



# Regulation Energy Management (REM) Straw Proposal

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Market Surveillance Committee Meeting  
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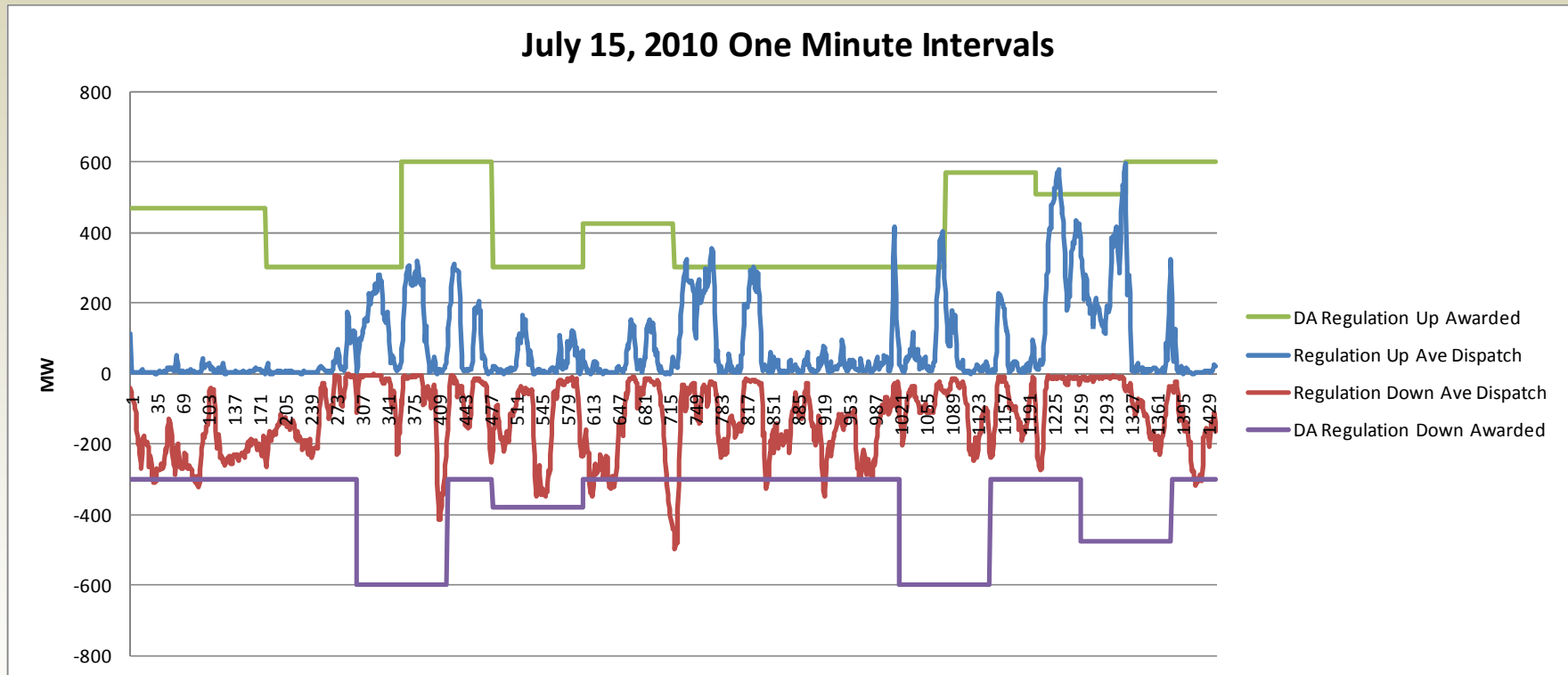
# Regulation Energy Management (REM)

- Enables Limited Energy Resources to meet the Day-Ahead Regulation 60 Minute Continuous Energy Requirement at full discharge/charge rate
- Deferred from Non-Generator Resources in Ancillary Services Market initiative
  - September 10, 2010 FERC Order – provide update on REM status in 6 months
- Included in Phase 1 of RI-MPR initiative

## Two Perspectives of Stakeholders

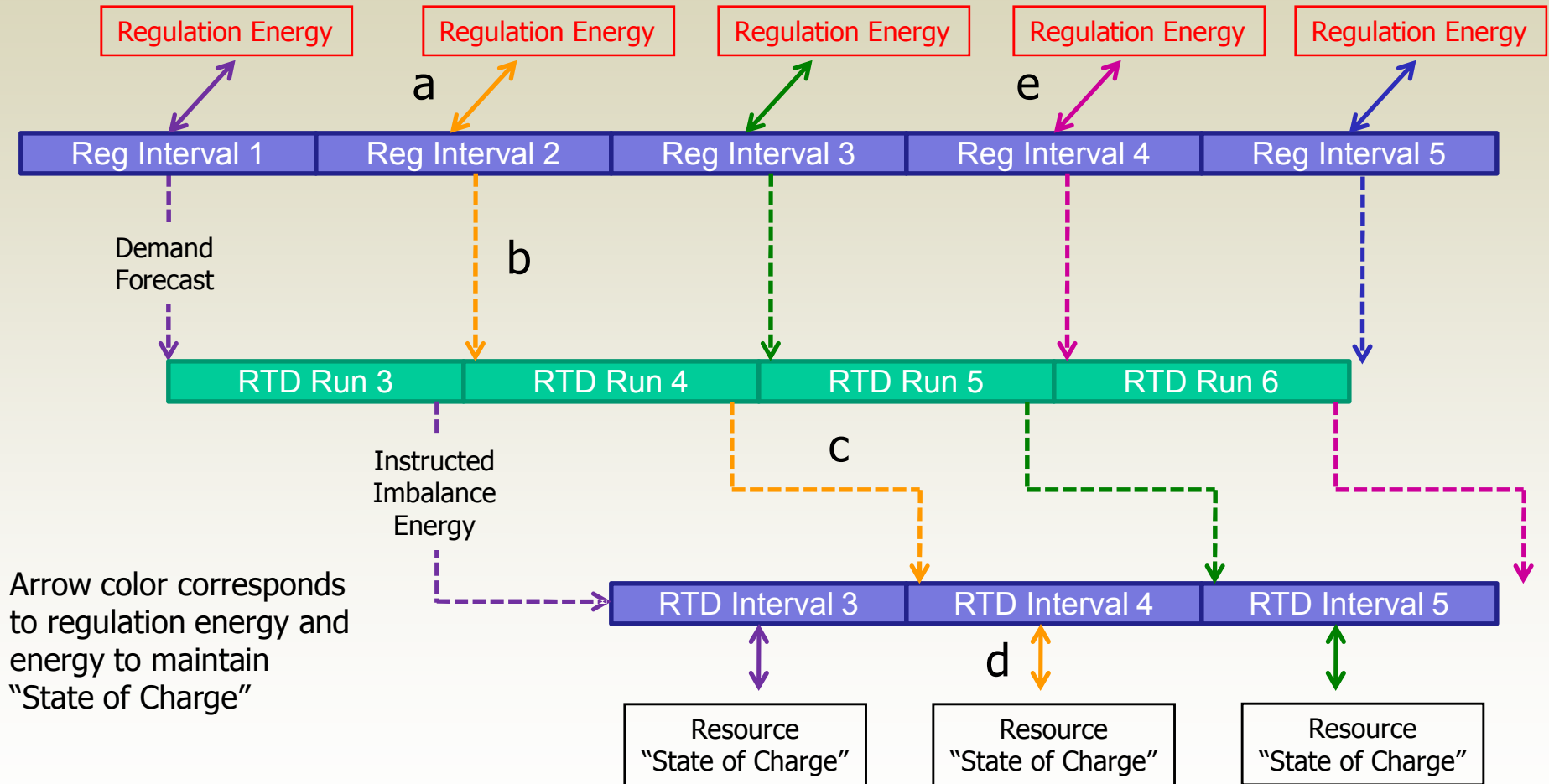
- REM is similar to MSG, a software enhancement to take advantage of full capability of resource
- REM is a new, different AS product that should be priced and procured separately from “traditional” regulation

# July 15, 2010 Actual Regulation Dispatch



- All regulation resources respond to 4 second EMS signal
- Not sustained dispatches at full DA capacity

# Regulation Energy Management (REM) Overview



Arrow color corresponds to regulation energy and energy to maintain "State of Charge"

RT Energy Market + Resource = Certified DA Regulation

# Summary of REM Straw Proposal

- Resource capacity based upon energy delivered over 15 minutes
  - Regulation Up – starting from a full state of charge, energy delivered.
  - Regulation Down – starting from a fully discharged state, energy withdrawn.
- Must bid separately for Regulation Up and Regulation Down
- Regulation Up continues to cascade to Spinning Reserves
- Resource communicates real-time state of charge or regulation range
- Only resources which require an energy offset qualify for REM
- Settlement
  - REM resource receives day-ahead regulation capacity payment
  - Energy injected/extracted to provide Regulation is paid/bought at the RT Price
  - Energy offset to maintain state of charge is sold/bought at the RT Price
  - No Pay applied to REM resources when insufficient stored energy

# Summary

- Software enhancement to manage state of charge with a real time energy offset, not a distinct market product
- REM removes barriers that limit the full participation of limited energy resources in regulation: storage, DR
- REM functionality sufficiently general to support other expected software modifications to address longer duration storage and DR
- Mileage payments or other changes in AS procurement addressed in Phase 2 RI-MPR

## Next Steps

- Stakeholder Comments Due December 1, 2010
- Post Draft Final Proposal December 13, 2010
- Stakeholder Conference Call December 21, 2010
- Stakeholder Comments Due January 5, 2010
- Board Meeting February 3-4, 2010