

# Decision on Eliminating Convergence Bidding at the Interties

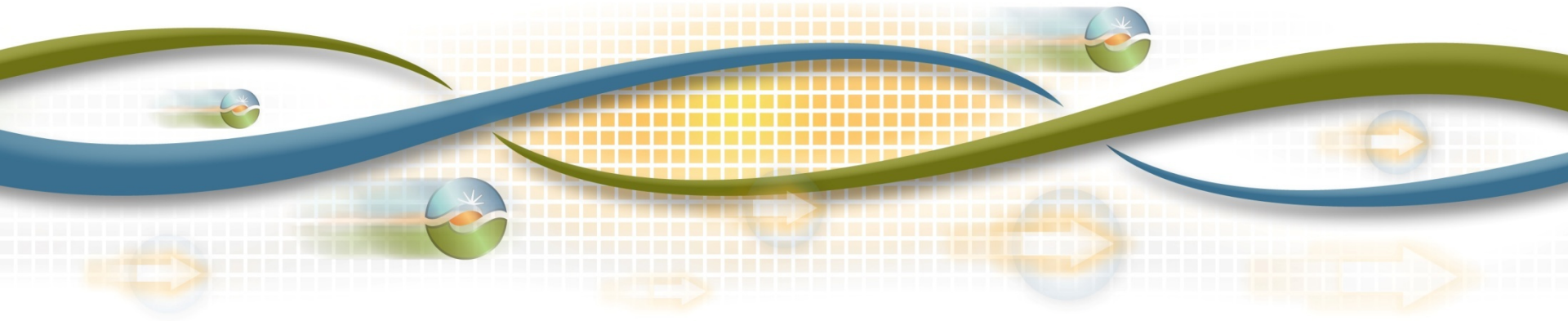
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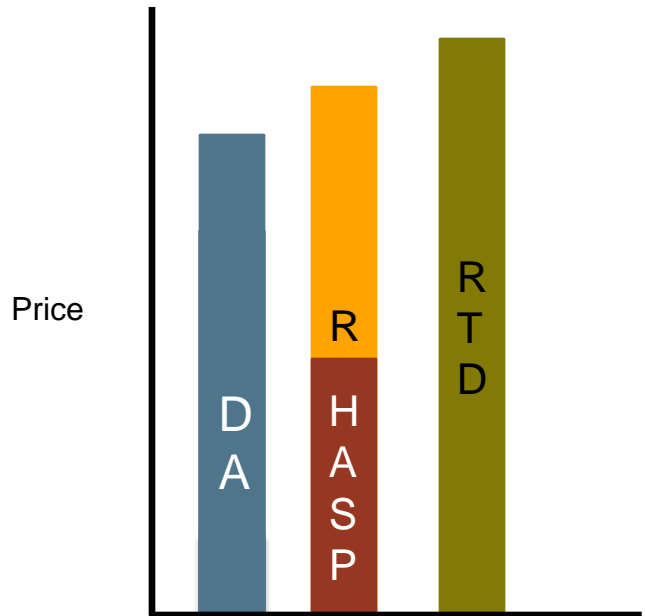
# Convergence bidding implemented in February to provide market efficiency benefits.

- Minimize differences between day-ahead and real-time prices
  - Lower costs due to more efficient day-ahead commitment
  - Improve grid operations
- Mitigate supplier market power
- Provide suppliers the ability to hedge against generator outages

# Convergence bidding on the interties is not driving the intended market efficiencies.

- The structure of the real-time market provides incentives for inefficient convergence bidding on interties.
  - Intertie convergence bids cleared at hour ahead scheduling process prices
  - Internal convergence bids cleared at real-time dispatch prices
  - Hour ahead scheduling process prices systematically lower than day-ahead and real-time prices
- Results in incentives for virtual supply bids on the interties that diverge day-ahead and real-time prices and increase uplift costs.

# Convergence bidding on the interties is undermining the market efficiency benefits of the convergence bidding design.

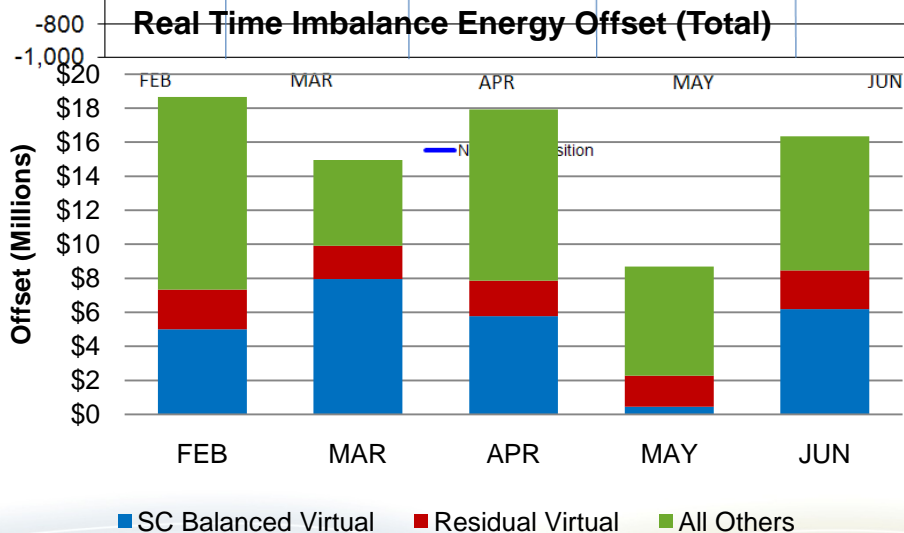
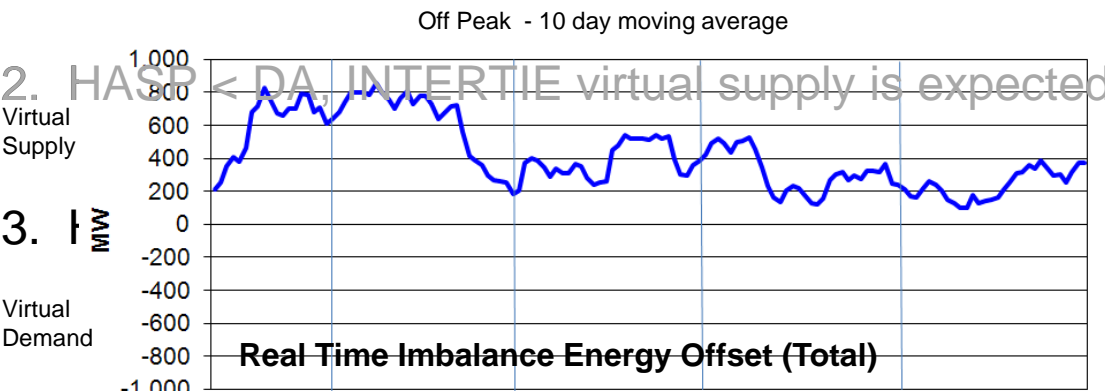


DA: Day Ahead  
 RT: Real Time  
 HASP: Hour Ahead Scheduling Process  
 RTD: Real Time Dispatch

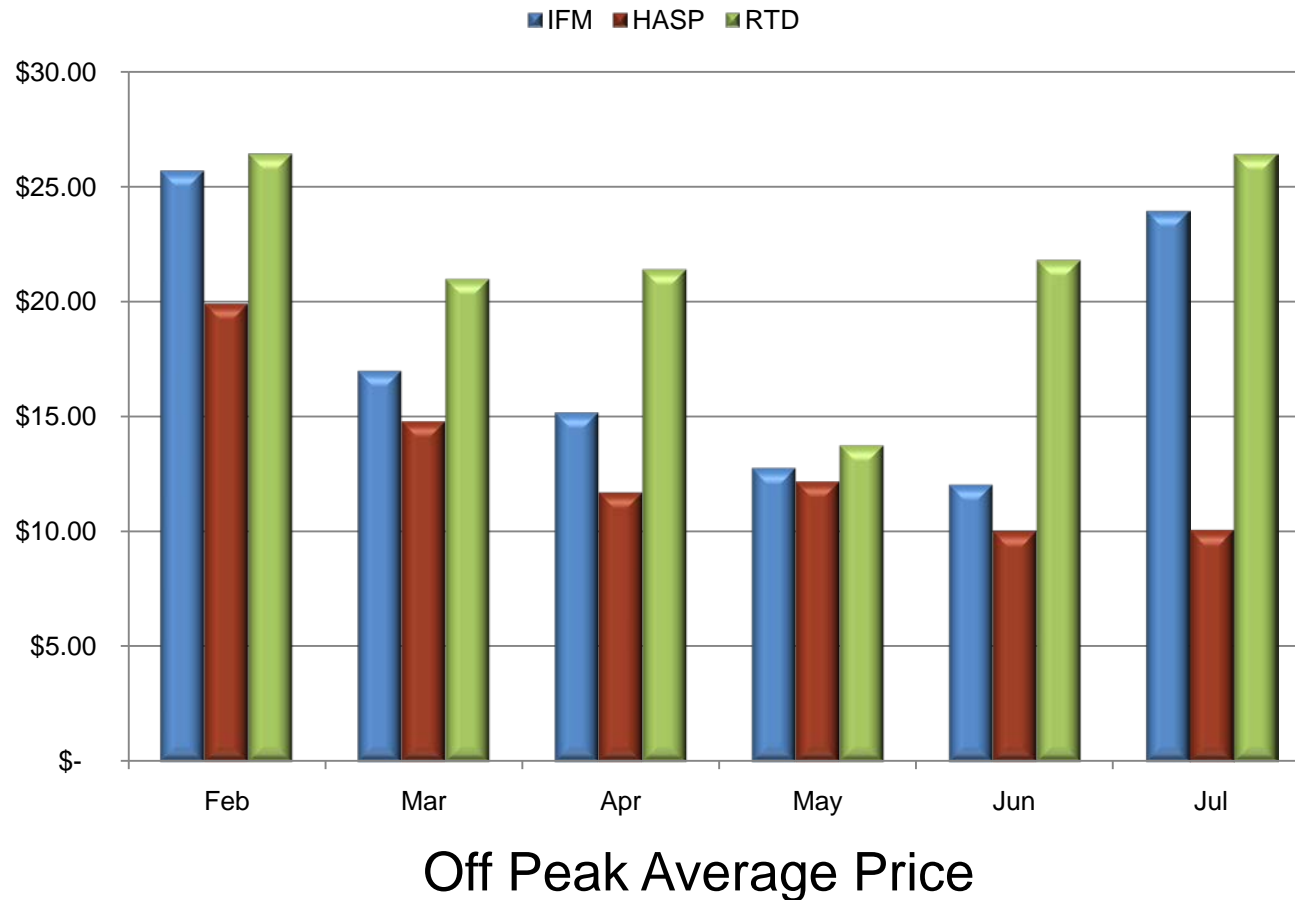
1.  $RT > DA$ , **INTERNAL virtual demand is expected**

2.  $HASP < DA$ , **INTERNAL virtual supply is expected**

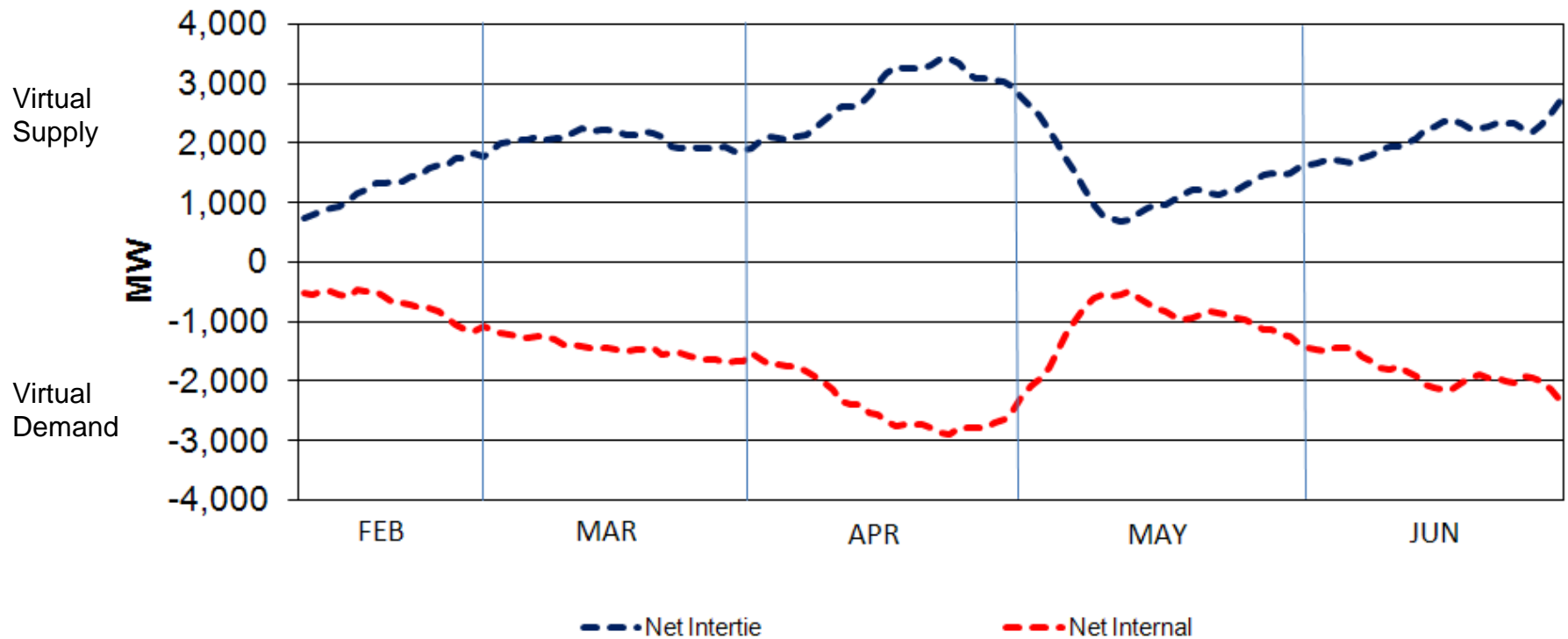
3.  $I_{MW}$



# Hour ahead scheduling process prices consistently lower than day-ahead and real-time prices.



There is high virtual demand at the internal nodes and high virtual supply at the interties.



Off Peak 10 Day Moving Average

Several alternatives were considered to resolve stakeholder concerns with convergence bidding on the interties:

### ***Real-time imbalance energy offset***

- Prohibit balanced virtual positions
- Settle imports and exports at real-time price
- Align virtual bid liquidation and settlement
- Settlement rule to return revenue from balanced positions

### ***Intertie price inconsistencies***

- Price the two intertie constraints
- Pay as-bid
- Pay as-bid or better

## Some stakeholders argue that convergence bidding on the interties provides market benefits.

- Lower cost to import renewables by enabling transmission to be procured after hour ahead scheduling process
  - Strategy not being used
  - Day-ahead physical schedule provides the same benefit
- Virtual supply on interties reduces day-ahead prices which benefits load serving entities
- Hedging against outages of physical imports
  - This hedge seldom used
  - Hour ahead scheduling process prices have little price volatility risk



## Stakeholders are sharply divided on the proposal.

- Strong support from load serving entities
- Strong opposition from marketers
- Agreement that two settlement timeframes for real-time market must be resolved
- Disagreement on whether convergence bidding should be removed while real-time market issues are resolved

## Management requests Board approval to remove convergence bidding from interties.

- Convergence bidding on the interties should be eliminated until real-time market design issues are resolved
- Limited benefits of convergence bidding on the interties exceeded by costs due to real-time market issues
- Eliminates issue of prices inconsistent with bids on interties
- Comprehensive market redesign stakeholder initiative underway to address ISO market issues