



California ISO
Your Link to Power

California Independent
System Operator Corporation

Market Monitoring Report

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September 7, 2006

Two Key Issues

1. Assessment of July Heat Wave

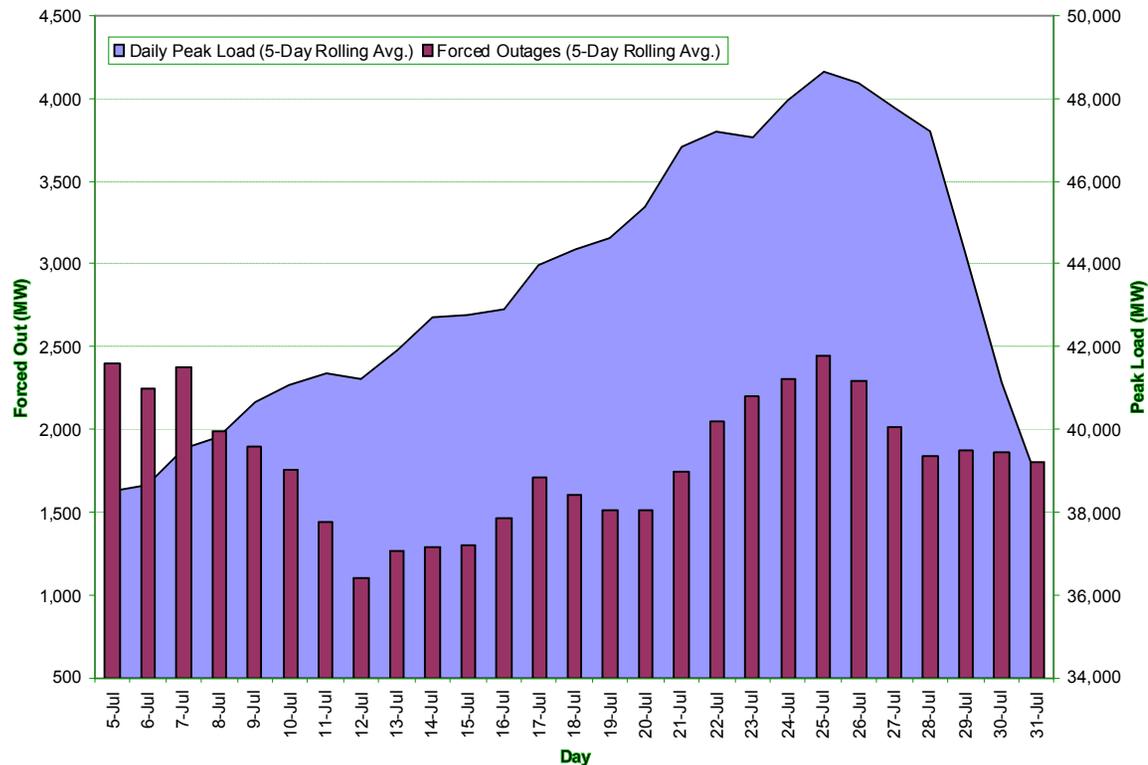
- Forced outages at record lows – potentially reflecting pre-summer outreach, incentives provided by RA, and higher bid cap. (p.3)
- Price signals seen in spot bilateral markets. Real-time prices not highly correlated with total load, but are significantly affected by real-time imbalances and load forecast error. (p.6, 10, 11)
- Other factors that might dampen real-time prices (pre-dispatch imports, minimum load from MOO waivers, and OOM) were not significant due to high level of forward scheduled load.
- July 24 - low imbalance prices during a Stage 2 Emergency and dispatch of Interruptible Load highlight current Real Time Market design deficiencies:
 - Inability to procure reserves in real time
 - No reserve shortage scarcity pricing mechanism

2. Update on Real Time Revenue Imbalance Charges

- DMM's previously reported estimates of real time revenue imbalance charges (approx. \$50 million) appear to be fairly accurate based on actual settlements (CT-1401).

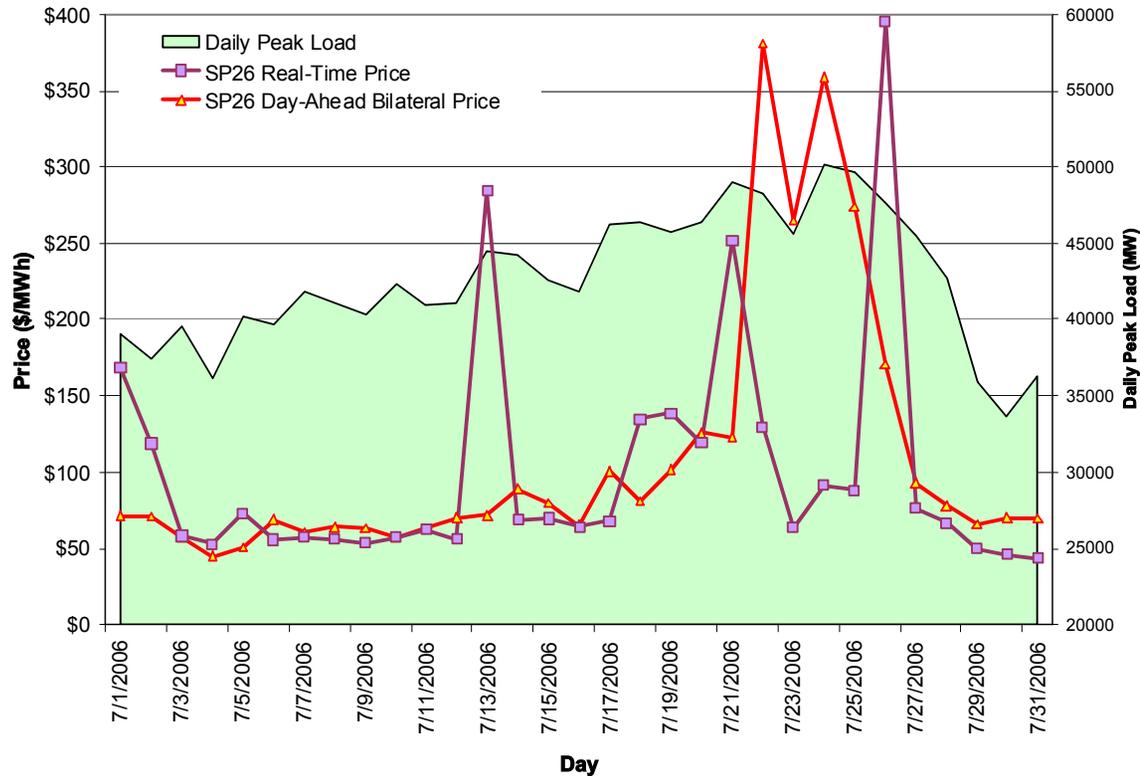


Low Forced Outage Rate – July 2006



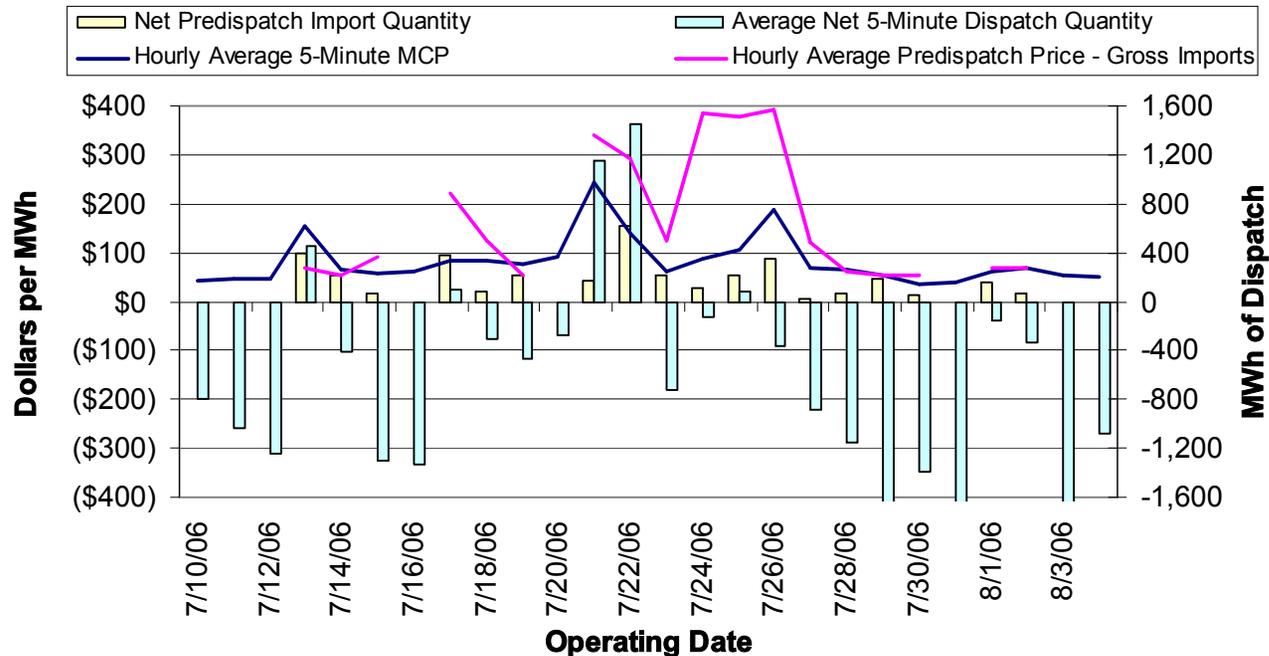
- **Peak forced outage rate was 2,000 MW to 3,800 MW for same period in 2005.**
- **Low forced outage rate potentially attributable to:**
 - Pre-summer outreach and coordination between CAISO and generators.
 - Incentives provided by RA program for determination of Qualifying Capacity.
 - Higher bid cap and forward energy contracting.

Price Signals in Spot Bilateral Market



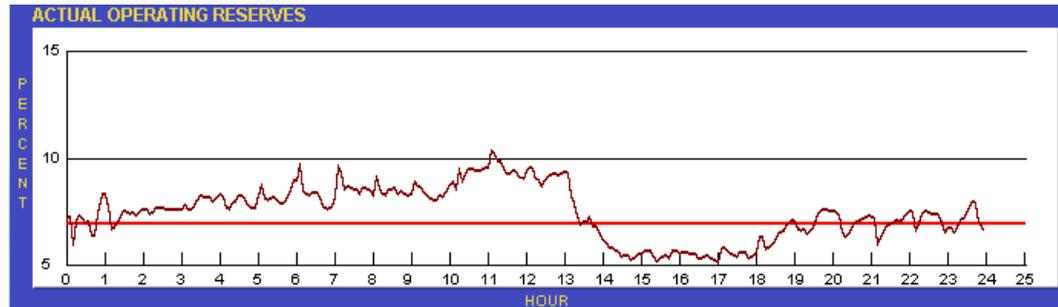
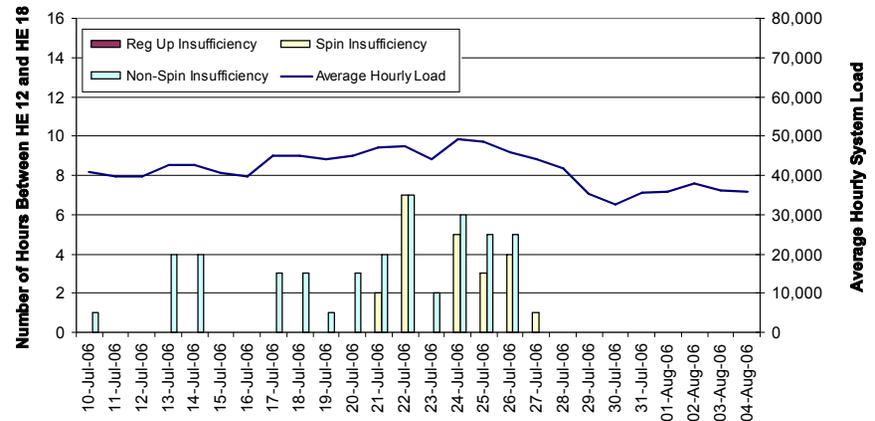
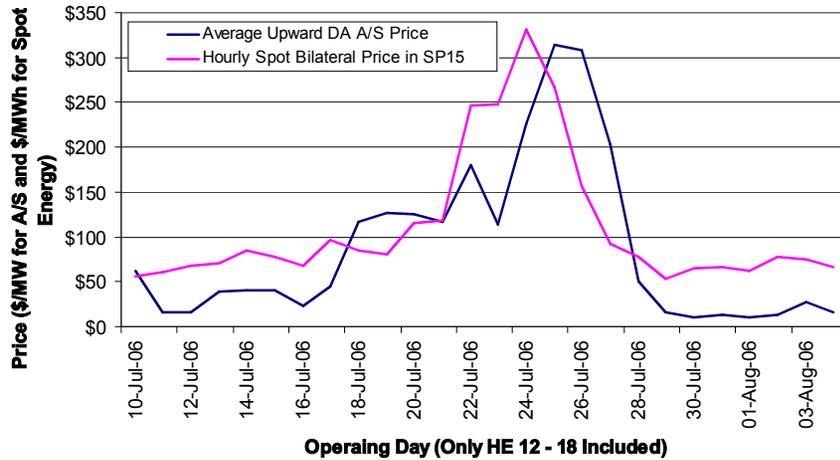
- Imbalance prices did not increase dramatically during peak load periods, however spot bilateral prices did signal anticipated scarcity.
- Day ahead ancillary service prices and pre-dispatch import prices also reflected increased spot bilateral prices (as seen in next slides).

Pre-dispatch Imports – High price & low volume



- Pre-dispatch imports not a significant factor in low imbalance prices during super-peak.
- High forward scheduled load (primarily) and load over-forecast were driving lower imbalance prices.
- Pre-dispatch import prices reflect regional spot bilateral prices during highest load days (diverging from lower real-time price levels seen in CAISO).

Insufficient A/S, Stage 2, and Interruptible Load



- A/S insufficiency during HE 13 – 19, with real time O.R. near 5% HE 14 - 19.
- Stage 2 Emergency called at beginning of HE 14, Interruptible Load called mid HE 15.
- A/S Market bid insufficiency and an inability to procure additional operating reserve in real time on July 24 contributed to declaration of Stage 2 Emergency and calling on Interruptible Load despite low real-time prices.