Decision on Enhancements to Improve Price Consistency
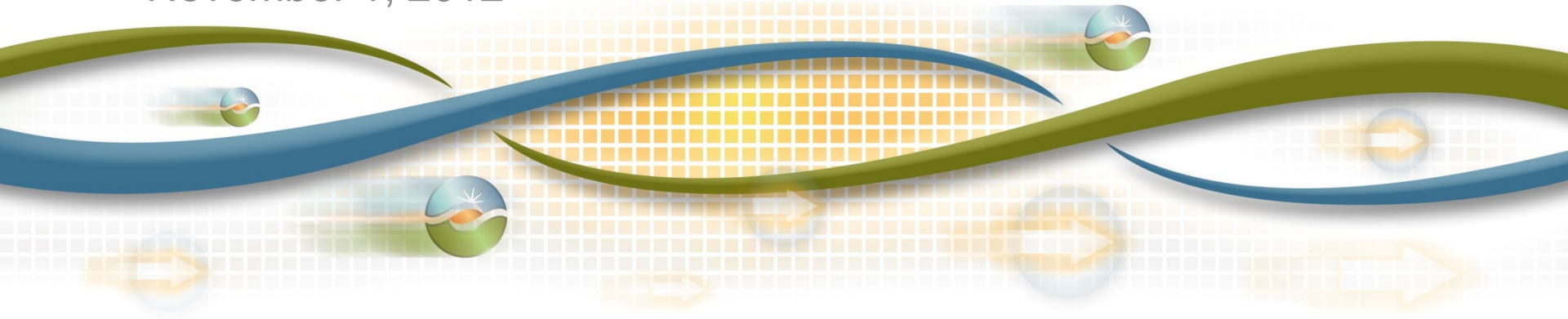
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General Session

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Issue to address:

In certain scenarios the ISO market has observed inconsistencies between prices and dispatches, which may lead to uneconomical awards.

Proposal:

Implement three enhancements to the ISO market functionalities in both the day-ahead and real-time markets to improve price consistency.

Issue	Enhancement
Scheduling run *vs.* Pricing run	Use MW and prices from the pricing run
Soft bid floor	Replace the soft bid floor with a hard bid floor concurrently with the change to -$150
Aggregate price	Use aggregate price generated by optimization instead of weighted average price of constituent nodes of aggregation calculated outside of optimization

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This proposal addresses price inconsistencies as a part of the ISO continued improvement process.

- Interplay of market functionalities may lead to price inconsistencies.

- While inconsistencies are infrequent, the integrated forward market and the hour ahead scheduling process may experience price inconsistencies.

- Price inconsistencies create uncertainty and risks.

Enhancement 1: Scheduling run *vs*. Pricing run

The interplay of the scheduling run and pricing run may lead to uneconomical awards.

Proposal:

Management proposes to use both MW awards and clearing prices from the pricing run

- Current setup of both runs will remain unaltered.
- Priorities and relaxations are already preserved in the pricing run.
- Use MW from pricing run in downstream processes.

Enhancement 2: Soft bid floor

A soft bid floor currently allows bids below -$30 but such bids do not set price.

One reason for inconsistency between the scheduling run and pricing run is the use of a soft bid floor.

Proposal:

Management recommends to implement a hard bid floor concurrently with the implementation of the -$150 bid floor.
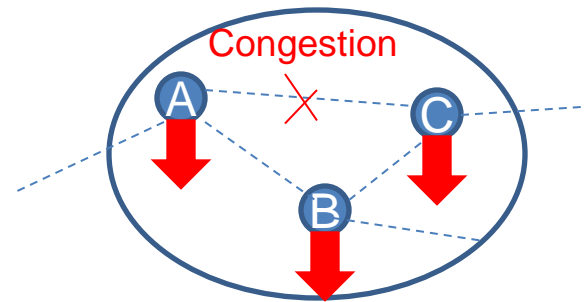
Enhancement 3: Use aggregate price produced by solution instead of weighted average price of individual nodes

Individual Node
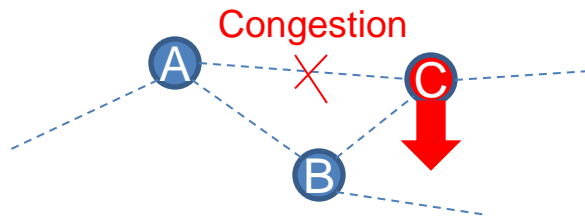
- If load at C is effective, it can be moved independent of any adjustment at A and B
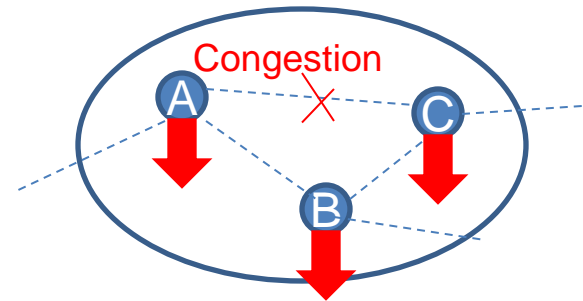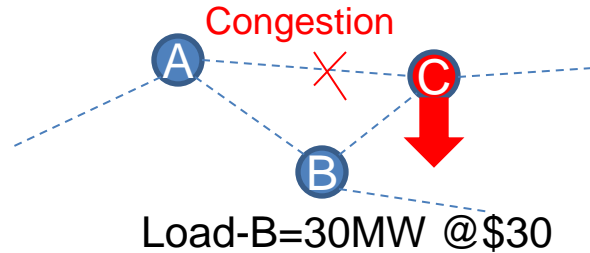
Aggregation

- Load at C can only move to relieve congestion if proportional movement at A and B is effective

Enhancement 3: Use aggregate price produced by solution instead of weighted average price of individual nodes

Load-C=40MW @ $50
Load C is effective at relieving congestion

Load-ABC=100MW @ $30
Aggregation ABC is NOT effective in relieving congestion

Load-A=30MW @ $30

Congestion

A ✕ C

B

Load-B=30MW @$30

Congestion

A ✕ C

B

Current Aggregate Pricing	Proposed Aggregate Pricing
Weighted Average Price = (30MWx$30+ 30MWx$30+ 40MWx$50)/100MW=$38.00	Aggregate Price = $30.00

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This proposal is widely supported by stakeholders.

- Based on stakeholders' feedback the ISO:

    – Modified the proposal to address consistency concerns between day-ahead and real-time markets.

    – Considered concerns regarding potential exploitative opportunities created by proposed aggregate pricing mechanism.

    – Deferred publishing information regarding disconnected nodes due to concerns about potential exploitative opportunity.

Benefits of price consistency enhancements proposal:

- The enhancements will effectively address the three most common causes for pricing inconsistencies in the ISO market.

- The enhancements are designed to improve market efficiency and received wide support from stakeholders.

Management recommends that the Board approve the proposed pricing enhancements

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