

# **Current Considerations Related to Local Reliability in Southern California**

**Senate Energy, Utilities, and Communications Committee**  
**July 10, 2013**

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## Near Term Reliability Considerations

A number of summer readiness projects, coupled with new generation coming on line from prior solicitations is supporting local reliability for Summer 2013

### Transmission

Projects completed include: (1) the installation of four 79.2 MVAR 200 kV capacitor banks at three Orange County substations, (2) decoupling the two 230 kV Barre-Ellis into four lines, and (3) converting Huntington Beach Units 3 and 4 to synchronous condensers

### New Generation

Approximately 1,775 MW of new generation capacity will be coming online: Walnut Creek (June 1st), CPV Sentinel (August 1st), and El Segundo (August 1st)

### Demand Side Resources

Engaging customers and encouraging participation in one or more of the following programs: Summer Discount Plan, automated demand resources technology, Flex Alert, pool pump education and home area network study, third-party thermostat study, Save Power Day, energy efficiency projects, and Energy Leader and institutional and governmental partnership programs

### Communications and Outreach

Developing an integrated communications and outreach plan utilizing all media and marketing channels

## Long Term Reliability Considerations

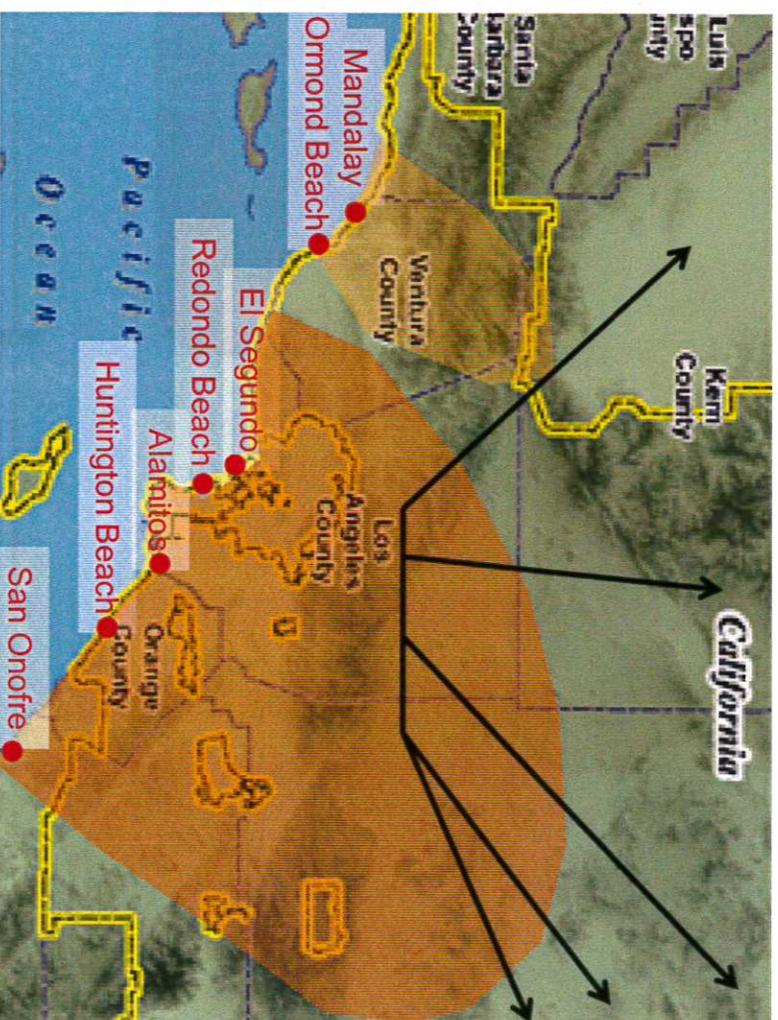
- SCE provides regulatory and technical input into a number of processes that interactively provide for system reliability
  - Long Term Procurement Plan (LTPP) - CPUC
    - A biennial rulemaking proceeding at the CPUC dating back to 2001
    - Intended to ensure that the investor owned utilities can supply procurement responsibilities on behalf of their customers
    - Both LTPP Track 1 and LTPP Track 4 address local reliability needs
      - LTPP Track 1 addresses local reliability needs for SCE in 2021 taking into account the absence of once through cooling (OTC) facilities which are likely to retire in 2020 to meet the SWRCB's requirements
      - LTPP Track 4 addresses local reliability needs for SCE and SDG&E taking into account the absence of both the OTC facilities and SONGS
  - Transmission Planning Process (TPP) - CAISO
    - An annual process identifying potential system limitations and opportunities for system reinforcements that improve reliability and efficiency
    - Product of the TPP is the CAISO Transmission Plan

## Long Term Reliability Considerations (Continued)

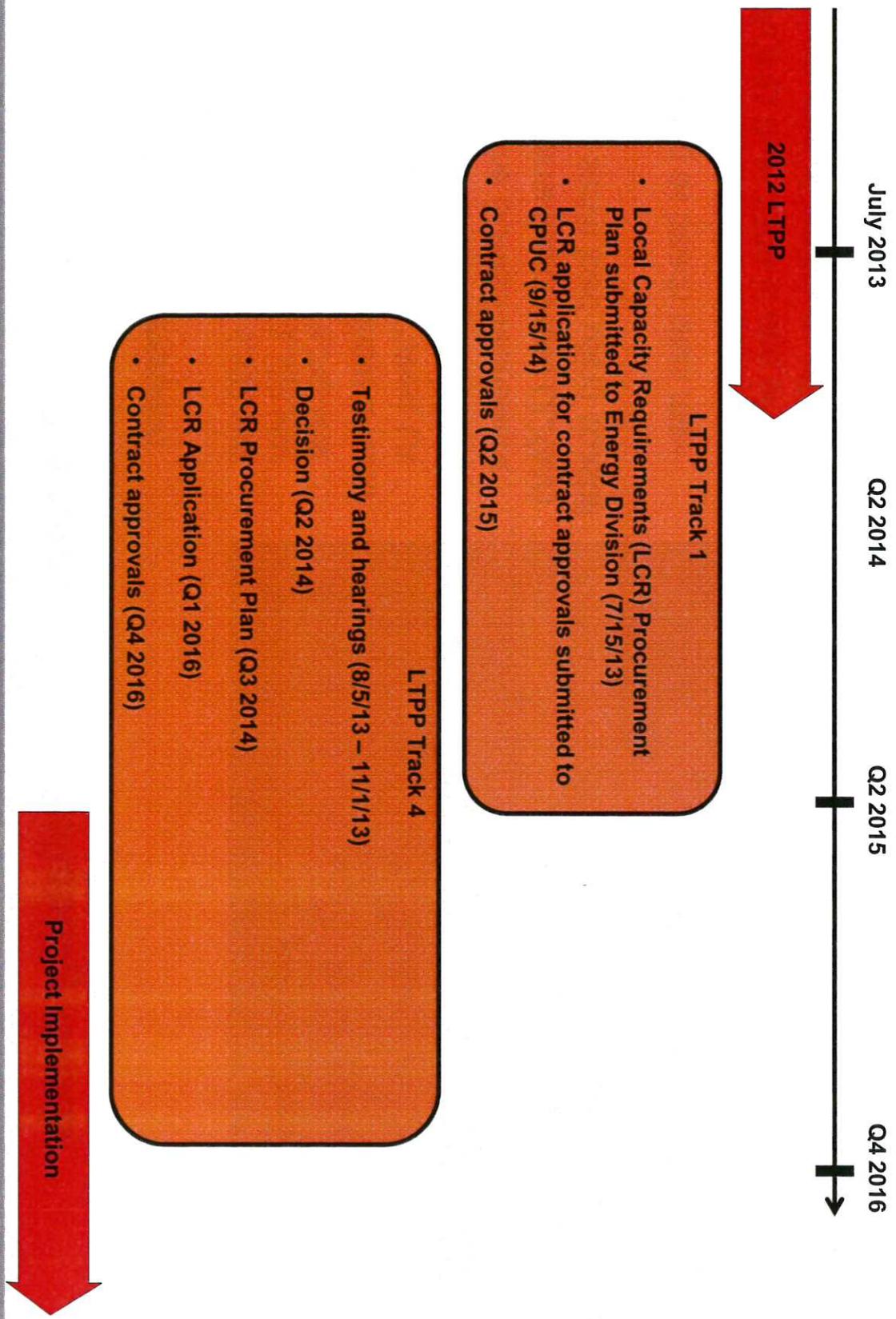
- SCE and SDG&E continue to work jointly on both near and longer term reliability issues
  - Recent Governor’s Task Force activity includes the utilities, CAISO, CEC, CPUC, SCAQMD, and SWRCB
- Planning for long term assuming “SONGS Out” cannot be accomplished without considering the impacts associated with closure of the OTC facilities
  - Track 4 of the LTPP was created after the SONGS retirement was announced to address local reliability needs in the absence of both the OTC facilities and SONGS
  - Track 4 is additive to the work already completed in LTPP Track 1

## Both OTC and SONGS Retirement Drive Reliability Needs

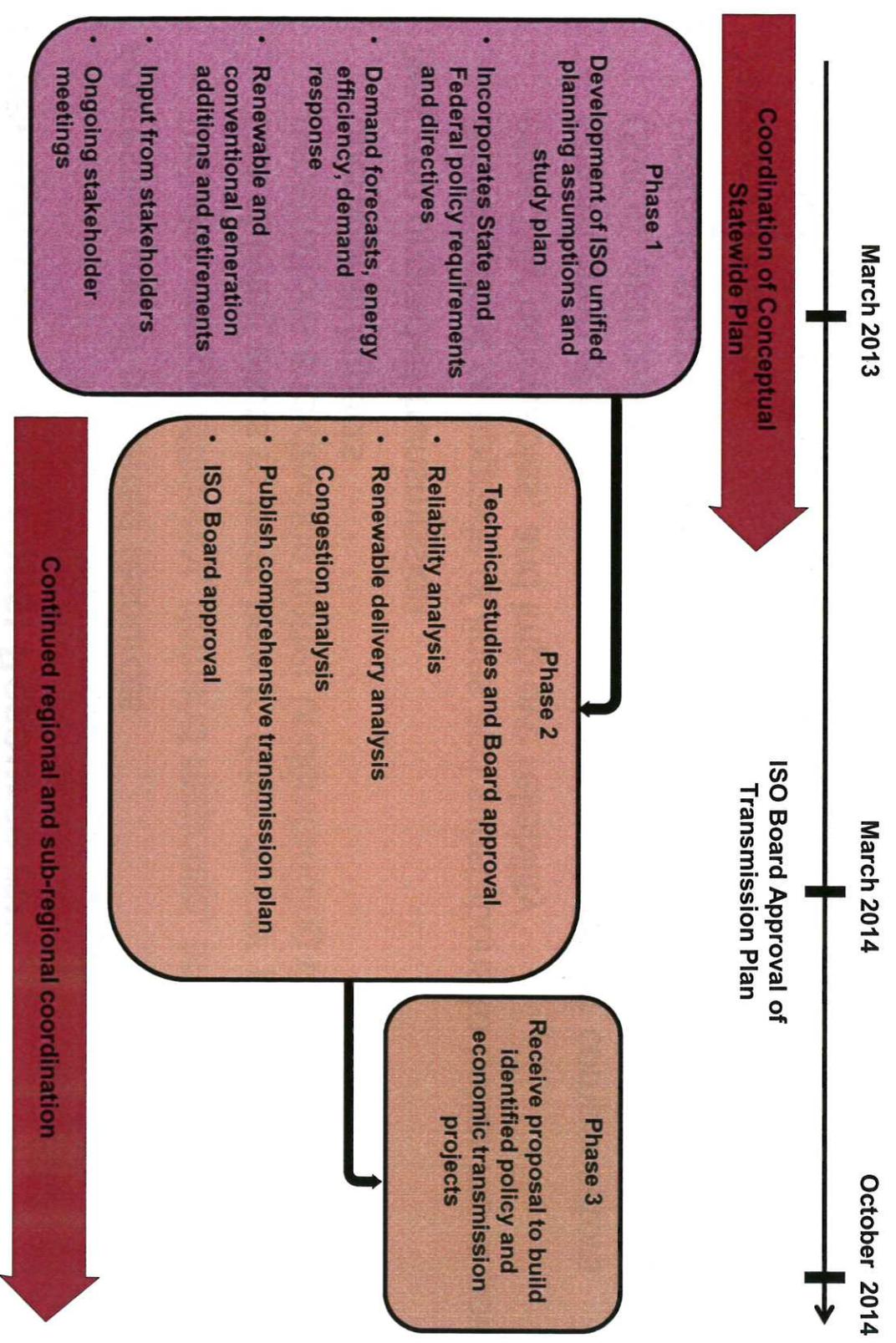
- SCE service territory generation reductions
  - Fossil OTC retirements 6,592 MW
  - SONGS retirement 2,150 MW
  - Total 8,742 MW
- Recent CAISO studies show a need for 3,000-4,600 MW of “West LA Basin” generation to replace OTC plants and the SONGS retirement
- The local transmission grid (220kV) was built to serve load using coastal generation
- Re-powering at beach sites may face stiff opposition
- SCAQMD Rule 1304 is one of the few sources of emissions offsets for new generation



# 2012 CPUC Long Term Procurement Plan Process



# 2013-14 CAISO Transmission Planning Process



## Longer Term Considerations: Resource Mix

- Aggressive use of preferred resources
  - Includes energy efficiency, demand response, and renewables
  - Use of living pilots to learn how to drive deeper preferred resource penetrations and develop better understanding of efficacy and grid operational impacts
- New and upgraded transmission
  - Development or upgrade of lines and substations to better move power, especially renewables, and improve reliability
  - Construction of synchronous condensers, static var compensators (SVCs), and capacitor banks to provide and improve reactive support (voltage support) as needed
- Targeted generation
  - Construction of fossil generation in targeted locations to support grid reliability and provide a backstop to pursue higher levels of preferred resources
- The ultimate solution will be a combination of these resources

## **Longer Term Considerations: Any Solution is Multi-Jurisdictional**

- Water permitting (Clean Water Act) – SWRCB OTC policy
- Reliability assessment – CAISO
- Power plant permitting – CEC, Application for Certification process
- Determination of need for investor owned utilities – CPUC, LTPP
- Air permitting (Clean Air Act) – South Coast AQMD (Rule 1304) and other APCDs
- Coastal zone management – California Coastal Commission
- Local zoning – Redondo Beach Measure A (Rezone to 60-70% parks and 30-40% commercial/industrial)
- Task force activities – Governor’s office

SCE will continue to work closely with regulators, policymakers and other stakeholders to ensure the safe delivery of sustainable and reliable electricity

# **SONGS Status Update**

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## San Onofre Generation Station (SONGS) Retirement

- On June 7, 2013, SCE announced that it is permanently retiring Units 2 and 3 at the San Onofre Nuclear Generating Station (SONGS)
  - A Certification of Permanent Cessation of Power Operations was submitted to the NRC on June 12, 2013
  - Once all of the fuel is safely stored in the spent fuel pool, written certification will be submitted to the NRC which will prevent SCE from loading fuel into the reactors or operating the units, thus changing the license from an “operating” to a “possession” license
- Decommissioning
  - Long process over many years
  - Removal of radioactive material from site and storage of used fuel in approved dry cask containers
- Nuclear safety
  - As always, we will continue to operate SONGS’ remaining systems safely, to the highest standards, to protect the health and safety of the public and our employees

## San Onofre Generation Station (SONGS) Updates

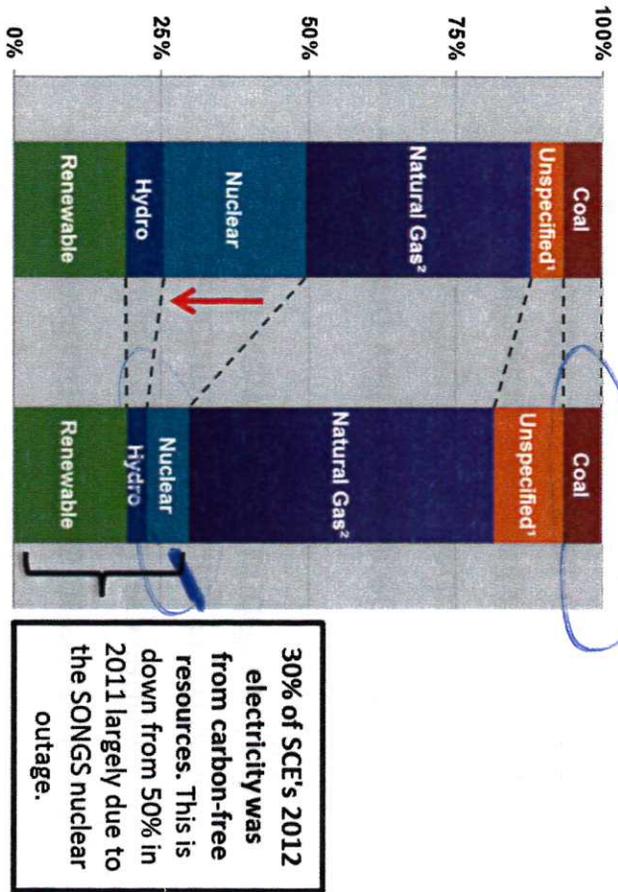
### Employee staffing:

- A transition plan has been developed for SONGS staff
  - Adhering to NRC regulations
  - Benchmarked using staffing levels at other nuclear power plants (Crystal River and Kewaunee) undergoing decommissioning and assuming two units
- Staffing will be reduced from about 1,500 to 400
  - Staffing will be reduced to approximately 600 by September 2013
  - Following September 2013, staffing will be evaluated on a semi-annual basis to identify areas that could be reduced to better align with changing workload requirements
  - Transition plans will ensure orderly and compliant plant closure
- Working with unions and Human Resources for a fair transition plan
- Evaluating contractor support on a case-by-case basis

# SCE's Resource Mix and GHG Emissions Pre and Post SONGS

SCE's resource mix and GHG emissions have changed since the shutdown of SONGS Units 2 and 3

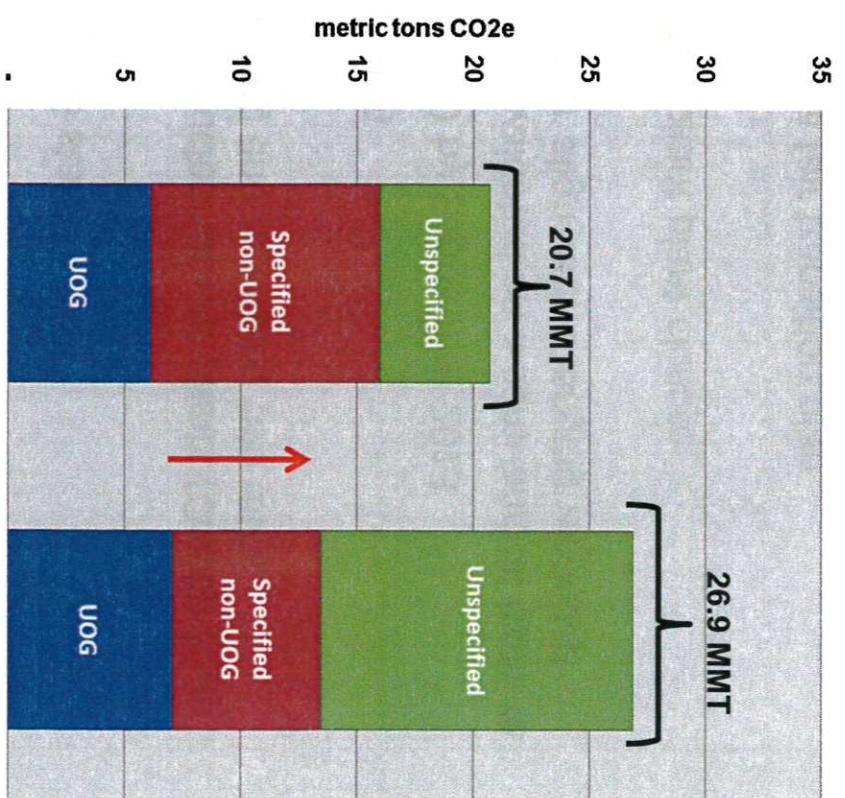
## Electricity Provided by Resource Type



30% of SCE's 2012 electricity was from carbon-free resources. This is down from 50% in 2011 largely due to the SONGS nuclear outage.

<sup>1</sup> "Unspecified" electricity is purchased power that is not tied to specific generation resources.  
<sup>2</sup> CAISO purchases are assumed to be from natural gas facilities, which are the marginal resources in California.

## SCE's GHG Emissions from Electricity



Note: GHG Emissions data is an unverified estimate. The UOG GHG data should be accurate, but many assumptions have to be made about the GHG from specified and unspecified purchases.