

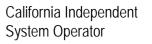
California Independent System Operator

Pricing and Settlement of Inter-ties in HASP

Market Surveillance Committee Meeting

September 22, 2005

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Problem Statement

- How to price and settle the ties in HASP/real-time
- How to allocate the costs



Pricing Options

- **Option 1:** Develop a separate hourly pre-dispatch clearing price for settling incremental and decremental energy at interties. The hourly predispatch price is a simple average of 15 minute prices for the next operating hour **(CAISO Proposal)**
- **Option 2:** Pay and charge predispatch as bid (current Phase 1b short term solution)
- Option 3: If there is congestion on an intertie, settle pre-dispatches at the pre-disaptch price. Otherwise settle based on real-time price plus hourly uplift, as needed to ensure bid cost recovery (LECG's recommendation)
- **Option 4:** Price pre-dispatched imports partly at the pre-dispatch price and partly at real-time price based on whether the import is used to serve the export or the real-time load. (BPA proposal)

CALIFORNIA ISO Pre-Dispatch (PD) & Real-Time (RT) Costs

Payments for total net incremental purchases for PD and RT:

- PD Purchases = Sum over all ties
 [(net PD incremental MWh) * (PD Price)]
- RT Purchases = Sum over all internal resources [(net RT incremental dispatch MWh) * (RT Price)]

Charges to total Net Negative Uninstructed Deviations (NNUD):

- Charges to underscheduled load = Sum over all load deviations [(underscheduled load MWh * LAP Price)]
- Charges to overscheduled generation = Sum over all internal resources [(overscheduled generation MWh * RT price)].

The difference between system wide net incremental (PD + RT) and NNUD in terms of MWh and \$ are defined as M and N:

- MWh Imbalance (M) = System-wide (net PD import MWh + net RT incremental MWh NNUD)
- Imbalance (N) = System-wide [(PD Purchases + RT Purchases) (Charges to underscheduled load and overscheduled generation)].

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CALIFORNIA ISO Cost Allocation Options

Option 1: Allocate N to Metered Demand
Option 2: (CAISO's Proposal)
If N is a net revenue → Allocate N to Metered Demand

If N is a net charge and:

- $M \leq 0 \Rightarrow$ Allocate N to NNUD only.
- M >0 → Allocate N in two tiers: Tier 1 to NNUD (at a computed Tier 1 rate) and Tier 2 to Metered Demand based on over-procured energy.



Requested MSC Action

• Questions, Comments, Concerns?