

California Independent System Operator Corporation

Issues for Scarcity Pricing Conceptual Design

Shucheng Liu Principal Market Developer Market Surveillance Committee Meeting/ Stakeholder Meeting June 6, 2007



Scarcity Pricing Is a Compliance Filing with FERC

- In September 2006 Order FERC directed the CAISO to
 - File tariff language for implementation of scarcity pricing methodology
 - Develop a reserve shortage scarcity pricing mechanism
 - Implement it within 12 months after MRTU Release 1



FERC Has Defined a Framework for the Methodology

- FERC has specified that the methodology has administratively-determined graduated prices at various levels of shortage
- It applies to both day-ahead and real-time markets



Design Issues Require Inputs and Discussion

Products

- Ancillary Services (A/S) to be included
- Separate or combined

Triggers and levels of scarcity

 The CAISO operational emergency condition (Stage 1, 2, 3)

Reserve demand curves

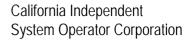
- The prices at different scarcity levels



Design Issues Require Inputs and Discussion (cont.)

System-wide or locational (zonal)

- Having a uniform scarcity price system-wide or measuring scarcity by congestion zone
- Resource Adequacy (RA) resources Day-Ahead A/S must-offer
 - Reducing possibility for market manipulation





Written Comments Are Requested

- The CAISO has posted an Issue Paper for scarcity pricing conceptual design
- Written comments are requested by June 13, 2007