



# Decision on generator contingency and remedial action scheme modeling proposal

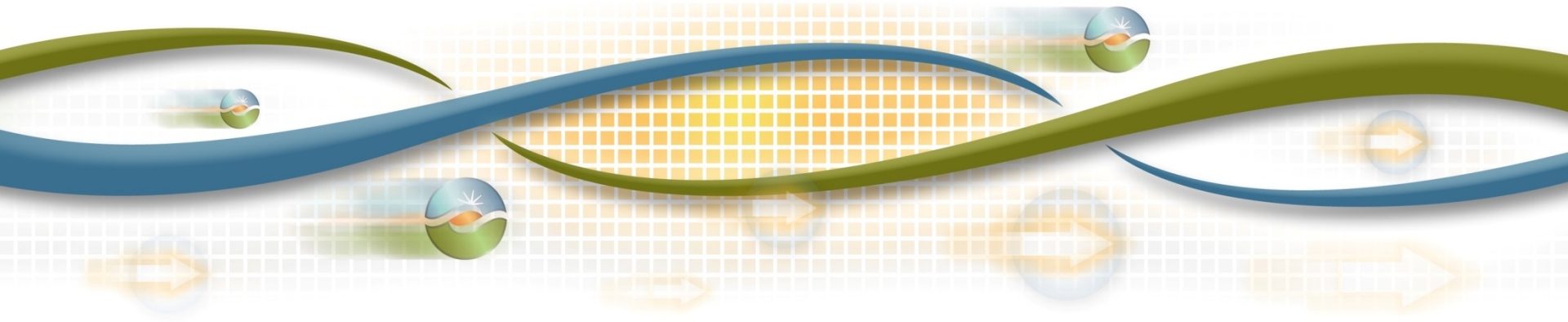
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# Proposal enhances the ISO market's modeling

- Current market ensures electrical flows do not overload lines only in the event a transmission line is lost
- Proposed enhancements will also model:
  - Potential loss of a generator, i.e. “generator contingency”
  - Potential remedial action scheme operation
- Enhancements will apply to:
  - Day-ahead market
  - Real-time market
  - Congestion revenue right auction and allocation process

# Proposal includes decisional items and a consent agenda item

## Decisional items:

- Model generator contingencies and remedial action schemes in:
  - Day-ahead and real-time markets
  - Congestion revenue right allocation processes and auction

## Consent Agenda item (approved by EIM Governing Body on September 6):

- Allow EIM Entities to have the option to have the ISO model generator contingencies and remedial action schemes in their respective balancing areas

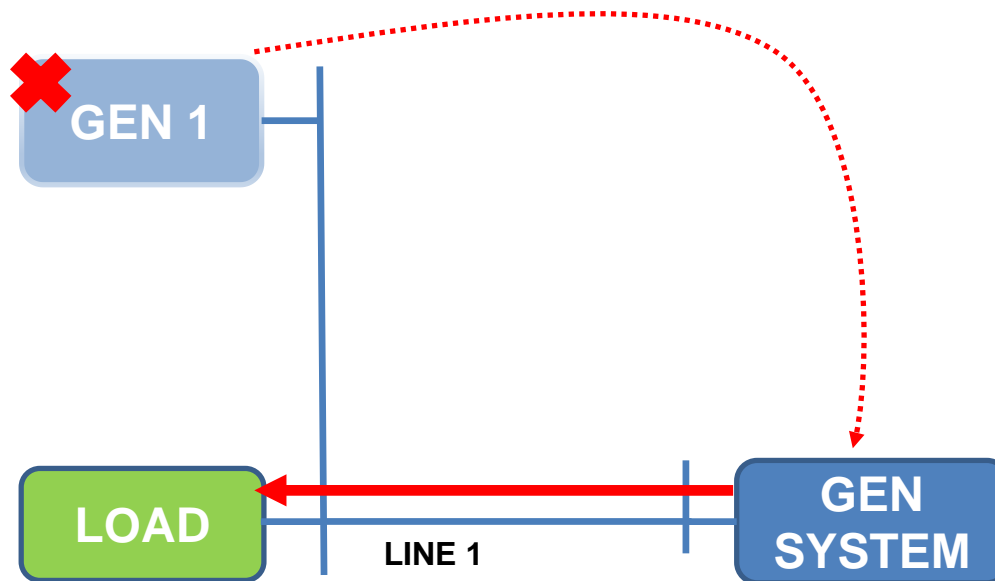
## Enhancements will improve market efficiency and transparency by reducing out-of-market actions

- Grid operators currently issue out-of-market manual dispatches to manage potential generator contingencies and remedial action schemes
- Proposed modeling will more appropriately reflect congestion in locational marginal prices, improving generator dispatch
- Allow the market to more fully utilize generation that is part of a remedial action scheme

# Generator contingency modeling proposal

## Model the “pick-up” effect of the system for a generator loss

- Consistent with reliability studies for generator loss
- Consistent with operator’s real-time contingency analysis tool
- Incorporates the potential change in electrical flows into locational marginal prices



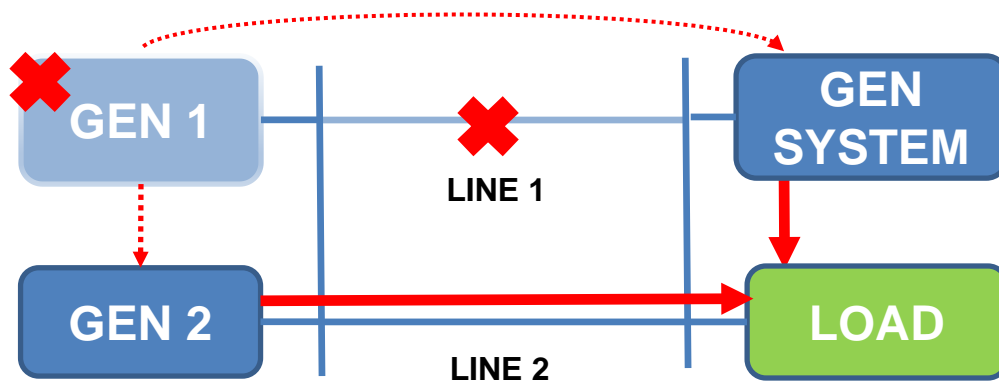
Loss of generation spread to other online resources to model transmission line flows.

**GEN 1** output picked up by **GEN SYSTEM**.

**GEN 1** locational marginal price considers flows on **LINE 1** due to pick-up by **GEN SYSTEM**.

# Remedial action scheme modeling proposal

## Models that generator on remedial action scheme trips-off if line is lost



**GEN 1** is part of remedial action scheme and trips off if **LINE 1** or **LINE 2** go out

**GEN 2** is not on remedial action scheme

**GEN 1** locational marginal price considers that **GEN 1** will not overload **LINE 1** or **LINE 2** if they go out.

Allows **GEN 1** to be dispatched to higher output than it would be without remedial action scheme modeling

# Stakeholders are generally supportive of the proposal

- Southern California Edison objects to locational marginal prices resulting from remedial action scheme modeling
  - Maintains generators on remedial action schemes should not be rewarded with higher locational marginal prices
  - Maintains this could provide incentives to install remedial action schemes rather than expand transmission capacity
- Management response:
  - Locational marginal prices will accurately reflect these generators' contribution to congestion
  - Required network upgrades determined by ISO during interconnection process

# Management recommends the Board approve the generator contingency and remedial action scheme modeling proposal

- Replaces manual operator monitoring and action
- Efficiently incorporates generator contingencies and remedial action schemes into the market
- Market Surveillance Committee and Department of Market Monitoring support