



California ISO  
Shaping a Renewed Future

# Flexible Ramping Products Requirements Incorporating FMM and EIM

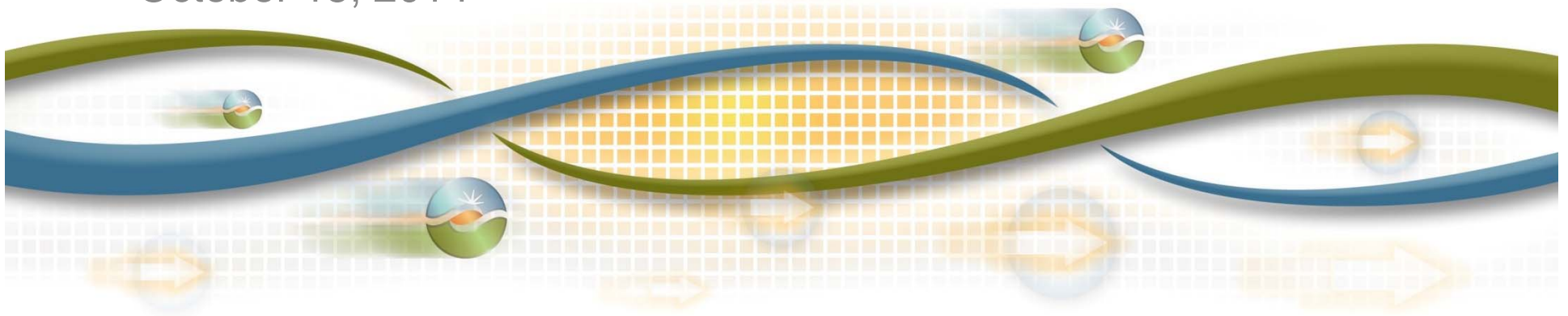
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Market Surveillance Committee meeting

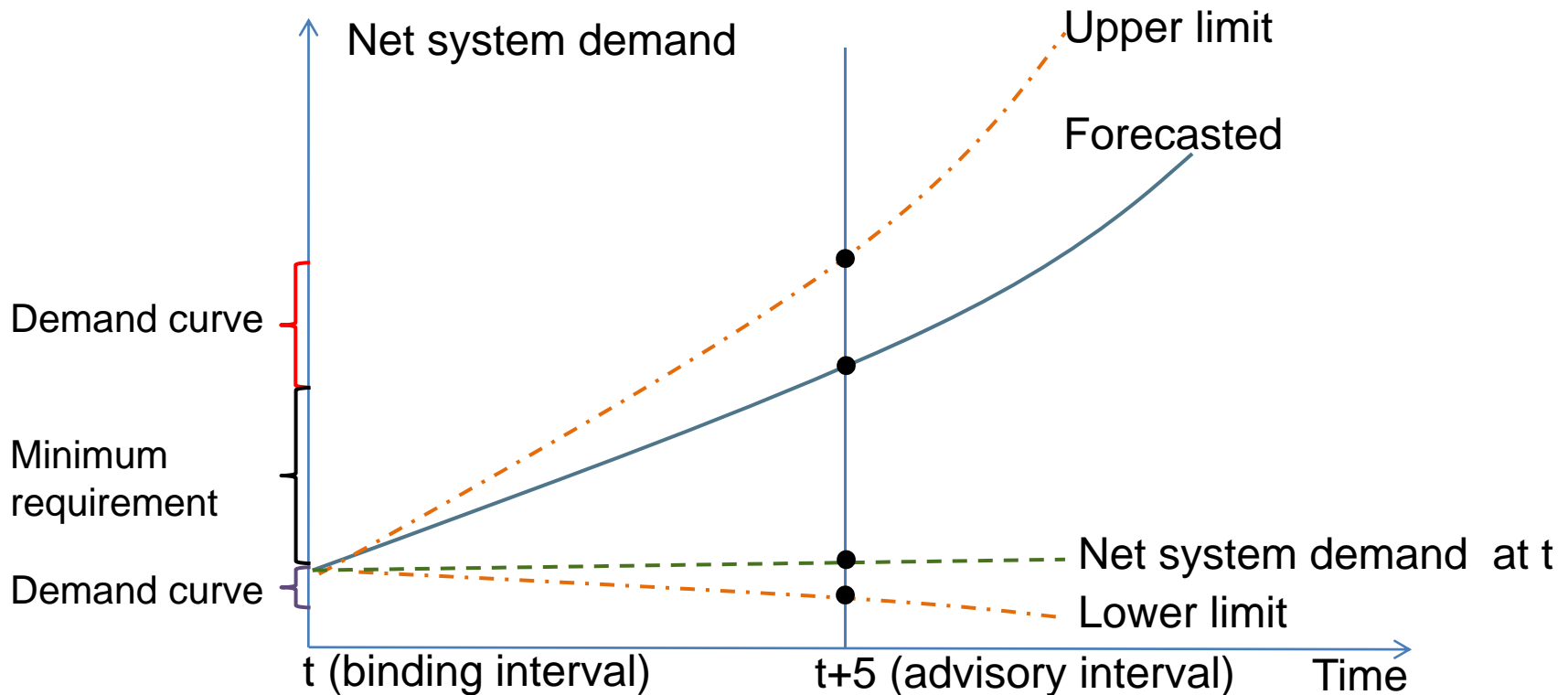
General session

October 15, 2014



# Flexible Ramping Product to meet Real Ramping Need

Net system demand = load + export – import – internal self-schedules - supply deviations



## Real ramping need:

Potential net load change from interval t to interval t+5  
(net system demand t+5 – net system demand t)

## Posted two methods for calculating FMM requirement

- Method 1 – Compare actual metered movement using 5-min data
  - Start point is average metered load of three 5-min intervals in first 15-min interval
  - End points are highest/lowest metered load in 5-min intervals in next 15-min interval
  - Historical distribution of actual movement
- Method 2 – Compare FMM forecast to actual 5-minute meter data
  - Start point is the FMM forecast net load
  - End points are highest/lowest metered load during 5-min intervals of FMM time period
  - Historical distribution of the differences

## Next steps

- ISO will be performing calculations using actual data
- The results will be published with the draft final proposal
- Flexible ramping product will be brought to the BOG for decision in February 2015