



California Energy Commission

#### Largest municipal utility in the nation, serving a population of 4 million within a 465 square mile area.

- 1.2 M Residential Customers
- 178,217 Commercial Customers
- 12,382 Industrial Customers



## **Recent City Climate Activities**

- 1990, 2004-2007 Municipal Greenhouse Gas Emissions Inventories
- 2007 Green LA: An Action Plan to Lead the Nation in Fighting Global Warming
- 2008 Climate LA: Implementation of the Green LA Plan
  - LADWP major role as electricity provider
- 2010 Adaptation Efforts Begin





- Global climate models too coarse for local needs
- UCLA team led by Dr. Alex Hall developed state of the art regional modeling technique
  - 19 global climate models downscaled for LA
  - Incorporates local topography and coastline information
  - High-resolution: 2 km grids
  - 2 GHG emissions scenarios for years 2041-2060 compared to baseline (1981-2000) scenario:
    - Business as usual scenario
    - · Mitigation scenario

# Mid-Century Warming, continued

- Modeling & statistical analysis produced an ensemble-mean warming scenario, deemed the most likely warming impacts
- The average warming over the entire region is roughly 4.6° F, with 95% confidence that the warming will lie between 1.7 and 7.5°F
- Variation between coastal and inland areas
- Coastal and central locations will see 2-3 times the number of extremely hot days
- Higher elevations and inland areas will see 3-5 times the number of extremely hot days





### Sea Level Rise Vulnerability Study for the City of Los Angeles

- Summary of initial research of sea level rise/associated flooding for 3 coastal regions:
  - Pacific Palisades
  - Venice/Playa del Rey/LAX
  - San Pedro/Wilmington/Port of Los Angeles
- Team led by Sea Grant program of USC, in partnership with Los Angeles Regional Collaborative, ICLEI and City of LA
- Sophisticated model developed by US Geological Survey
  - Based on January 2010 "10-year" storm
  - Incorporates information on critical coastal infrastructure
- Preliminary examination of physical, social & economic impacts

# Sea Level Rise Vulnerability, continued

- Sea level rise in LA matches global projections
  - 12-23 CM (5-9 inches) from 2000 to 2050
  - 39-76 cm (15-30 inches) from 2000 to 2100
  - Potentially exacerbates damage from storm surge/tides
- Roads/water systems (wastewater, stormwater, potable water) are vulnerable to sea level rise and storm surge impacts
- Cultural assets (museums, parks, open space) along coast also vulnerable
- Port and energy facilities have relatively low vulnerability to sea level rise

# Sea Level Rise Vulnerability, continued

- Bureau of Sanitation commissioned engineering studies to plan for potential flooding at critical locations
- Port of LA conducting additional sea level rise study
- LADWP previously conducted tsunami study
- Social impacts: greater potential impacts in San Pedro, Wilmington, Venice
- Economic studies show very limited damage to transportation and utility systems

## Mitigation and Adaptation Planning in Los Angeles

- AdaptLA: City-led, science-based, participatory process
- Provides methodology to help identify vulnerabilities and mechanisms for moving forward
- Three teams:
  - Adaptation Planning Team (steering committee)
  - City Adaptation Leadership Team (City depts.)
  - Regional Stakeholder Working Group
- LA Regional Collaborative convenes discussion/ stakeholder groups
- Now looking to develop more specific actions

#### **Energy Efficiency and Next Steps**

#### LADWP:

- Increased funding for Energy Efficiency Programs
- Commitment to achieve at least 10% energy savings by 2020
- Offering "Cooling" incentives
  - Residential Cool Roof rebate (single- & multi-family)
  - Whole House Fan
- Looking into Cool Pavements
- Supporting Million Trees LA program
  - Energy savings/Carbon calculator tool (US Forest Service)
  - Demonstrate and improve tools to measure savings

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Contact Information Los Angeles Department of Water & Power
THANK YOU!
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