

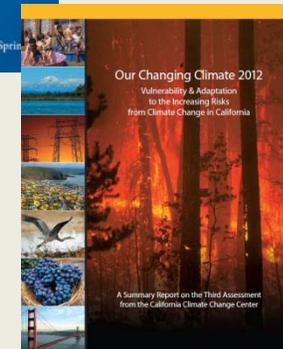
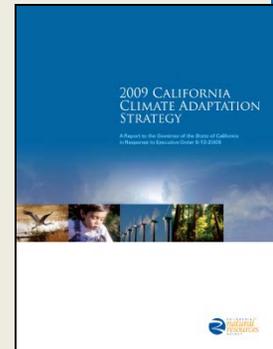
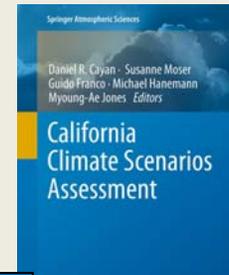
Climate Change and the Energy Sector: Workshop Overview

Laurie ten Hope
Deputy Director
Energy Research & Development Division

Joint Lead Commissioner Workshop
Integrated Energy Policy Report
June 4, 2013

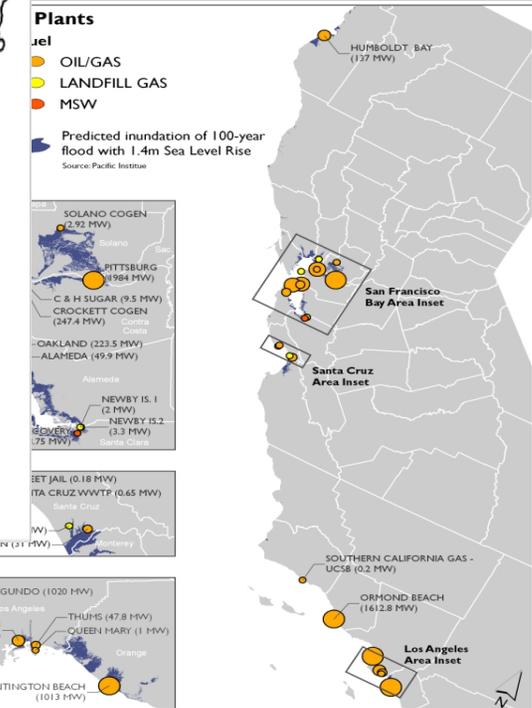
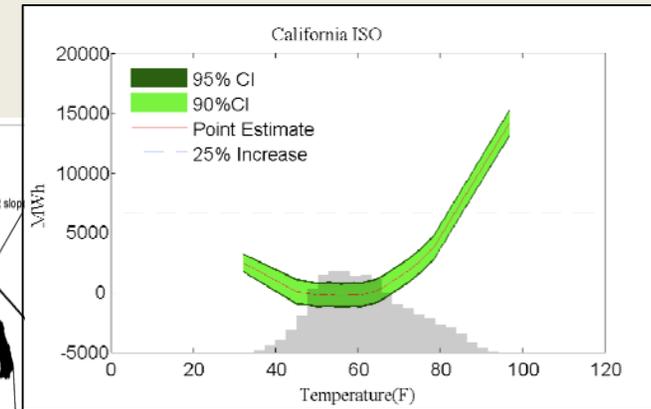
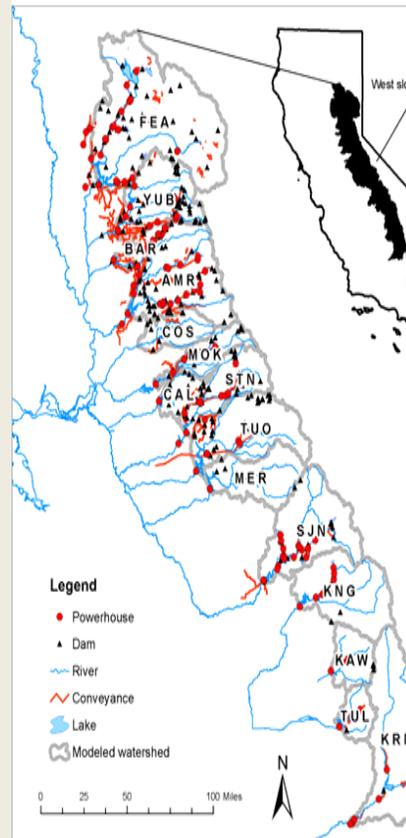
Historical Context

- Multiple research projects on the impacts of climate change and energy since 2000
- Three California Assessments
- 2009 Adaptation Strategy for California
- 2012 IEPR Workshop



2012 IEPR Workshop

- Highlighted Impacts of Climate Change on the California Energy System
- Examples
 - Temperature impact on electricity demand
 - Snowpack impacts on hydro
 - Coastal power plant vulnerability



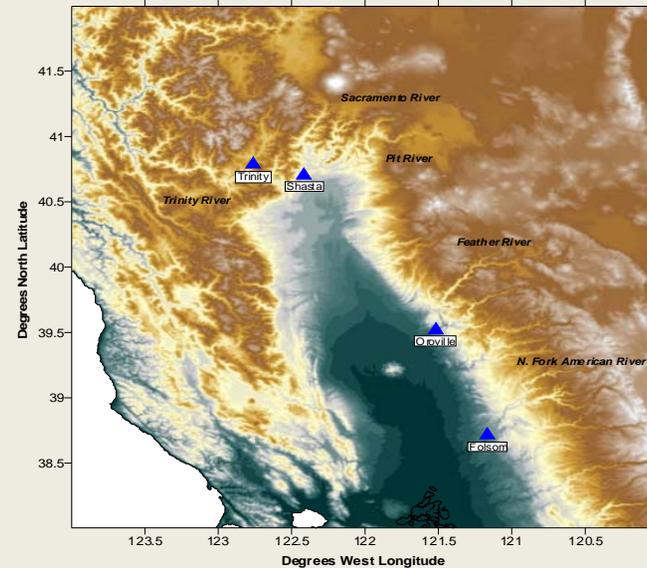
2012 IEPR Workshop (cont.)

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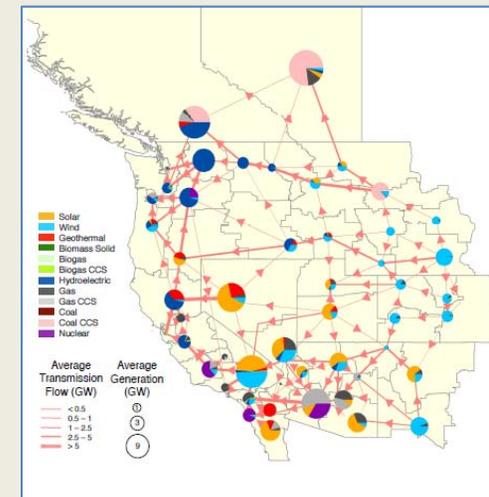
- Also highlighted strategies to prepare the California Energy System for a Changing Climate
- Examples
 - Tools for sophisticated management of water reservoirs
 - Evaluating GHG and environmental implications of potential electricity pathways

http://www.energy.ca.gov/2012_energy_policy/documents/index.html#04302012

Major Reservoirs in Northern California



SWITCH Model



2013 IEPR Scoping Order

Consider the potential vulnerability of California's energy supply and demand infrastructure to the effects of climate change, including higher temperatures, reduced snowpack, sea level rise, and extreme events like heat waves, flooding, and wildfires.

2013 Workshop Overview

Climate Change and the Energy Sector

- Workshop sessions
 - Climate Projections and the Energy and Transportation Sectors
 - Probabilistic weather/climate forecasts (Scripps)
 - Trends and projections of extreme events (Scripps)
 - Sea-level rise (JPL)
 - Impacts to the transportation infrastructure (CalTrans)
 - Impacts of Climate Change on Energy Supply
 - Hydropower generation (PG&E)
 - Natural gas infrastructure in the Delta (UC Berkeley)
 - Endangered species, climate change, and renewable energy (USGS)
 - Energy Sector Responses to Climate Change
 - Generation during extreme hot events (Maulbetsch Consulting)
 - Adaptation measures for LADWP (LADWP)
 - Adaptation measures for SMUD (SMUD)
 - Energy Assurance (ICF)

Thank you!