California ISO
Shaping a Renewed Future

Demand Response Compensation FERC Order 745

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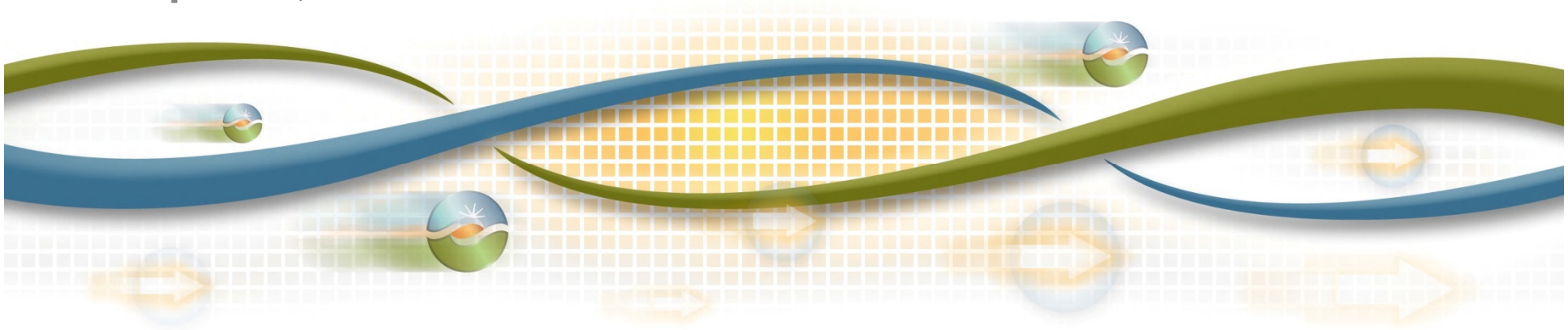
Market Surveillance Committee Meeting
General Session
April 29, 2011



Summary of FERC Order 745

Rule Addresses Regional Variations in Compensation in the Organized Electricity Markets

- **Pay Full LMP When Cost Effective**
  - Cost-effectiveness as determined by a Net Benefits Test
  - Consumer cost minimization vs. bid cost minimization
- **Cost Allocation**
  - Allocate DR costs to those that benefit from lower LMP

Highlights- Net Benefits Test

- **Rejects wholesale "LMP-G" compensation construct**
  - Not a "sale for resale" transaction

- **Pay LMP if cost effective per a "net benefits test"**
  - *"When reduction in LMP from implementing DR results in a reduction in the total amount consumers pay for resources that is greater than the money spent acquiring those DR resources at LMP."*
  - *"Depending on the change in LMP relative to the size of the energy market, dispatching DR may result in an increased cost per unit to the remaining wholesale load associated with the decreased amount of load paying the bill."*

Highlights- Net Benefits Test

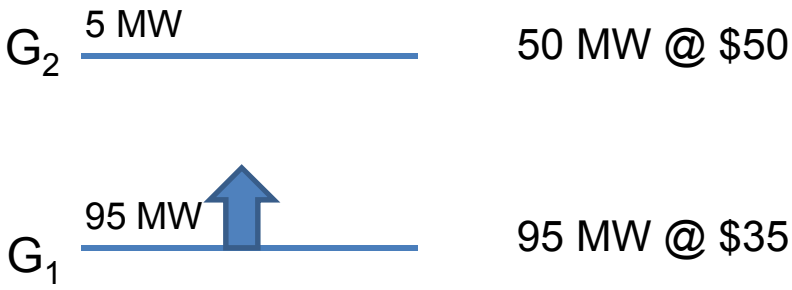
Implementation of the Net Benefits Test

- **Phase 1**: Each RTO/ISO is to develop a mechanism as an approximation to determine a price level at which the dispatch of DR will be cost-effective. This price level is to be updated monthly. Threshold where supply curve becomes inelastic.
  - Update monthly based on historical evaluation
    - Incorporate fuel prices, unit availability, etc.
  - Post supporting documentation on website
- **Phase II**: FERC's preference is to integrate the net benefits test into the ISO dispatch algorithms. Each RTO/ISO must study this and answer how it can be done or why it can't be done by Sept. 2012

Net Benefits Example- Cost Effective

Scenario 1- W/O DR

Load Balance = 100 MW

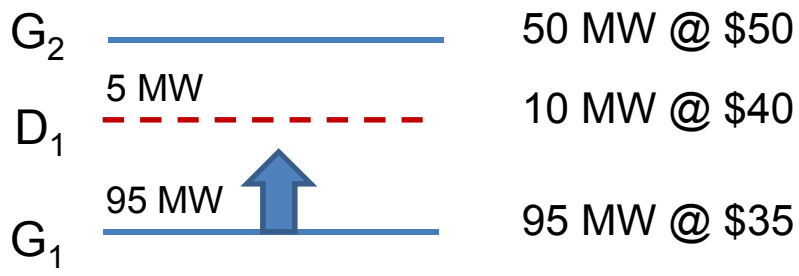


ISO Pay G_1 & G_2: $5000 [(95+5) MW x $50]

Load Pay ISO: $5000 (100 MW x $50)

Per Unit Cost: $5000/100 MW = $50/MW

Scenario 2- W/ DR



ISO Pay G_1 & D_1: $4000 [(95+5) MW x $40]

Load Pay ISO: $4000 (100 MW X $40)

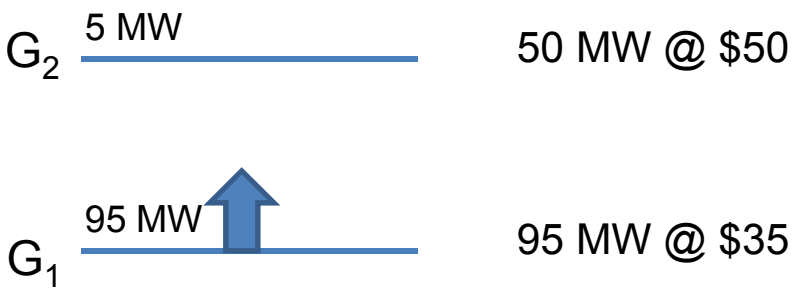
Per Unit Cost: $4000/95 MW= $42.10/MW

Cost Effective to Dispatch DR

Net Benefits Example- Not Cost Effective

Scenario 1- W/O DR

Load Balance = 100 MW

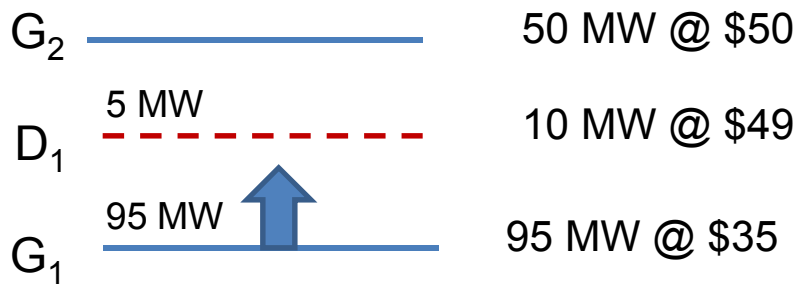


ISO Pay G_1 & G_2: $5000 [(95+5) MW x $50]

Load Pay ISO: $5000 (100 MW x $50)

Per Unit Cost: $5000/100 MW = $50/MW

Scenario 2- W/ DR



ISO Pay G_1 & D_1: $4900 [(95+5) MW x $49]

Load Pay ISO: $4900 (100 MW X $49)

Per Unit Cost: $4900/95 MW= $51.57/MW

Not Cost Effective to Dispatch DR

Highlights- Cost Allocation

Must assign costs proportionally to all entities that purchase from the relevant energy market in the area(s) where DR reduces the LMP when committed or dispatched

CAISO Response to FERC Order 745

- Filed Motion for Clarification and Request for Rehearing
- Rule could require the ISO to abandon critical elements of its demand response platform

  DR Settlement

  – Ask Commission to issue an order granting clarification or rehearing that the rule does not require the elimination of the "default load adjustment" settlement mechanism

  Resource Optimization

  – Adoption of the net benefits test forces a fundamental change in the objective of the dispatch optimization performed by the ISO, from bid cost minimization to load cost minimization

- Sought a Formal MSC Opinion on DR Compensation
  – Draft opinion incorporated into ISO Request for Rehearing