Reserve Deployment – ISO/RTO Education

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- Spin events initiated via set point changes through AGC changes to units.
  - Units expected to follow basepoints without intervention
- Manual notifications to commit fast-start CTs.
- Continuous monitoring of 15-min reserves.

CAISO

- Spin events initiated via Real-Time Contingency Dispatch system.
  - Special SCED case with options specific for reserve deployment
    - 10-min dispatch instead of 5-min
    - Triggered after contingency occurs
    - Takes 2-3 minutes to solve
    - Automatic dispatch instructions to units
- Dispatch determines MWs to deploy and can exclude units.
- Reserves cleared on a DA basis with RT manual additions.

SPP

- Spin events initiated via Contingency Reserve Deployment system.
  - Non-SCED case designed to quickly optimize dispatch instructions to units based on lost MWs
  - Pricing is not updated until next regular SCED case
  - Constraints not considered
- Units compensated based on energy prices for deployment.
- Reserves cleared on a DA basis with RT manual additions.

NYISO

- Spin events initiated via Reserve Pickup Tool.
  - Non-SCED tool to update basepoints to make up for lost unit over a 10-min ramp
  - Sends ICCP signal out to indicate RPU in effect
  - Constraints not considered
- Unit(s) lost would be removed from Market systems.
- Over-generation above basepoints is encouraged and rewarded.

ISONE

- Spin events initiated via Contingency Scheduling Pricing and Dispatch run.
  - Full SCED optimization designed for reserve deployment
  - Faster solve than normal SCED case
  - Automatically sends updated basepoints to units
- Units are expected to acknowledge the event within 60 seconds.
- Unit lost is removed from all systems prior to solve.

MISO

- Spin events initiated via Contingency Reserve Deployment process.
  - Non-SCED tool to update basepoints for online units with reserve commitments
  - Can commit off-line resources based on economic merit
- Wait until next available SCED case sees the lost unit(s).
- Uplift paid to units who do not recoup deployment costs.
- Just underwent stakeholder process to revamp deployment process.
  - Remove uplift by adding a probabilistic adder to price signal to represent deployment costs and deployment likelihood
  - Consider energy deployment costs when selecting units

Summary

- Other RTOs/ISOs have some method of automated reserve deployment.
  - Most systems include an ability to send out updated dispatch instructions to each unit
  - Deployment systems are ready to go or available shortly after event
  - Separate system or modifications to energy dispatch cases
- Fundamental differences in reserve treatment across RTOs/ISOs compared to PJM.

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