



California ISO
Shaping a Renewed Future

Market Performance Update

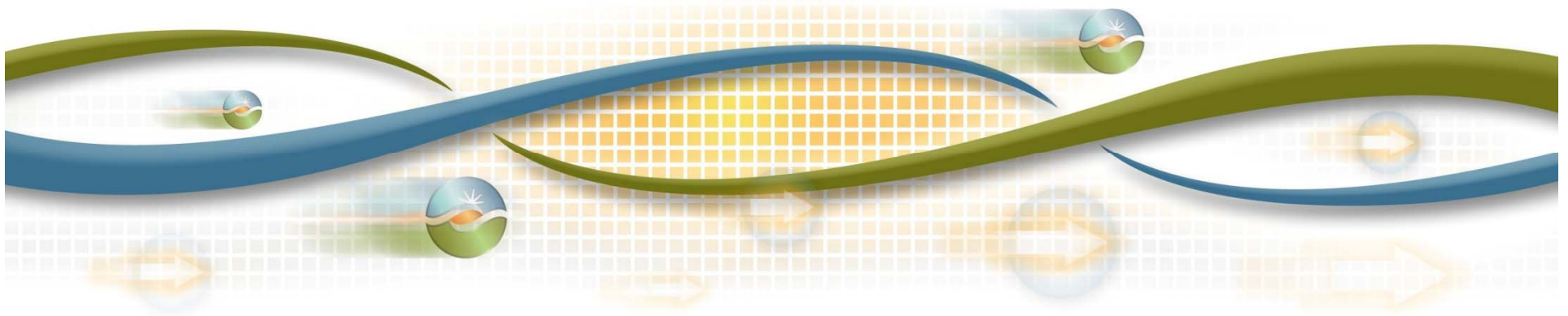
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Board of Governors

General Session

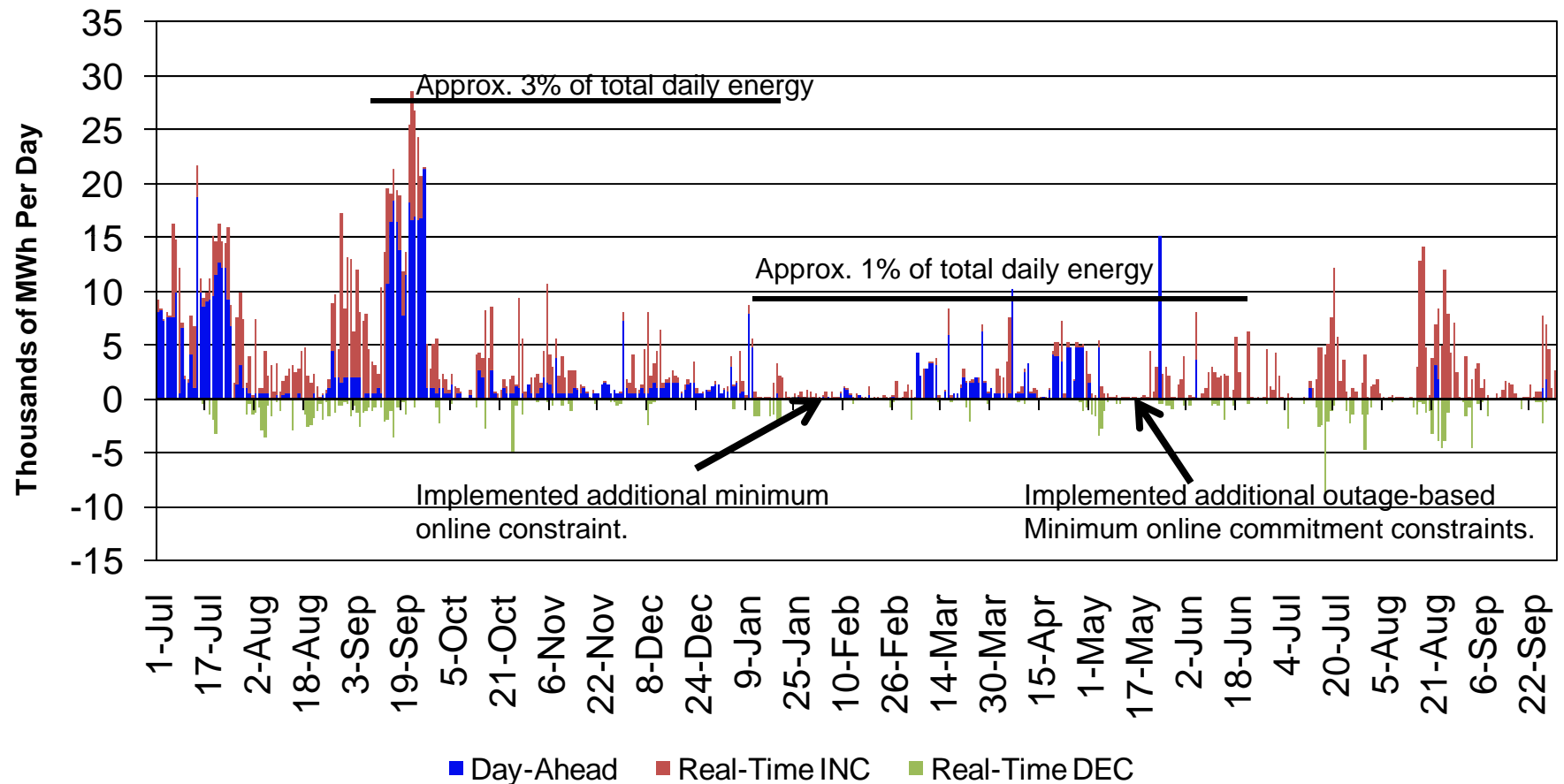
May 18-19, 2011



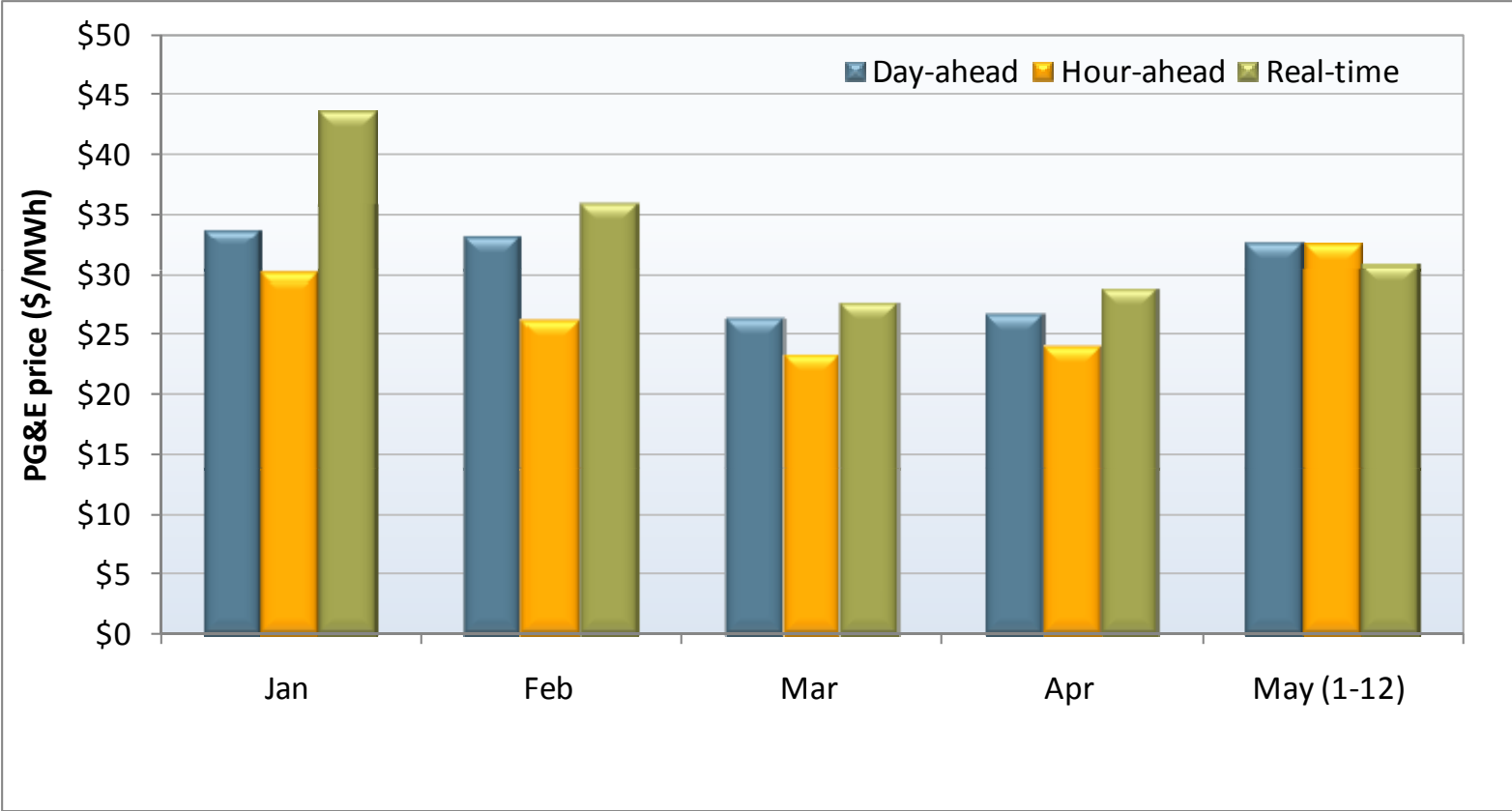
Role of Market Analysis and Development:

- Collaborate in monitoring the quality of the market solutions
- Identify systemic issues and identify opportunities for improvement
- Stakeholder engagement to provide insight and explain market results and trends:
 - Market Performance and Planning Forums
 - Technical bulletins
- Perform special analysis and studies
 - Renewable integration studies

In 2010, the reduction of manual dispatch is an example of an issue identification and improvement.



Hour-ahead and real-time price convergence is an identified opportunity to improve.



Actions taken to improve hour-ahead and real-time price convergence.

Software:

- Improved energy delivery expectations from variable resources
- Addressed inertia ramp profile issue

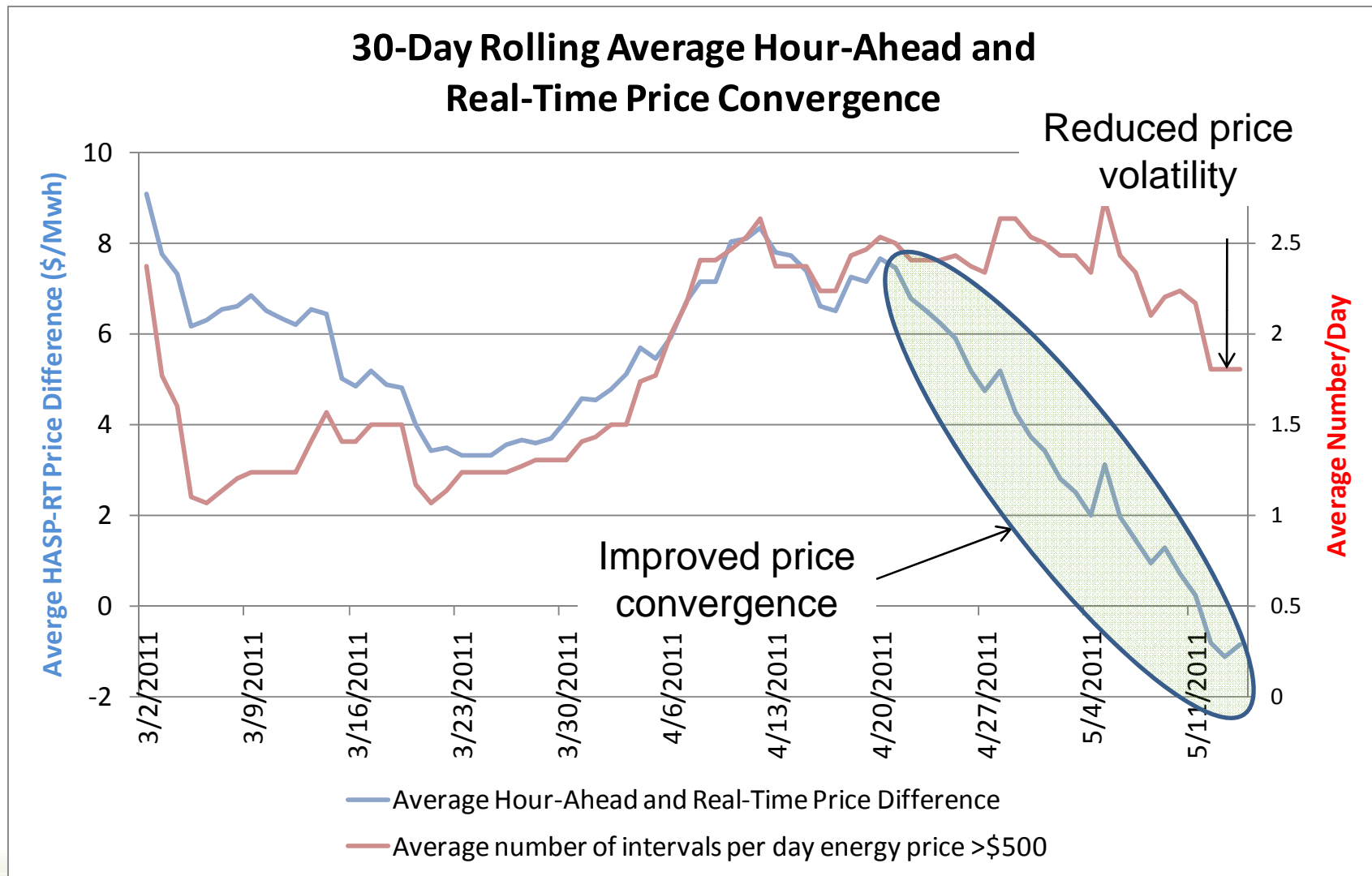
Forecast Adjustment Process:

- Adjusted hour-ahead load forecast to account for observed differences
- Adjusted imbalance to account for resource start-up and shut-down

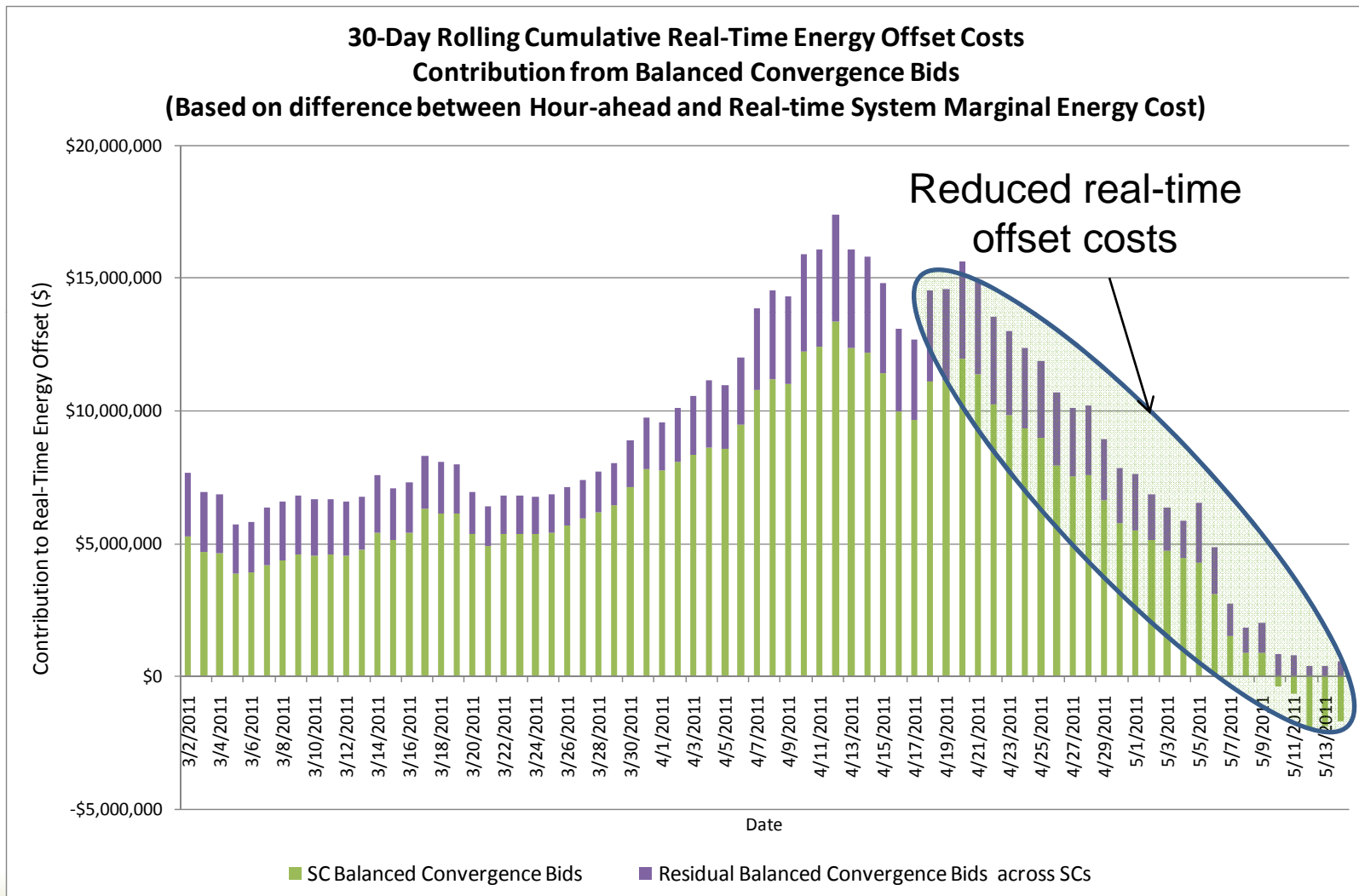
Other contributing factors:

- Resources not delivering expected quantity on time
- Resources not positioned to respond

In March and April additional actions taken to converge conditions between the hour-ahead and real-time prices.



As hour-ahead and real-time price convergence improves, the impact on costs reduces.



The following future improvements are planned:

- Implement enhanced load forecasting in real-time
- Enhance management of resource fleet
- Refine constraint management