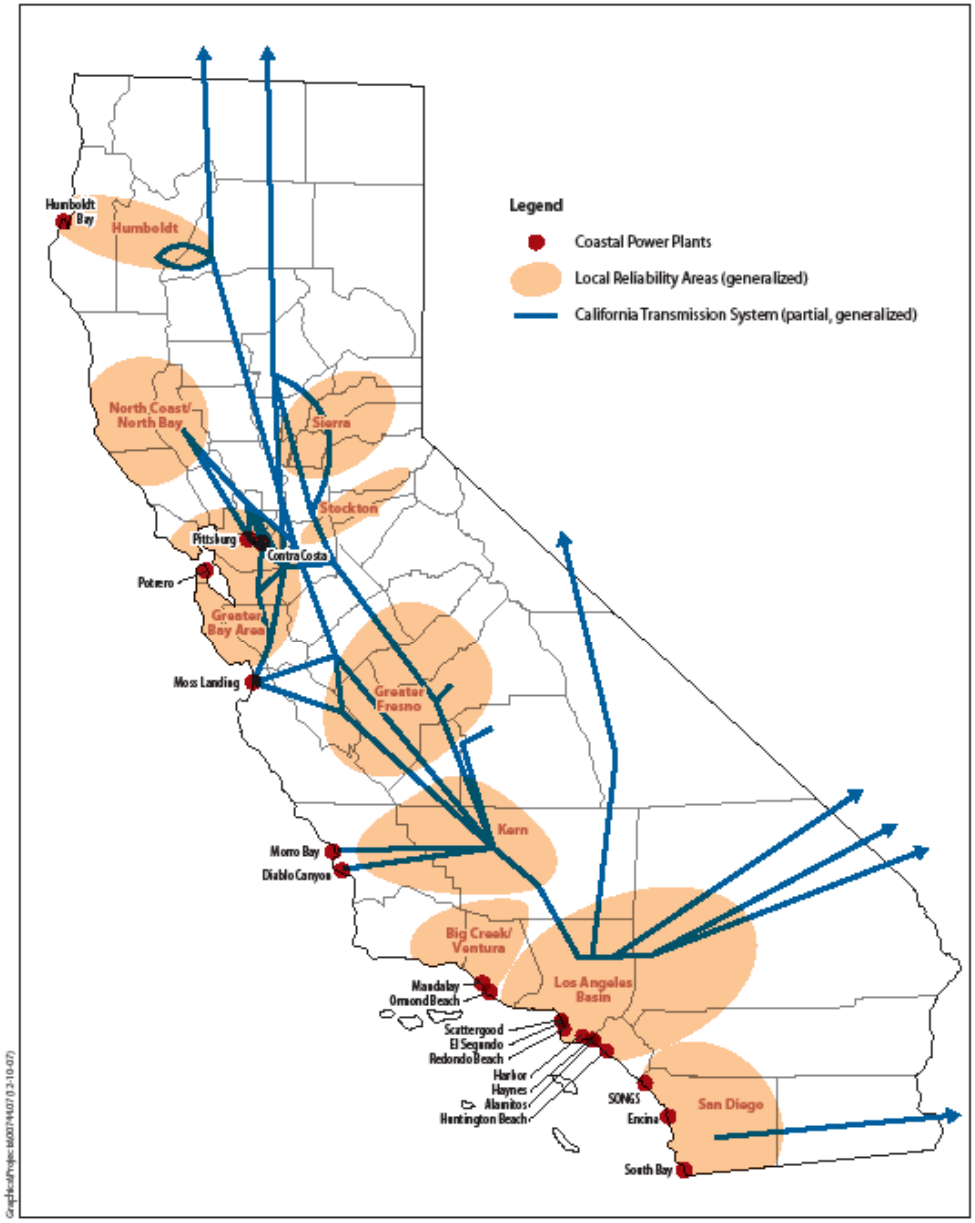
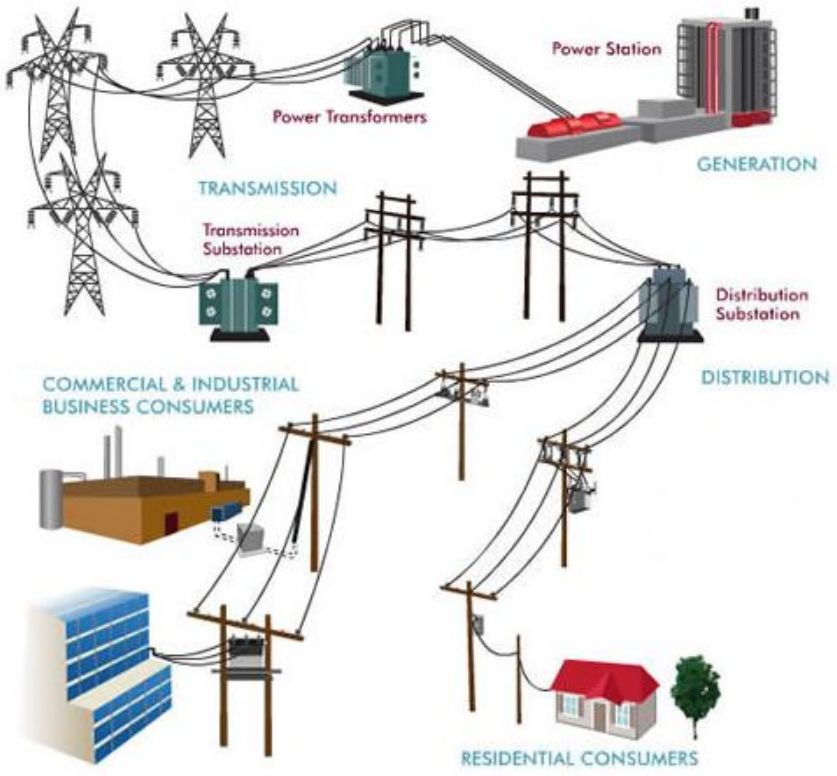


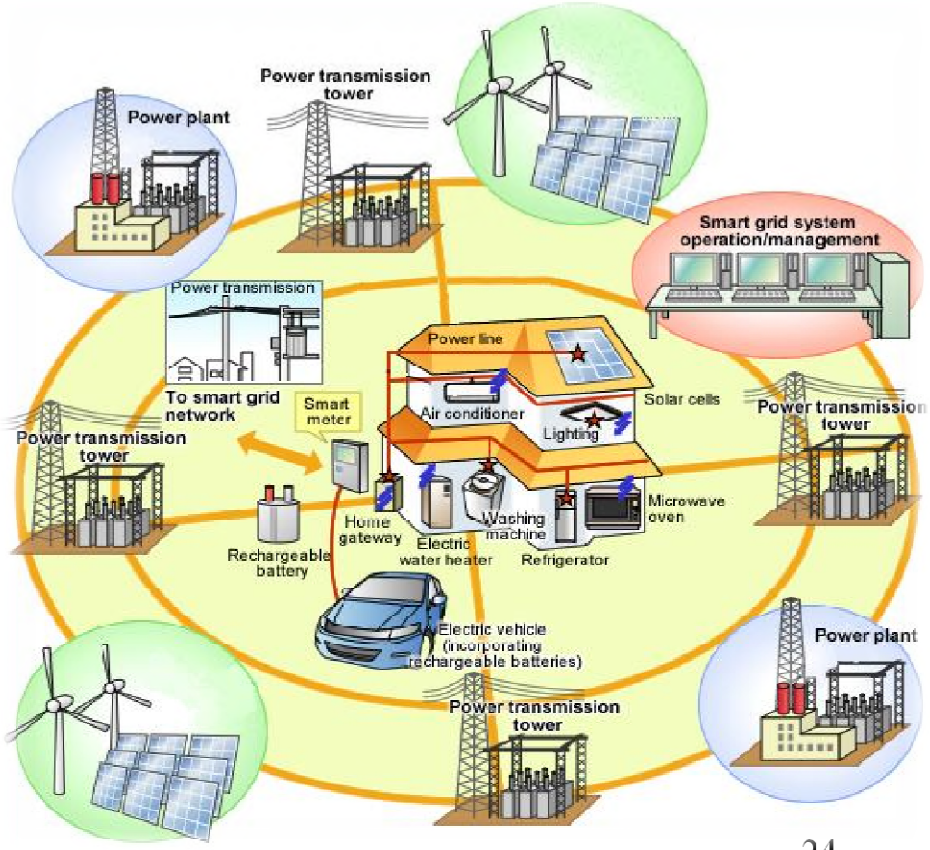
Figure 1
Locations of Power Plants, Local Reliability Areas, and California's Major Transmission System

Opportunities Going Forward

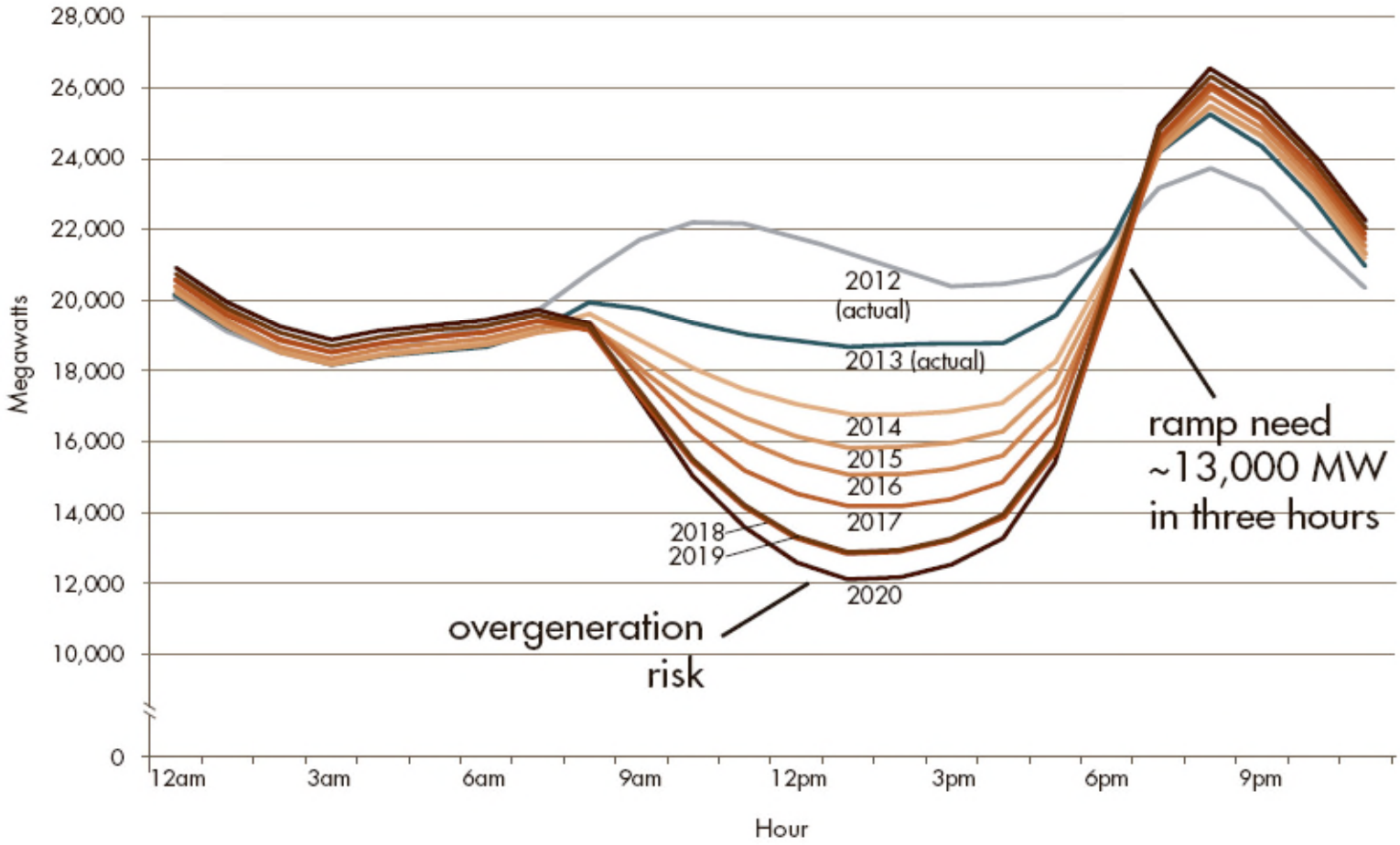
- Evolving Grid
- Beyond 33 percent
- Over generation

California's Evolving Electricity System





Net Load - March 31



Examples of Loading Order Implementation

- CPUC authorizes and verifies ~$1 billion annual expenditure in energy efficiency by IOUs.
- The Energy Commission updates building standards every 3 years, and develops appliance standards.
- RPS is a major focus of the energy agencies.
- In 2013, the Energy Commission's California Energy Demand forecast included ***additional achievable energy efficiency*** (AAEE) as part of the baseline forecast.
- The CPUC's Long Term Procurement Plan relies on the demand forecast and directs utilities to procure more preferred resources.
- The LTPP feeds into the California ISO's annual Transmission Planning Process which plans for renewable projects.