Summer 2007 Electricity Forecast & Resource Adequacy Outlook

Assembly Committee on Utilities and Commerce
Hon. Lloyd E. Levine, Chair

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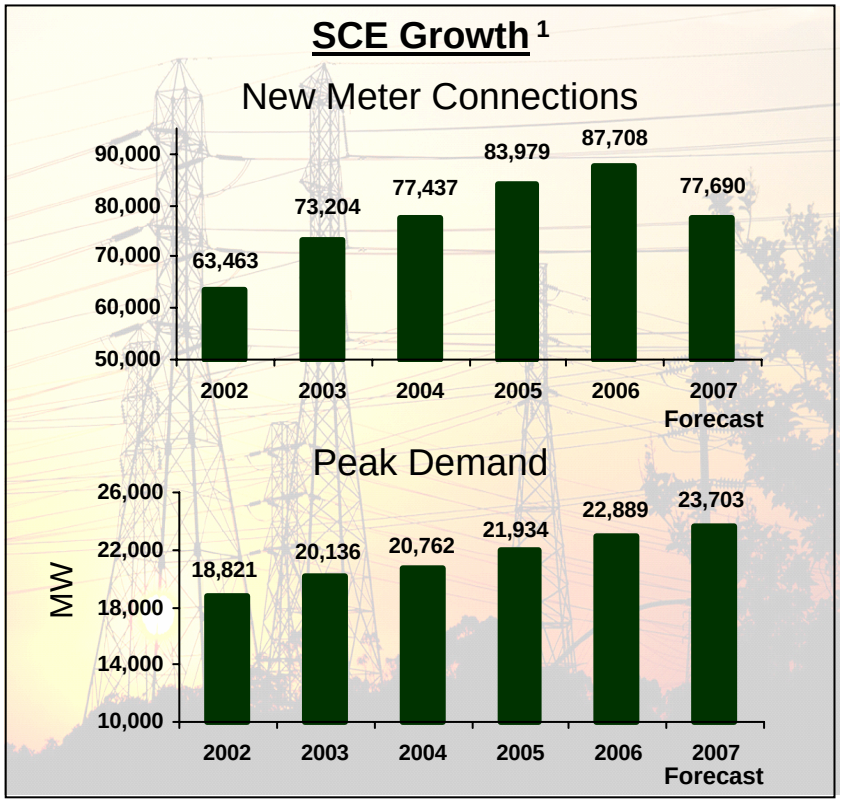
Resource Adequacy Is A Shared Responsibility

- SCE customers are served by a large, interconnected electrical system, operated by CAISO
- SCE's service territory is in a region of the CAISO grid known as SP-26 (or SP-15)
  - SCE, SDG&E and several municipalities have service territories within SP-26
- CAISO, CEC, and SCE all assess the adequacy of generation resources on an SP-26-wide basis
- Within SCE's service territory, there are multiple Load-Serving Entities (LSEs) individually responsible for obtaining adequate generation to serve their retail customers
  - SCE is one of several LSEs operating within its service territory; it is also the largest

Resource Adequacy Should Be Assessed Many Years Ahead Of Time

- Planning for new generation should be performed 5 to 7 years in advance of potential need due to typical lead times for:
  - Conducting a competitive solicitation,
  - Performing transmission studies,
  - Obtaining permits and regulatory approvals, and responding to potential legal challenges,
  - Constructing transmission if necessary, and
  - Constructing new generation plant
- Large uncertainties in load growth, generation retirements, and future environmental regulations need to be taken into account in future generation planning

Robust Load Growth In SCE's Service Territory



- SCE's service territory has
  - 4 of the 10 fastest growing counties in the nation [2]
  - 5 of the 25 fastest growing cities in the nation [3]
- New Meter Connections
  - Expect to be 77,690 in 2007
  - 385,791 meters added in the past 5 years
- Home remodeling and population growth in high-temperature regions contribute to growth
- Peak Demand
  - In July 2006 Peak Demand reached 22,889 MW
    - 4.4% growth from 2005 peak
    - 10.2% higher than 2004 peak

1) 2007 figures projected for full-year.
2) LA, Riverside, San Bernardino and Orange counties. US Census Bureau data, in terms of population increase between 2000 and 2005.
3) Moreno Valley, Rancho Cucamonga, Irvine, Lancaster and Fontana. US Census Bureau data, in terms of population percentage increase between 2004 and 2005.

The Current Framework For Ensuring Resource Adequacy

Normal Procurement

- *Consistent with AB380*, the CPUC adopted Resource Adequacy rules to apply to all CPUC-jurisdictional Load-Serving Entities
  - Requires LSEs to demonstrate in a month-ahead filing sufficient electrical capacity, with 15% planning reserves, to meet their customers' projected loads
  - Assigns responsibility to individual LSEs to procure enough Local Capacity
- CAISO proposes and FERC adopts Resource Adequacy rules consistent with CPUC's rules to apply to municipal entities not subject to CPUC jurisdiction
- *Consistent with AB57*, SCE and the other California IOUs procure power for their "bundled" customers under a Procurement Plan approved by the CPUC

Backstop Procurement

- *Consistent with AB380*, if the CPUC determines that more supply is needed, the CPUC can authorize utilities to procure new generation capacity and allocate the costs to all customers that benefit
  - To date, the CPUC has authorized SCE to procure 1,500 MW of new generation

Future Framework For Ensuring Resource Adequacy

- The CPUC is currently considering rules for a future framework in its Resource Adequacy proceeding
- SCE has encouraged the CPUC to approve a Capacity Market which would provide an appropriate price signal to developers to build new generation when needed
- To the extent the market doesn't respond with enough generation, SCE has proposed that CAISO be granted authority to conduct "backstop" new generation procurement

Resource Adequacy Outlook
The Short Story

- In part due to SCE's recent efforts, the 2007 Resource Adequacy outlook is favorable for SP-26

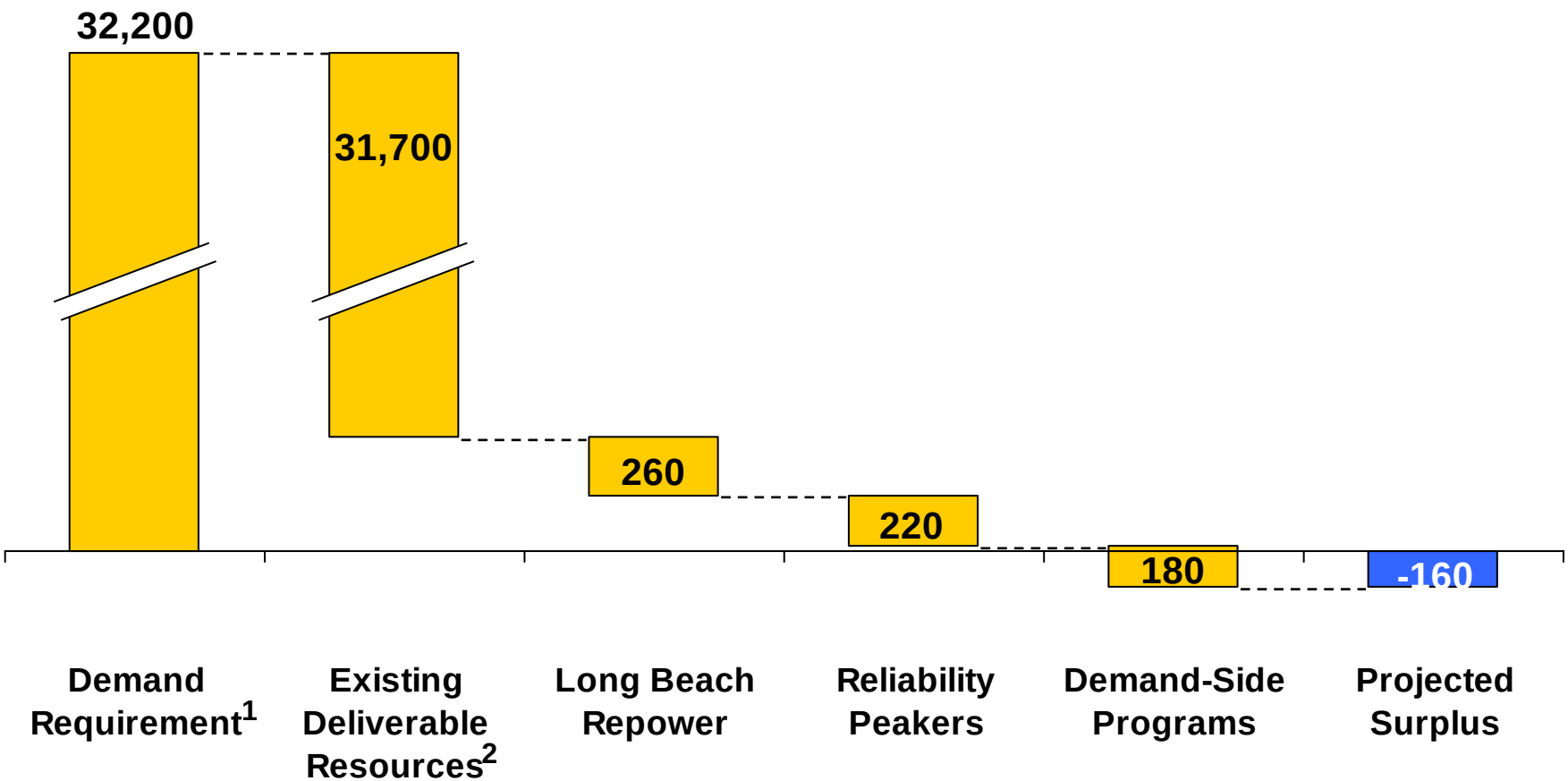
- SCE is taking several other initiatives to address the long-term Resource Adequacy need

SCE's Efforts Since Last July's Heat Storm

- Construction of 220 MW of utility peakers
  - 4 of 5 are currently on track; one project may be slightly delayed
- Signing a 10-year contract with NRG Long Beach to refurbish 260 MW of moth-balled peakers with state-of-the-art emissions controls
  - CPUC initially approved contract, but 3 parties have appealed
- Obtaining an additional 180 MW of demand response capability

2007 Southern California Supply and Demand Balance

MW, CAISO Zone SP-26



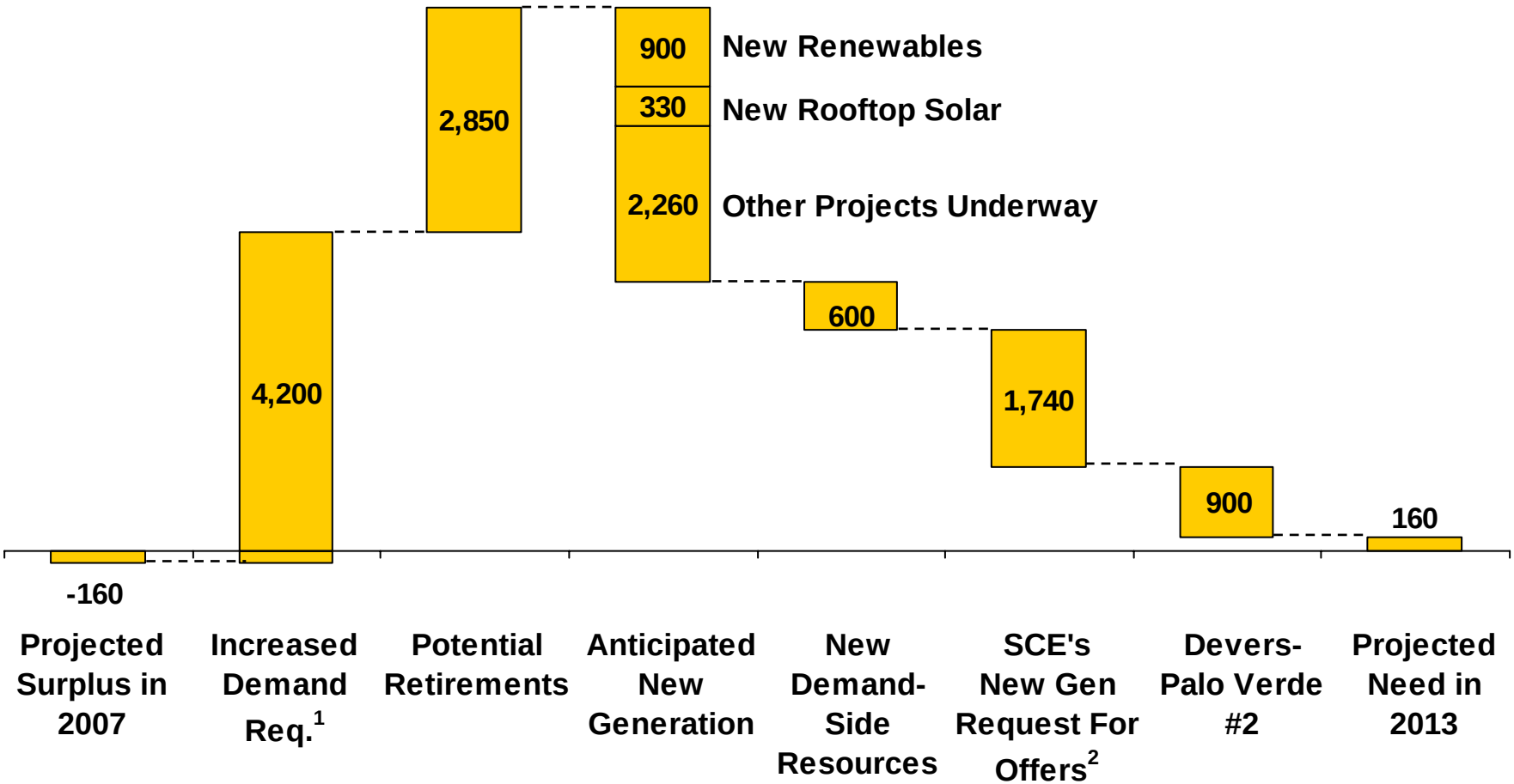
1. Adverse weather conditions; includes 5% operating reserves
2. Dependable capacity, including import capability and demand-side

SCE Actions To Address Long-Term Resource Adequacy Needs

- Construction of Devers-Palo Verde #2 transmission line
- Construction of transmission lines to areas of high renewable generation potential
- Contracts with new renewable generators
- Energy efficiency and demand response programs
- Request pending at CPUC to expand new generation procurement by 500 MW

2013 Southern California Supply and Demand Balance

MW, CAISO Zone SP-26



1. Adverse weather conditions; includes 5% operating reserves
2. Includes SCE's petition to modify seeking an additional 500 MW not yet

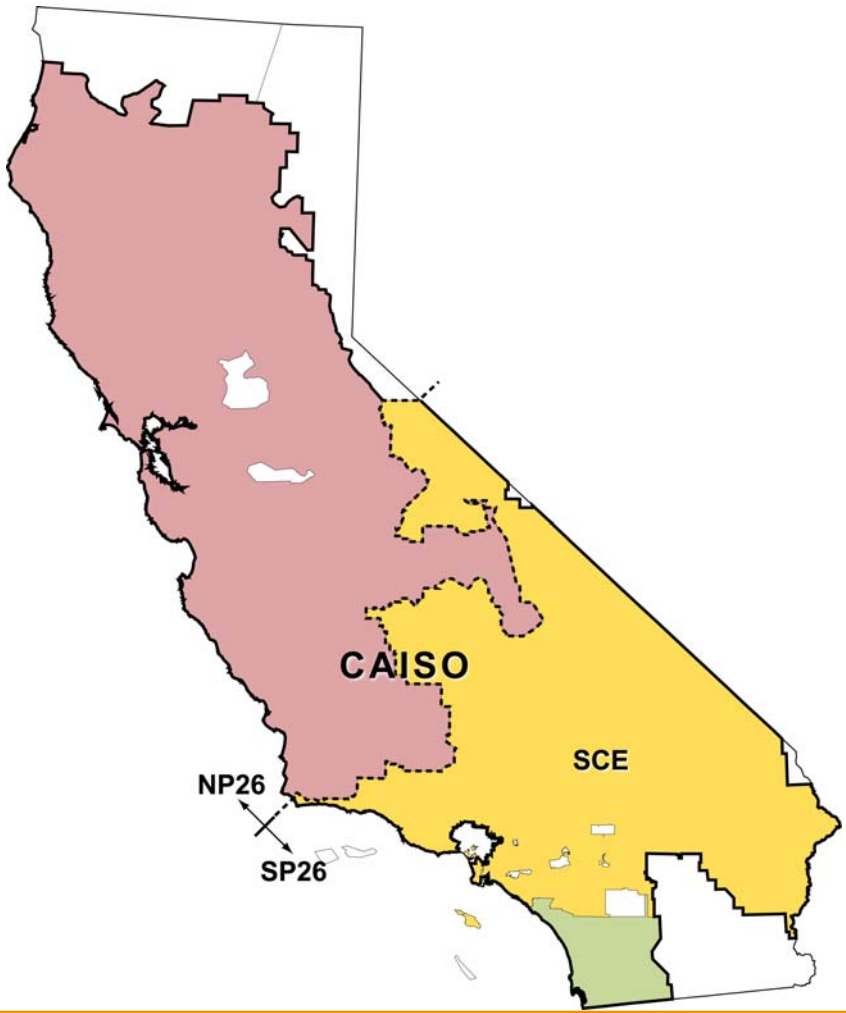
Back-Up

New Generation RFO for System Needs

- Benefits and costs allocated to all SCE distribution wires customers
- Summer 2007 Track: launched per Assigned Commissioner Ruling after July 2006 heat storms
  - ***NRG Long Beach***: refurbished peaking units ***(260 MW)***
  - CPUC approved contract in late January
  - Project on schedule for start-up by August 1
- Fast Track (online dates by 8/1/10): awards made Feb. 15, 2007
  - ***FPL Blythe***: CCGT plus new transmission connection to ISO ***(490 MW)***
  - ***CPV Ocotillo***: 5 new LMS-100 peakers ***(455 MW)***
  - CPUC application was filed Feb. 28, 2007
- Standard Track (online dates by 8/1/13)
  - Indicative offers received Jan. 25, 2007
  - Final bids due Jan. 16, 2008

SCE's Power Procurement Activities

- Traded Transactions: ~20,000 in 2006
  - Power (terms less than 3 months)
  - Natural Gas (terms less than 18 months)
    - ***Enabled with well over 100 power and gas counterparties***

- Competitive Solicitations – RFOs
  - Four renewable portfolio solicitations between 2002 and 2006
  - 5 All-Source RFOs for terms up to 5 years since 2002
  - New Generation Resources RFO (3 tracks) to procure up to 1,500 MWs under ten year agreements
    - Petition for additional 500 MW under 20 year contracts pending at CPUC
  - Natural Gas RFO for terms up to 5 years in April 2006

SCE Service Territory In CAISO