

Senate Energy Committee Electricity Outlook: Summer 2005 and Beyond

February 22, 2005



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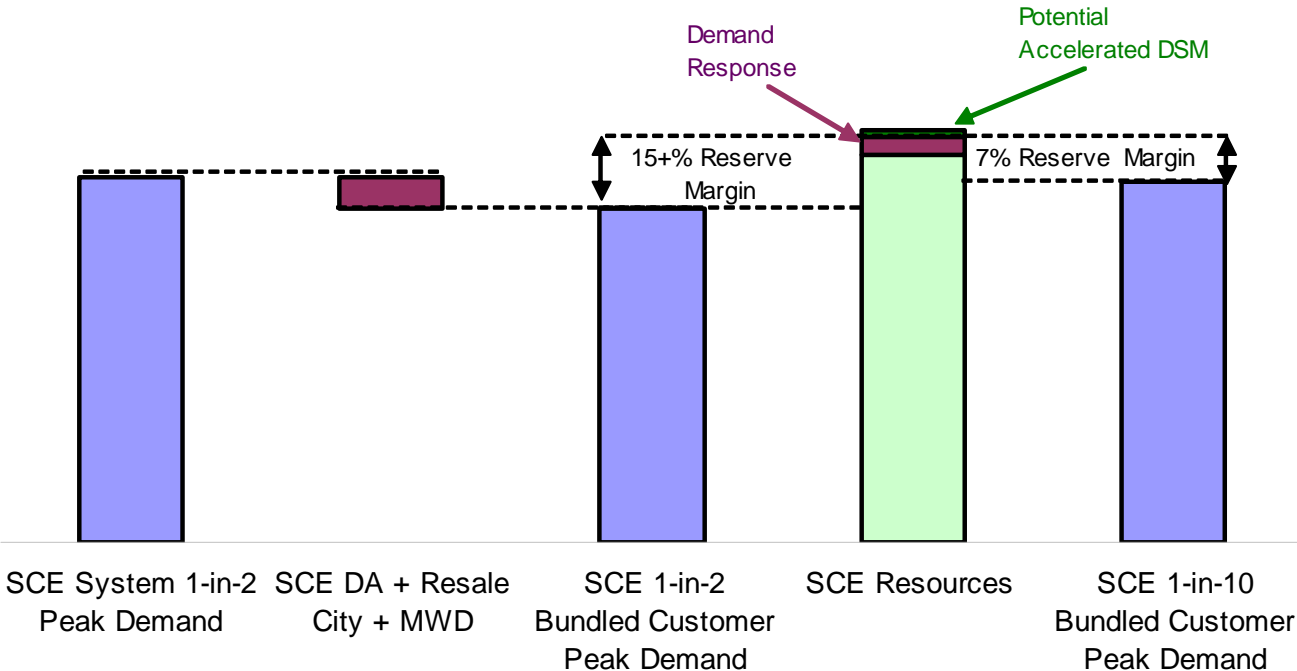
SCE Resources Exceed 115% Peak Demand

- ◆ SCE has procured more than 115% of the resources needed to meet the expected peak demand of its bundled customers for Summer 2005:
 - Under normal (1 in 2) weather conditions, meeting early the standard set by the CPUC's Resource Adequacy Requirement for month-ahead demonstration of 115% planning reserves relative to 1-in-2 load beginning in 2006
 - In full compliance with its CPUC approved AB 57 procurement plan
- ◆ Resources Procured by SCE include Unit Contingent and Portfolio Purchases:
 - The majority of resources procured by SCE are unit contingent:
 - QF Contracts
 - Non-Utility Owned Generation
 - Utility Owned Generation
 - A large portion of SCE's Portfolio Purchases ("Firm Energy Contracts") are with generator owners
- ◆ SCE is taking further actions to provide additional incremental resources this summer, consistent with the Energy Action Plan Loading Order (Energy Efficiency and Demand Response)



115% of Peak Load Procured

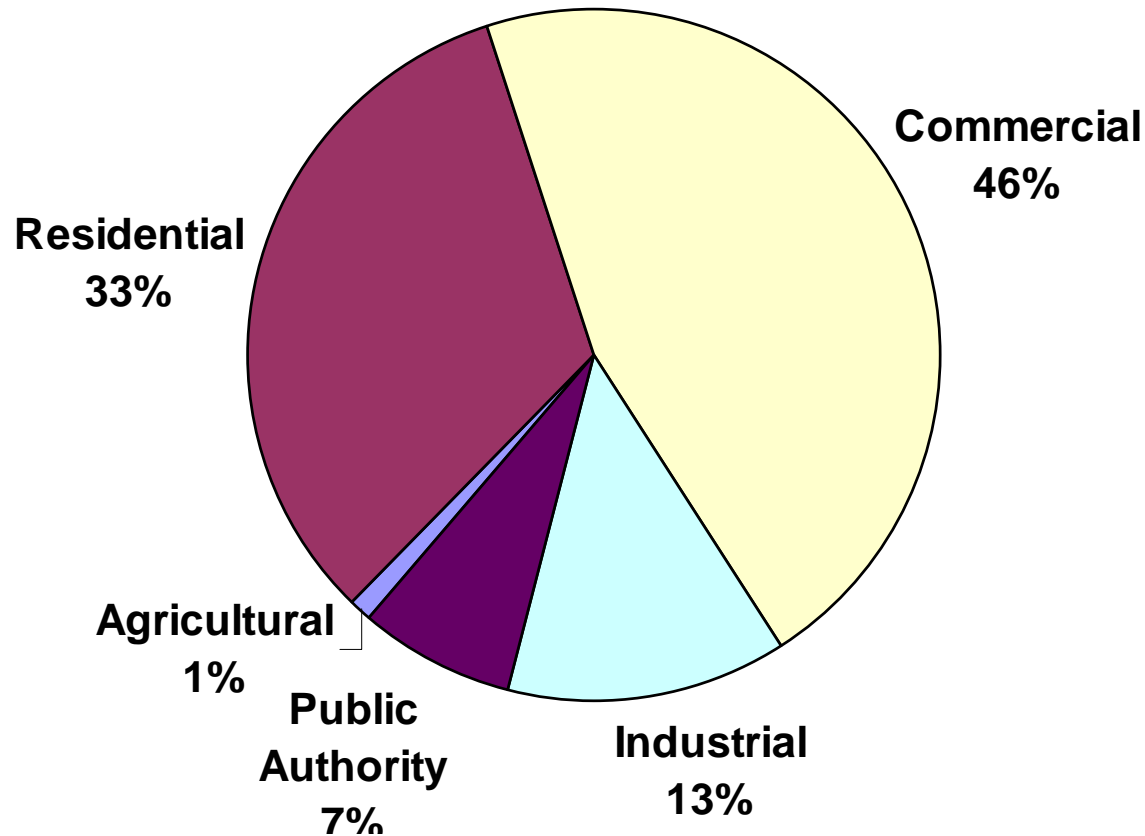
SCE Has Achieved a Reserve Margin Greater than 15% for Summer 2005



- ◆ In January 2004 the CPUC adopted a 15% minimum reserve margin to be implemented in July **2008**
- ◆ In October the CPUC accelerated implementation to summer **2006**
- ◆ SCE has achieved a reserve margin greater than 15% in **2005**



SCE's 2005 Retail Load by Customer Class



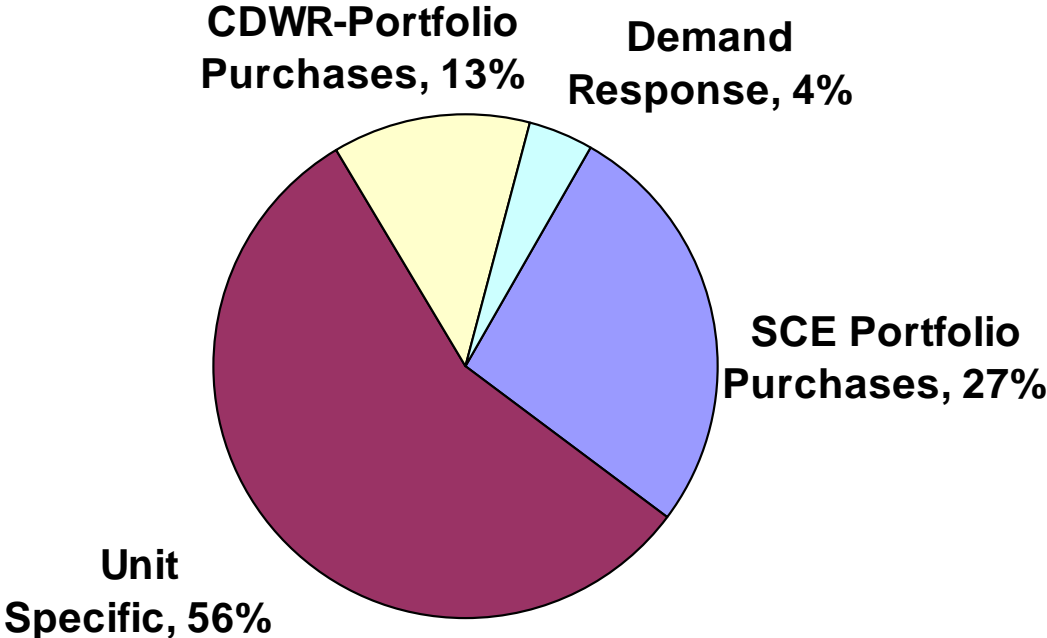
Note: Energy (MWh) served for each customer class



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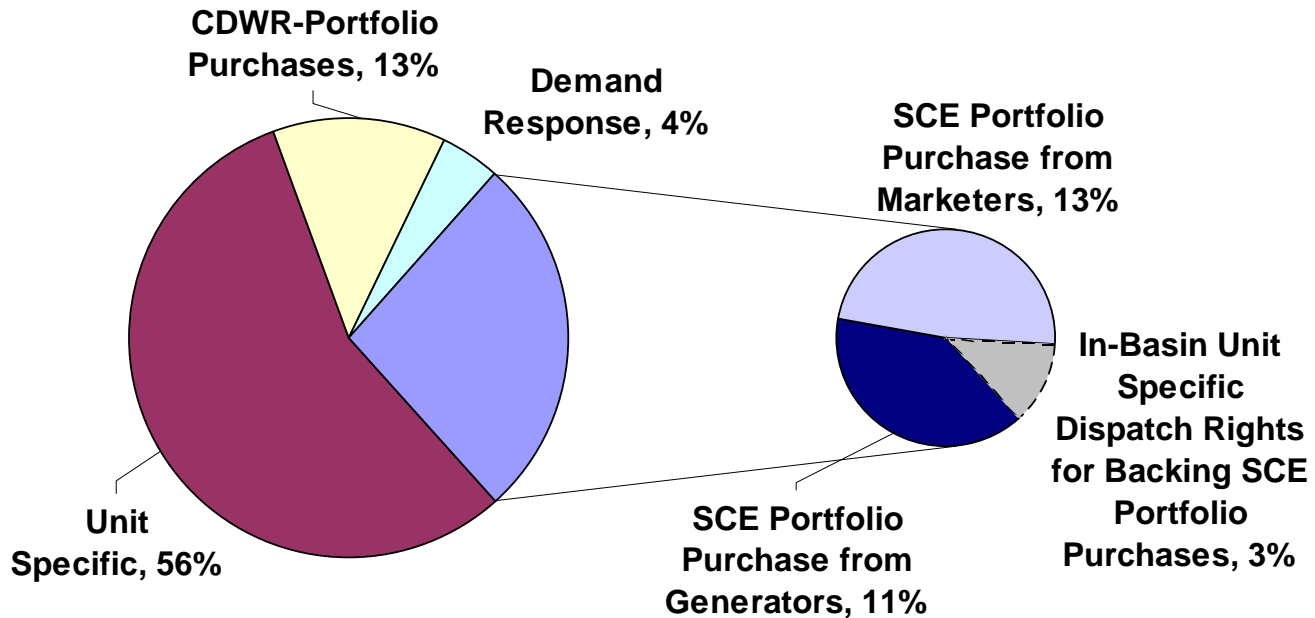
Resources Procured to Meet 115% Peak



- ◆ Portfolio purchases are also known as “Firm Energy Contracts”, they are often served from the seller’s “portfolio” of resources
- ◆ SCE has procured additional dispatch rights over specific power plants in the LA Basin, known as “In-Basin Unit Specific Dispatch Rights”
- ◆ Historically, Firm Energy Contracts are as reliable as Unit Contingent



Breakdown of Portfolio Purchases



- ◆ A large portion of SCE's portfolio purchases are from Generator Owners in southern California
- ◆ Portfolio Purchases from Marketers:
 - Marketers have recently acquired Firm Transmission Rights (via the CAISO auction) equal to or above their sales to SCE
 - According to the CEC analysis, there are 9,900 MWs of transmission import capability, which is far greater (by over 4,000 MWs) than the transmission needed to serve SCE portfolio purchases
 - Additional uncommitted generation in southern California

Balancing Loads and Resources

- ◆ Every day of the year, SCE is engaged in balancing its load requirements and supply resources around the clock
- ◆ SCE commits and dispatches these resources in a manner that minimizes cost to its customers (“least-cost dispatch”), including purchasing power from the market when the market can reliably produce power more affordably than the next resource in SCE’s portfolio
- ◆ This also requires that, after SCE has enough resources to serve its load, any additional resources that have market value are sold into the market to reduce the “net costs” to SCE’s customers
- ◆ These are standard utility practices that have been used for many decades



Planning and Acquiring New Resources

- ◆ SCE updates its five-year forward energy plan every month to ensure that it has sufficient resources to cover its requirements
- ◆ To comply with Resource Adequacy Requirements (RAR), SCE will be making an annual showing beginning September 2005 on its commitments to meet its load requirements for the following year
- ◆ Additionally, SCE produces ten-year forward energy plans biennially to cover longer term needs, as required by regulatory agencies
- ◆ When acquiring new capacity resources, SCE conducts competitive solicitations (Request for Offers – RFOs) and selects contracts in merit order to fill the requirements
- ◆ SCE completed two of these RFO's in the last 12 months



Southern California SP 15 Grid



- ◆ Multiple “load-serving entities” across Southern California
 - SCE
 - SDG&E
 - Competitive retail electric service providers (ESPs)
 - Several munis

- ◆ Supply deficiencies by any one load-serving entity affect reliability across entire SP15 grid

State Seeking Additional Resources in SP15

- ◆ CEC, CPUC, and ISO have advised that under extreme weather and operating conditions, reserves in SP 15 could be insufficient for the summer of 2005
- ◆ SP 15 includes SCE, SDG&E, Non-utility electric service providers (ESPs) and munis
- ◆ Even though SCE has procured more than 115% of the resources needed to meet the peak demand of its bundled customers, the CEC, CPUC and ISO have advised that additional resources may be necessary under extreme weather and operating conditions for all customers, including direct access customers served by ESPs.
- ◆ SCE has identified Incremental Resource Options in SP 15
 - High Probability Resource Options
 - Resource Options Requiring Extraordinary Action
- ◆ Resource Options to benefit SP15 should be paid for by all SP 15 customers



Incremental Resource Options Identified

High Probability Incremental Resources

- Expanding demand-side management: 290 – 390 MW
 - Incremental Energy Efficiency (30 MW)
 - Expanded 20/20 (Approx. 150 MW)
 - Critical Peak Pricing (50 – 150 MW)
 - Enhanced A/C Cycling (60 MW)
- Curtailing MWD pumping load: 110 – 210 MW
- Contracting for mothballed facilities: 175 MW

Resource Options Requiring Extraordinary Action

- Temporary opacity waiver at Mohave 75 MW
- Refurbishing existing generation units TBD
(Feasibility uncertain)
- Installing additional peakers TBD
(Feasibility uncertain)



Beyond 2005: Reliability at Risk

- ◆ In order to ensure reliable, affordable electric service, investment in energy resources is needed
- ◆ Investment, whether (1) direct utility investment, (2) LSE contract with a non-utility generator, or (3) non-utility generator merchant investment without LSE contracts, requires long term commitments by customers or suppliers
- ◆ The current market structure does not support long term commitments
- ◆ Without new investment, reliability is at risk
 - ISO responsible for grid reliability
 - Does not procure long term resources
 - Only provides short term backstop for LSE procurement to mitigate market power
 - LSEs responsible for procuring resources to support grid reliability
 - LSEs unable to assume long term investment risk due to customer base uncertainty
 - Supply (generators) unable to assume long term investment risk due to market uncertainty
- ◆ California must act now to develop a durable, stable market structure that will support long term investments in resources needed to ensure reliable, affordable electric service to California businesses and consumers



Potential End-State: Stable Capacity Market

- ◆ Competitive wholesale markets should provide:
 - Adequate and stable capacity supplies at just and reasonable rates
 - Capacity payments in an amount sufficient to incent new capacity where and when it is needed and to maintain existing capacity
 - All consumers using the grid and depending on its reliability pay for the cost of capacity
- ◆ Designing and implementing a competitive wholesale market to achieve these objectives could take years
- ◆ California should proceed in a deliberative manner to design and implement a competitive wholesale market structure
- ◆ California needs new capacity in the near term, so an alternative mechanism to develop new capacity now is needed during the transition to the market



Transition to the Market: New Capacity Now

- ◆ During the transition to the market, new capacity can be built with state support for utility long term contracts for new capacity to ensure system wide reliability, provided costs are allocated to all customers, including direct access customers
- ◆ Utility long term contracts entered into during the transition to the market should be for the minimum amount of capacity needed to ensure system reliability at the lowest possible price
- ◆ Utility long term contracts for new capacity to ensure system wide reliability should only be entered into during the transition to the market
- ◆ Merchant generators who are able to finance projects independently are encouraged to build capacity at any time

