

Market Performance Update

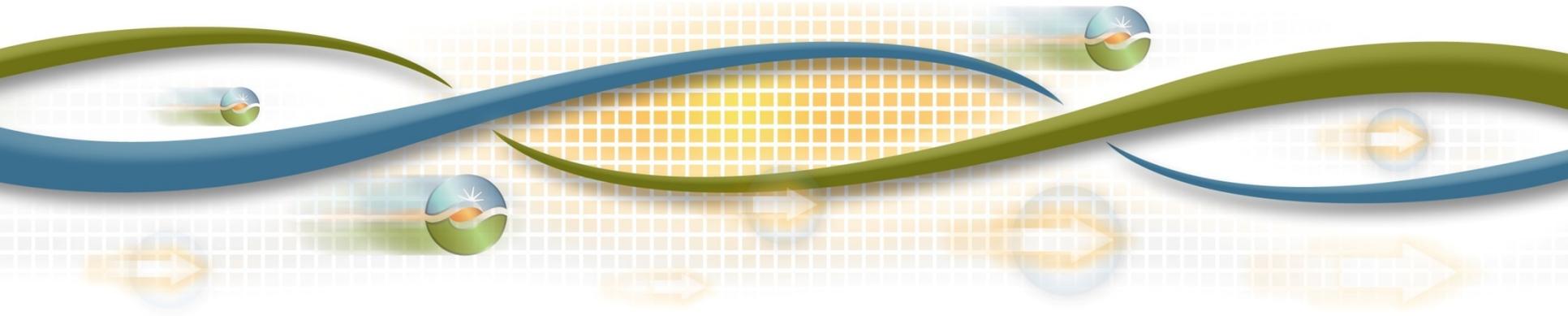
Mark Rothleder

Executive Director, Department Analysis and Development

Board of Governors

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Higher demand, SONGS outage and transmission bottlenecks led to a challenging summer.

- **Challenges:**

- High summer system wide load and near record load in San Diego
- Fires diminished local supply, exacerbating congestion
- Import constrained due to voltage limitation on neighboring system
- Transmission maintenance and outages
- Day-ahead market timing and quality of solution

- **Impacts:**

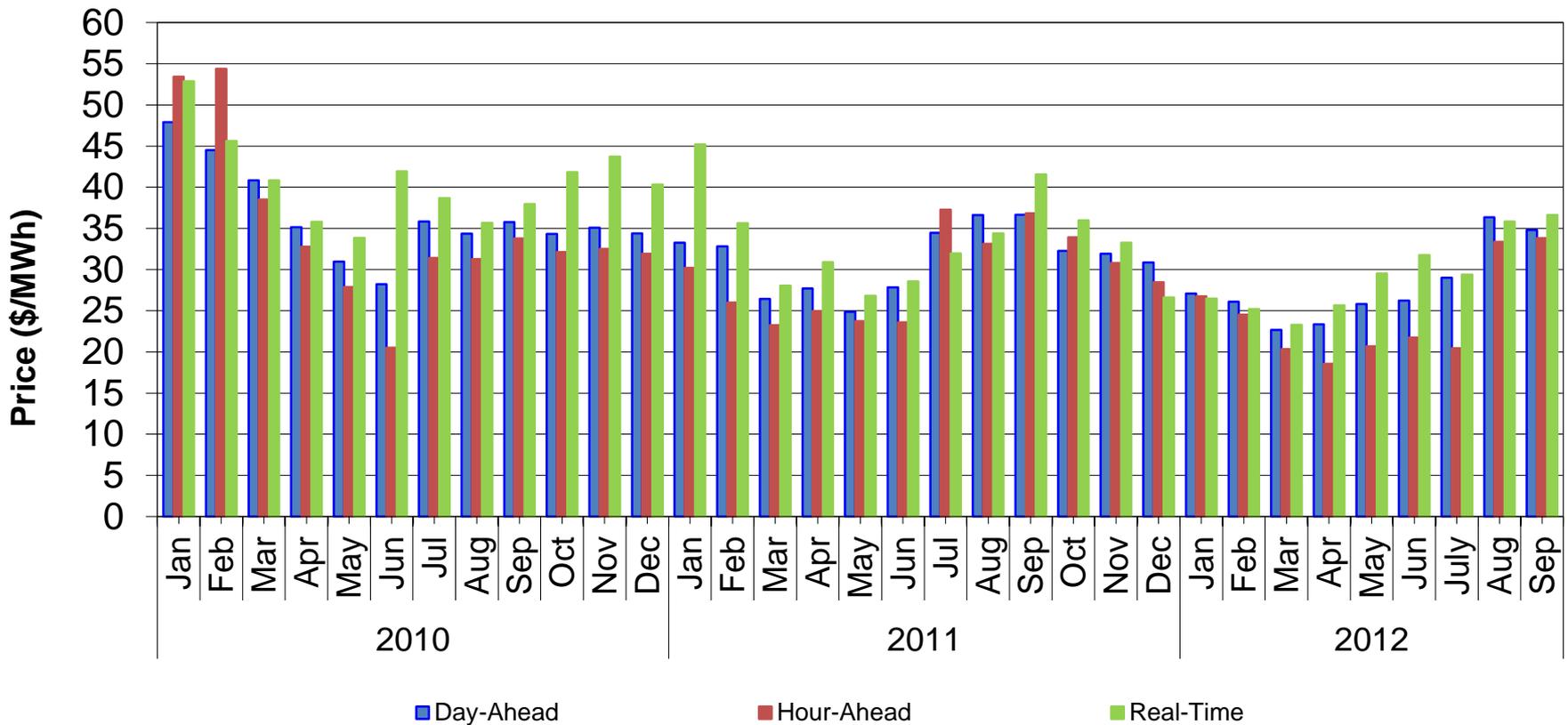
- Elevated levels of exceptional dispatch, bid cost recovery and real-time imbalance energy and congestion offset costs.

- **Steps taken/planned to address these areas:**

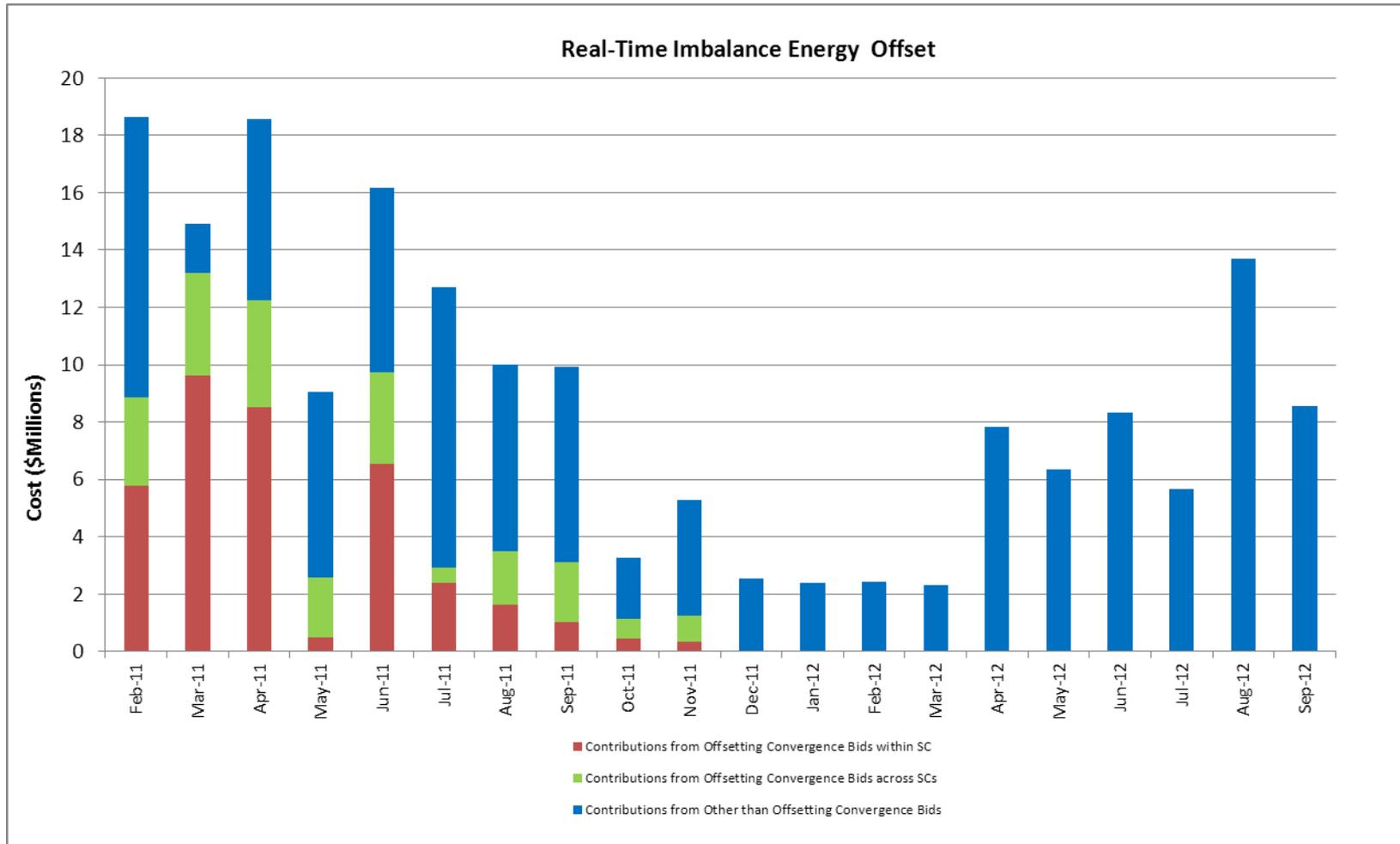
- Improved forecasted imbalance and ramping needs in hour ahead scheduling process
- Improved modeling and forecast quality to minimize the need for exceptional dispatch
- Improved root cause analysis of price corrections

Average price convergence improved in August and September.

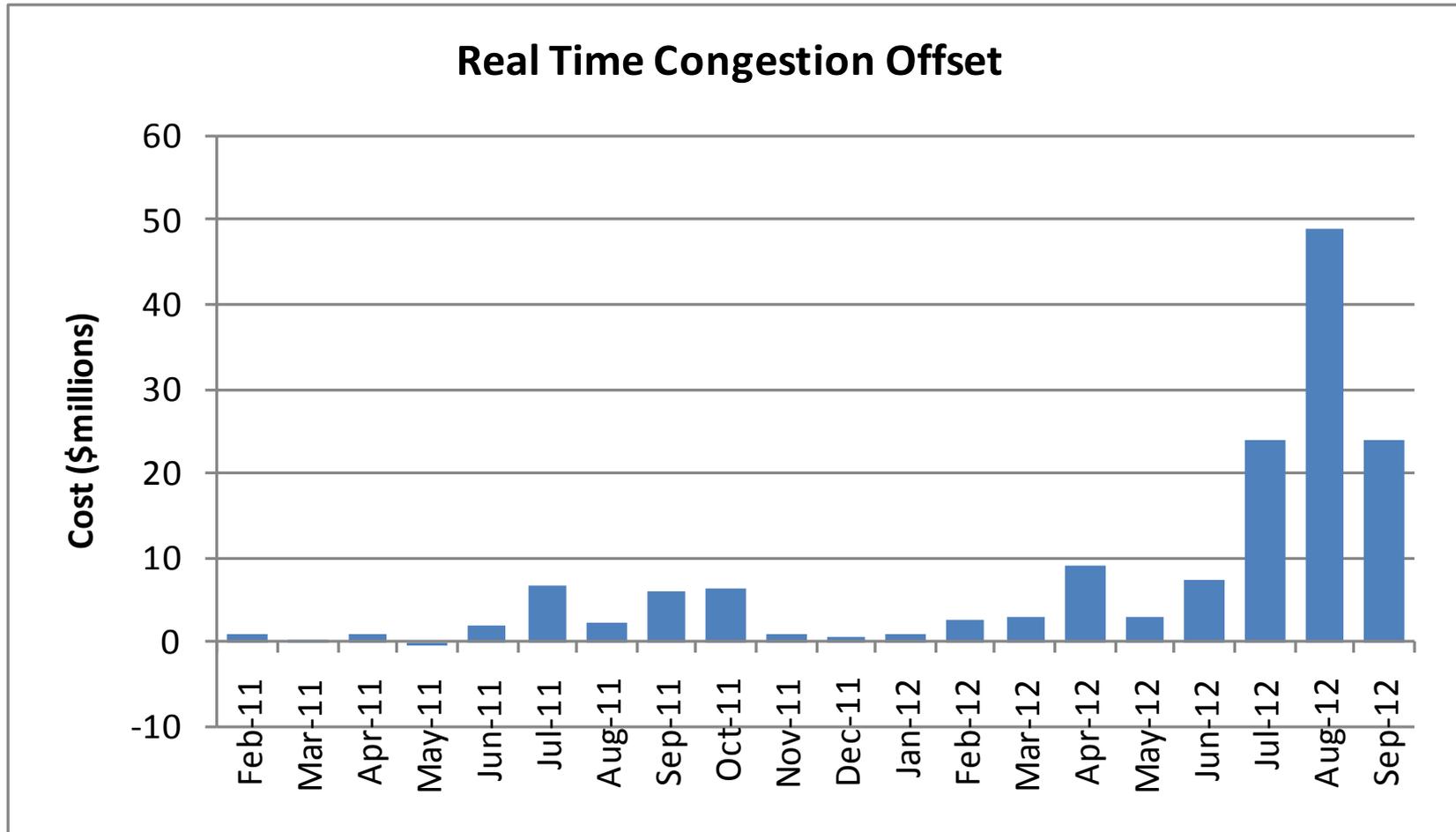
System Marginal Energy Cost



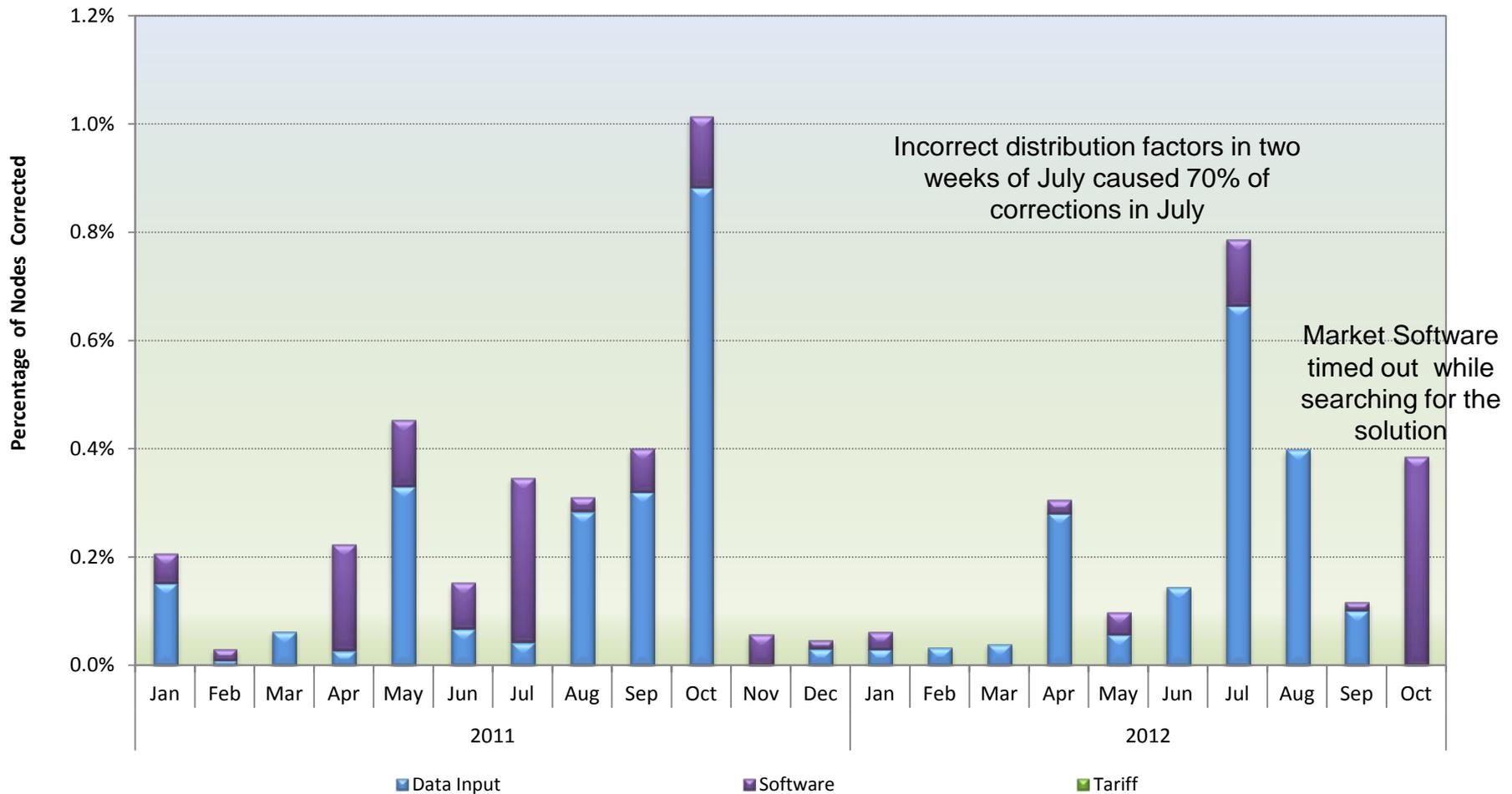
Energy offset costs rose in August and dropped back to a normal level in September.



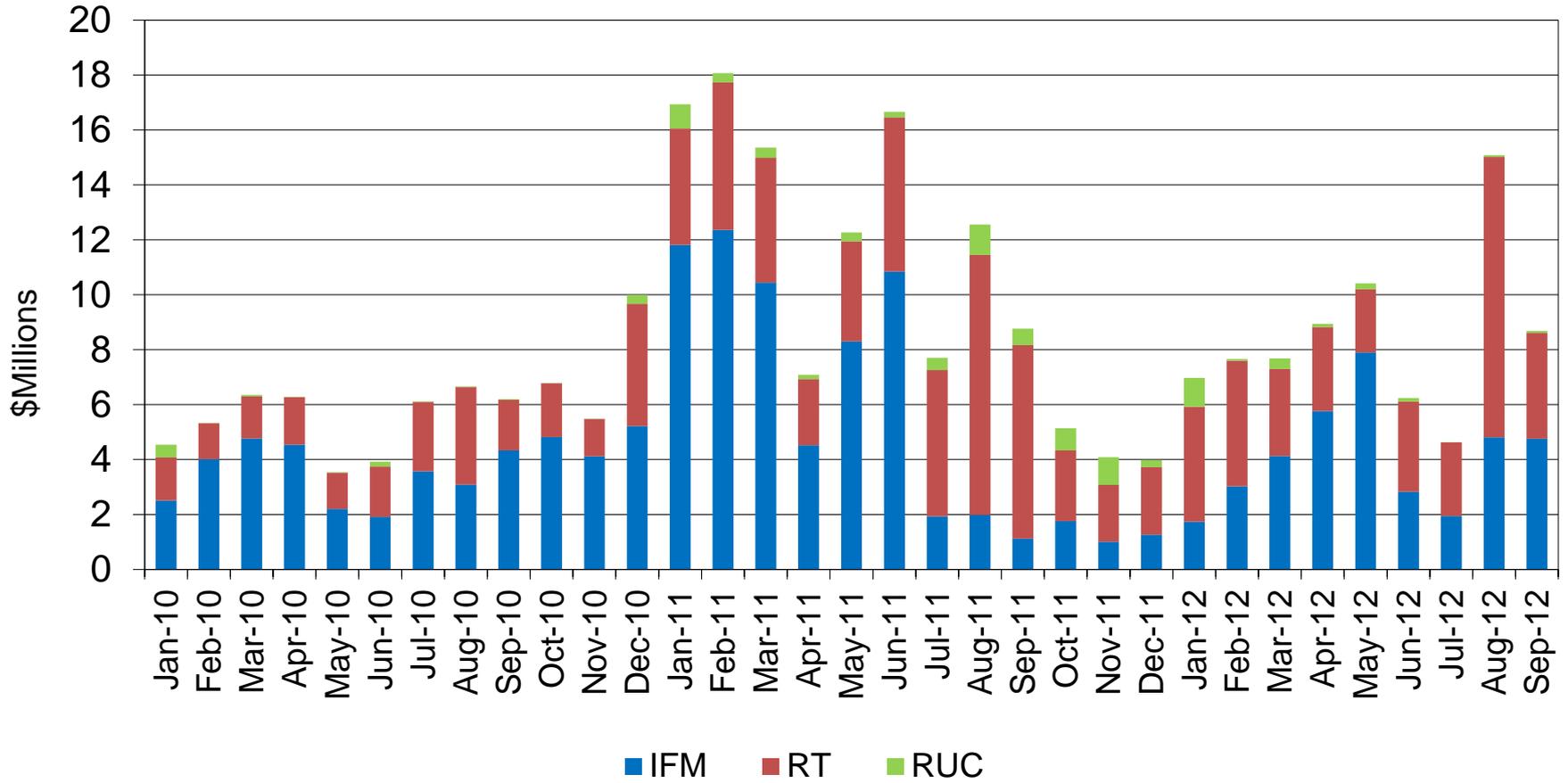
Congestion offset costs increased in August due to real-time transmission and outage conditions.



Price corrections increase in October due to market software failure to achieve quality solution.



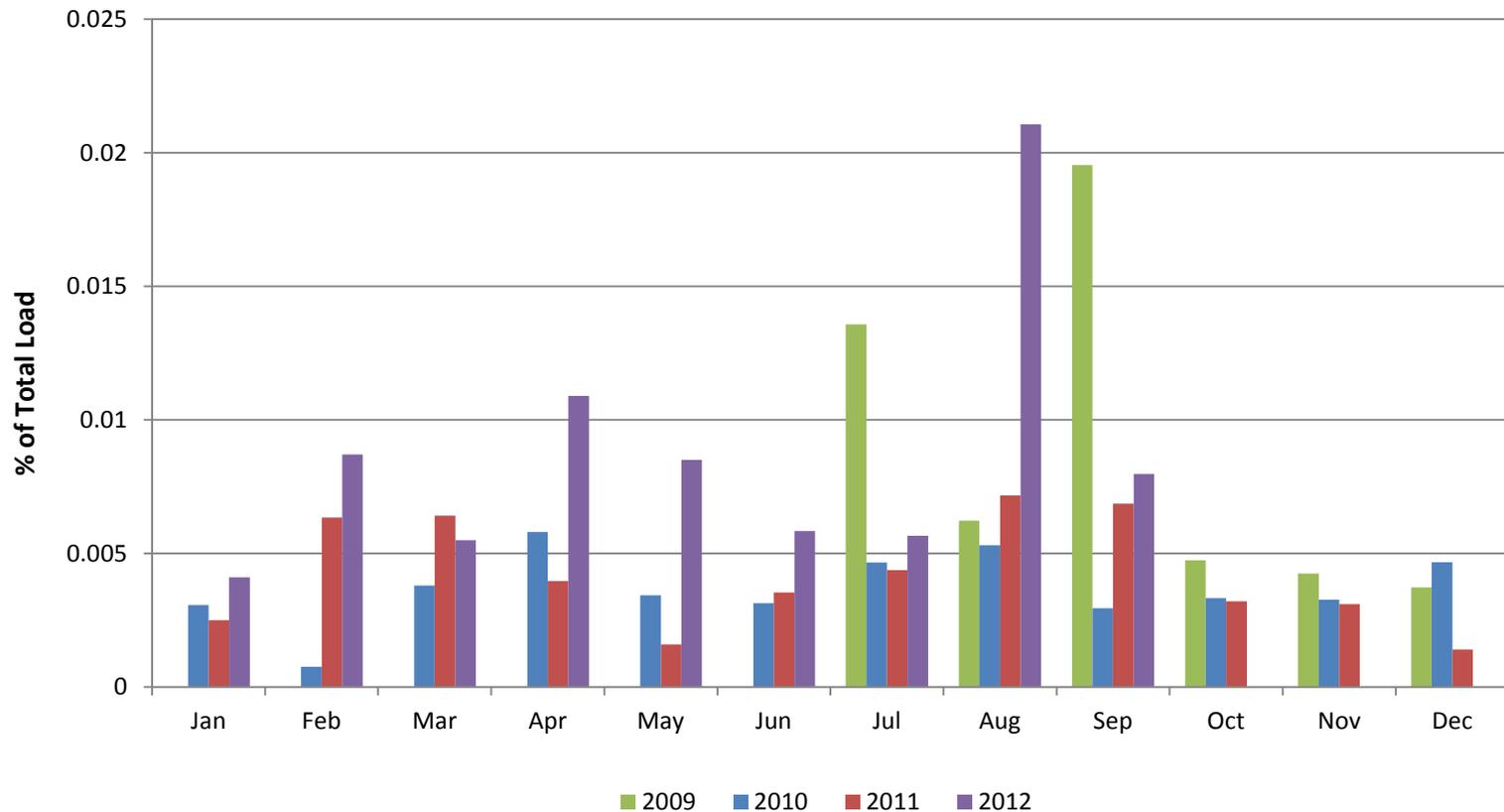
Bid cost recovery rose in August in response to system conditions and dropped to a normal level in September.



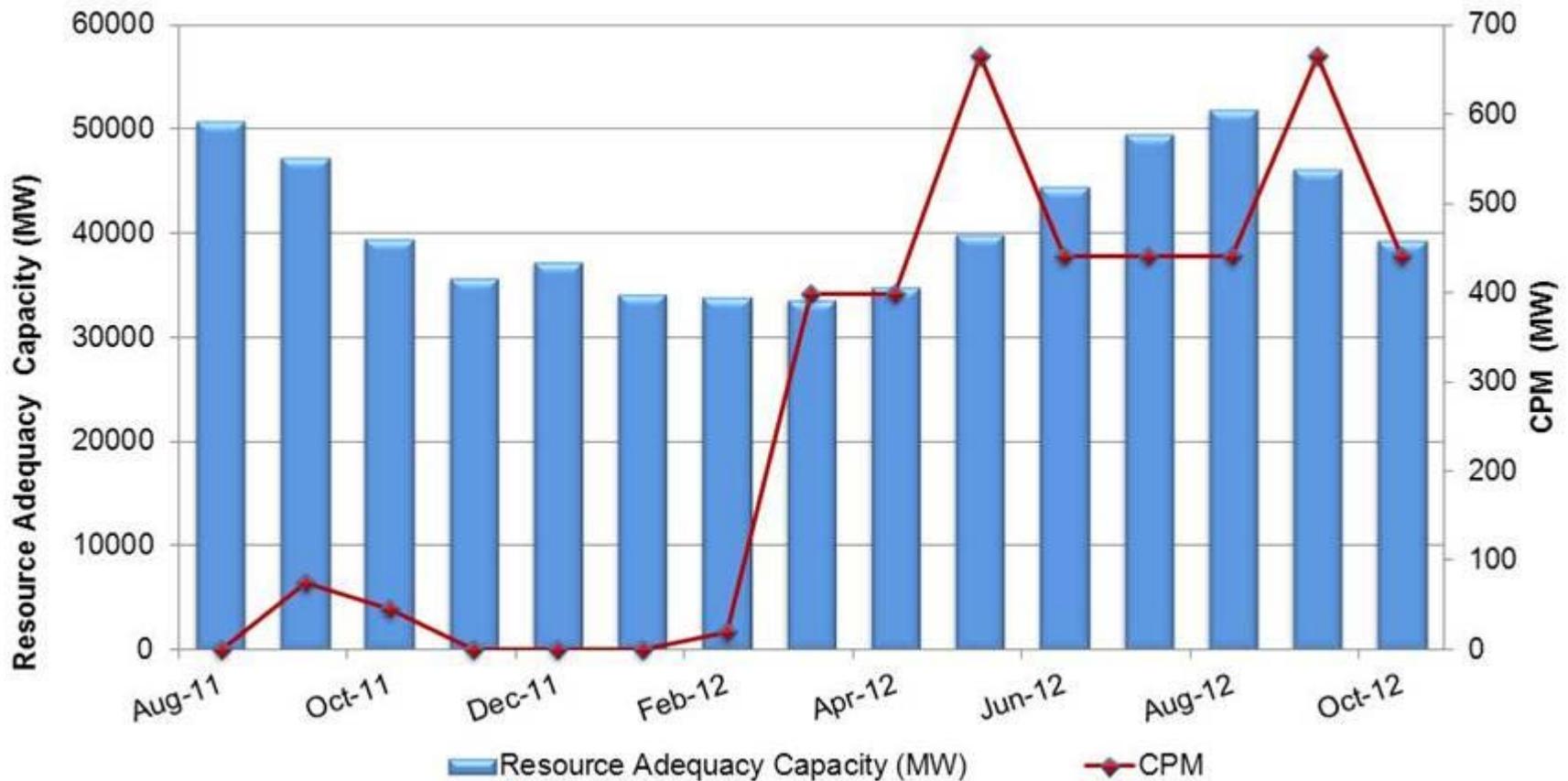
Note 1: Improved cross-day unit commitment decision process

Exceptional dispatch volume rose in August due to constraints that could not be modeled and then declined to a normal level in September

Total Exceptional Dispatch as Percent of Load



Use of capacity procurement mechanism maintained higher level in response to SONGS outage.



Review of market performance highlights the following areas needing improvement:

- Address conditions resulting in higher real-time congestion costs
- Address conditions leading to manual intervention including exceptional dispatch
- Ensure timely day-ahead quality of solution