

## CAL POLY

California Marine Renewable Energy Commercial and Industrial Support Environment

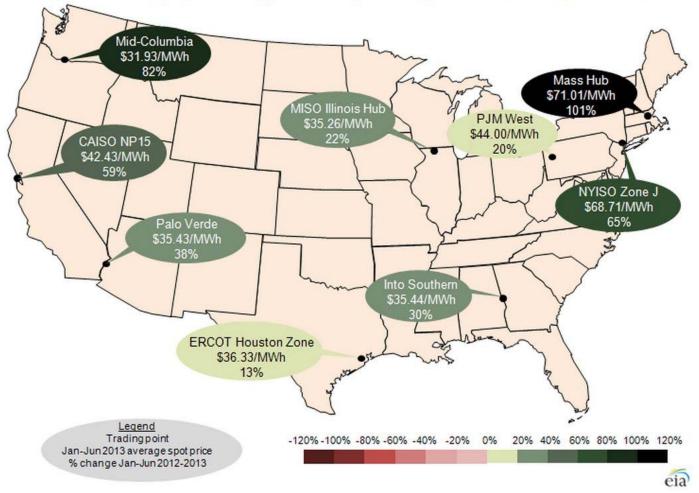
Marine Energy Technology and Deployment Panel William Toman, Cal Poly, San Luis Obispo

BOEM Offshore Renewable Energy Workshop Sacramento, CA July 30, 2014



- Biggest Power Market in U.S. = 60,000 MW
- Highest West Coast Electricity Prices (AK & HI Are Higher)

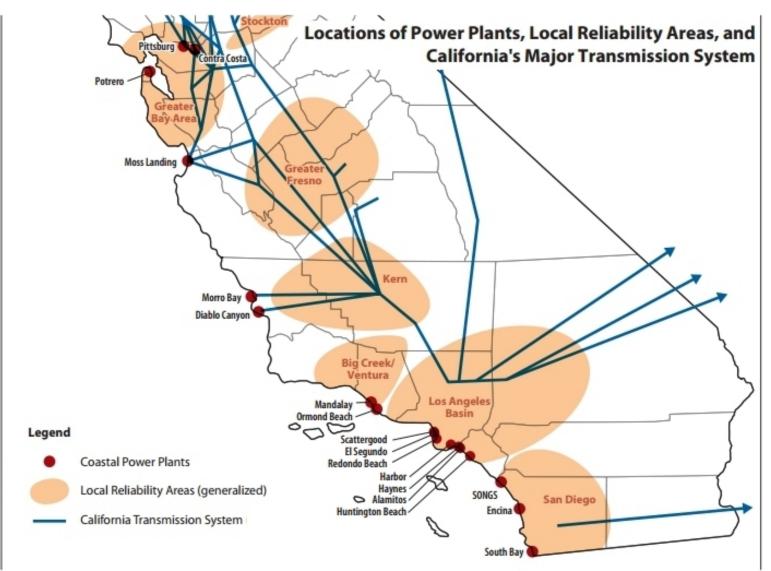
Average wholesale (spot) electricity prices at major trading locations, January 1-June 30, 2013



ics/Projects/0074407 (12-10-07)



•Largest Coastal Grid Infrastructure Potentially Available for New Generation



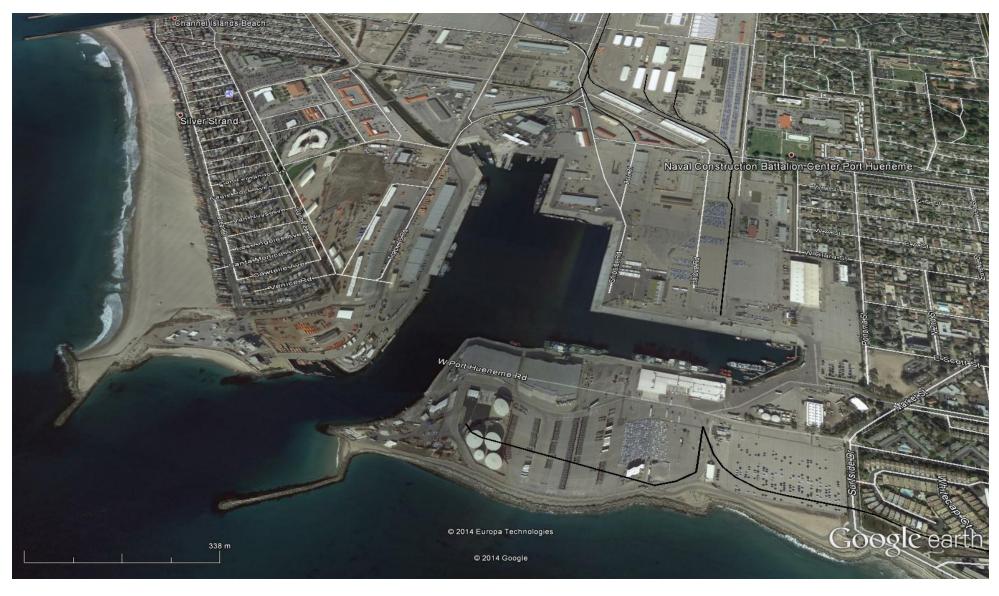
# SAN LUIS OBISPO



- Industrial Ports
  - Humboldt Bay
  - San Francisco / Oakland
  - Port Hueneme
  - Los Angeles / Long Beach
  - San Diego

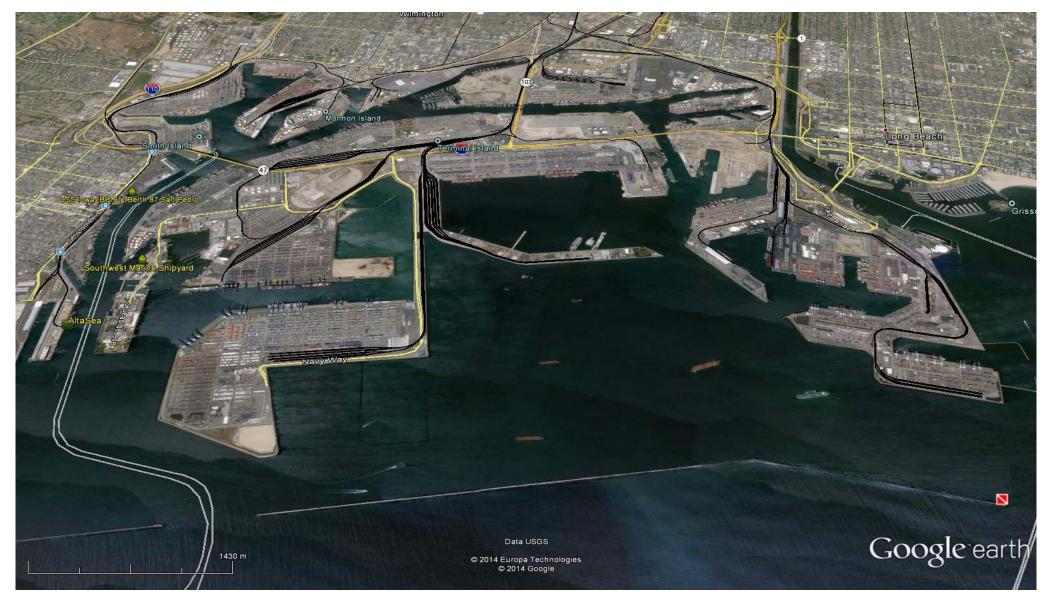


#### Industrial Ports: Port Hueneme



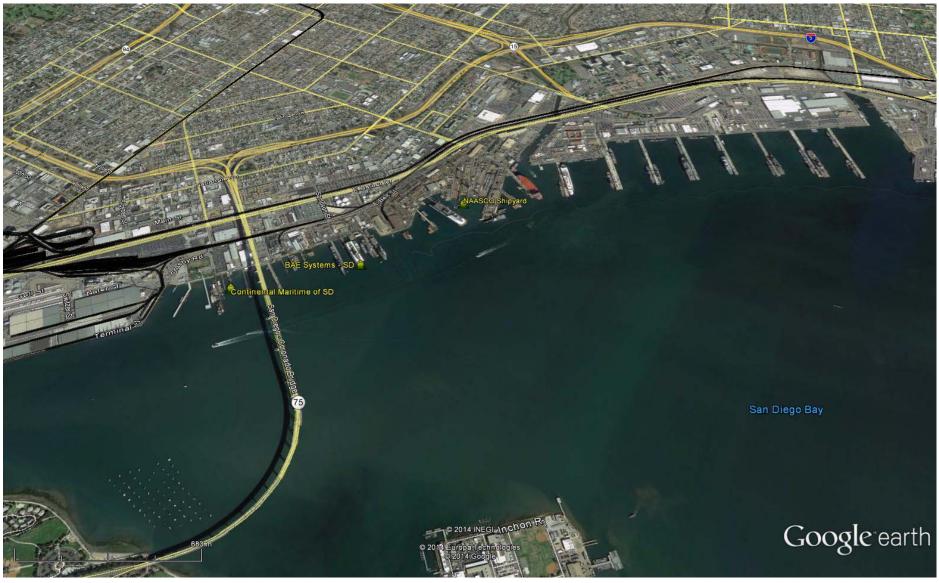


#### Industrial Ports: Port of Los Angeles / Long Beach



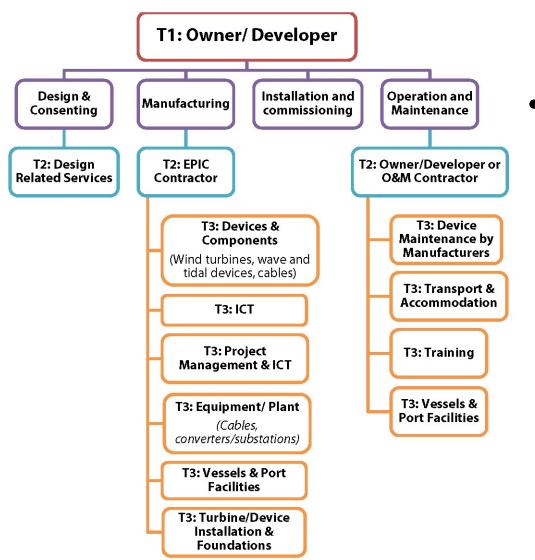


#### Industrial Ports: Port of San Diego



SAN LUIS OBISPO

The Offshore WW&T Energy Supply Chain



• Established full capability marine industrial supply chain

Source: A Study of the Supply Chain Requirements and Irish Company Capability in the Offshore Wind, Wave and Tidal Energy Sector, Sustainable Energy Authority of Ireland, 2012





- Existing Offshore Oil Platform Service and Maintenance Fleet
- Operating from Port Hueneme and Port of Los Angeles / Long Beach



#### CalWave Study

- Awarded \$750,000 grant by U.S. Department of Energy to Study Siting and Cost of National Wave Energy Testing Center
- Cal Poly, San Luis Obispo Leads Team drawn from Universities, National Labs and Industry
- Will Examine Sites Offshore of Humboldt Bay and Vandenberg Air Force Base





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