

Intelligent Reserve Deployment (IRD) – Manual 11, Manual 12 and Manual 28 Revisions

Damon Fereshetian

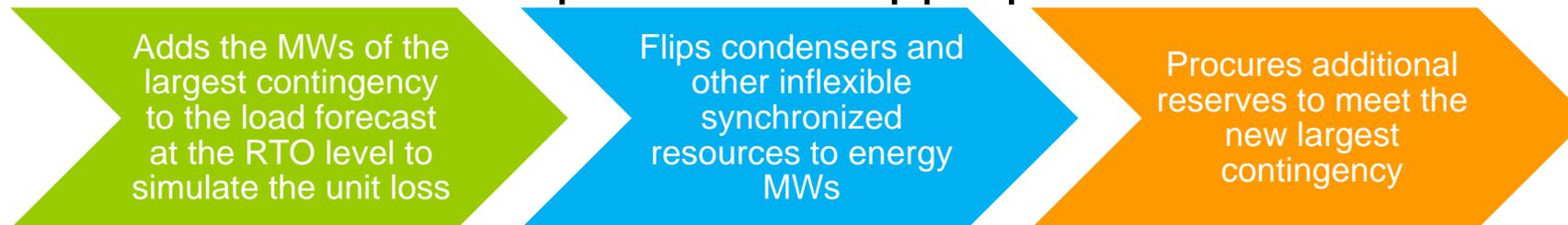
Mike Handlin

Rebecca Stadelmeyer

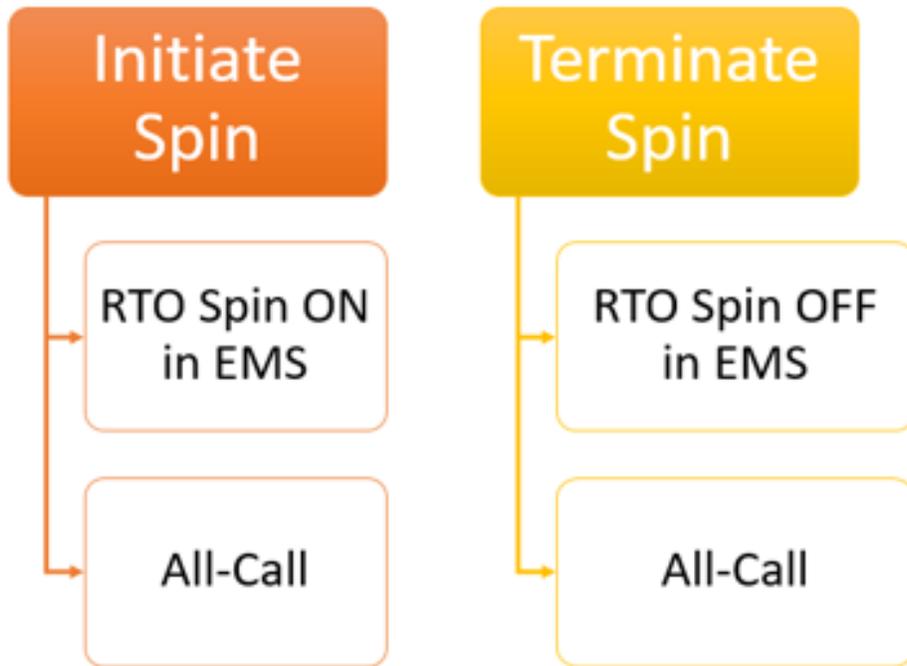
Markets & Reliability Committee

April 27, 2022

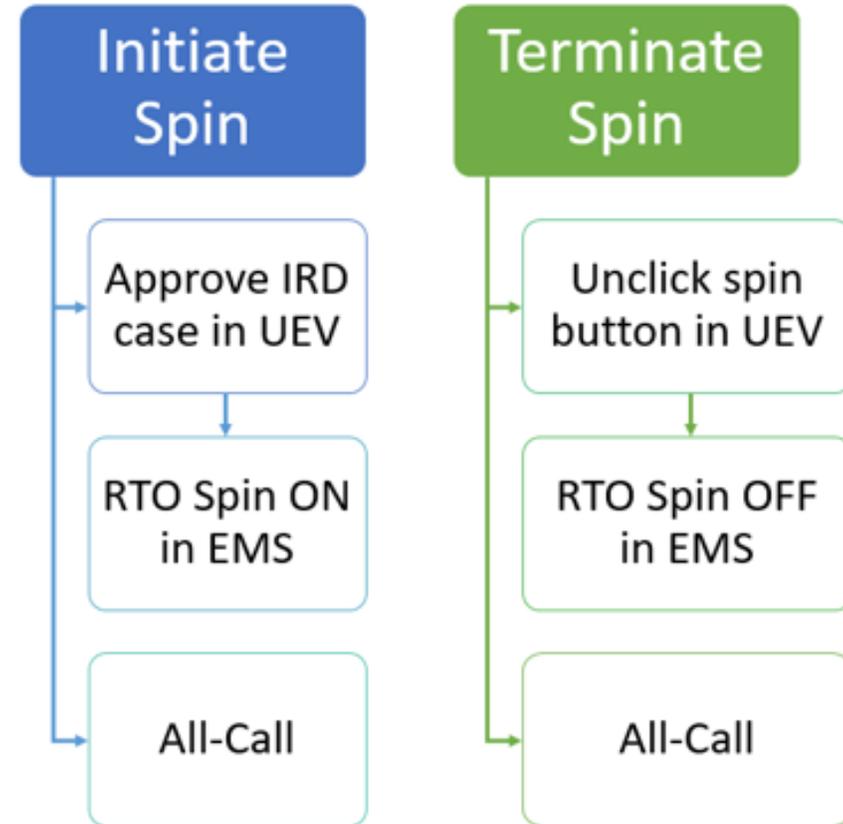
- Intelligent Reserve Deployment (IRD)
 - IRD is a SCED case that simulates the loss of the largest generation contingency. Approval of the case will trigger a spin event.
 - Economic dispatch based on real-time input including constraints
 - Converts inflexible reserve MWs to energy
 - Readily available for use, no lag time
 - Initiates faster response until appropriate RTSCED case available



Current Process



IRD Process



- Updated economic basepoints to replace all-call instructions.
 - All-call will still go out for communication purposes
- Active constraints will be controlled by IRD.
 - Target resources that do not adversely impact constraints
- IRD instructions will be priced in the subsequent interval.
 - Supersedes approved RTSCED cases for the same interval
- Dynamic performance evaluations based on event dispatch.
 - Status quo for Demand Response
- Smooth transition in and out of events with continued SCED usage
 - Updated basepoints to reduce manual actions required



Manual 11 – Energy & Ancillary Services Market Operations

Damon Fereshetian
Sr. Engineer I, Real-Time Market Operations

- 2.7 – Locational Pricing Calculator (LPC)
 - Added new language that an approved IRD case supersedes any other approved RT SCED cases for the same target time to be used as the reference case for LPC.
- 4.2.6 – Synchronized Reserve Commitment
 - Added clarifying language that resources committed for Tier 2 MWs are obligated to follow dispatch instructions in response to a Synchronized Reserve Event.

- 4.2.10 – Settlements
 - Removed language to credit Tier 1 resources for overresponse to a Synchronized Reserve Event.
- 4.2.11 – Verification
 - Added clarifying language that the response to a Synchronized Reserve Event is based on the resource following dispatch instructions and is capped at the expected response.
- 4.2.12 – Non-Performance
 - Added clarifying language that Tier 2 non-performance penalties apply to resources that do not respond with the lesser of their assigned amount or PJM calculated expected response.



Manual 12 – Balancing Operations, Vision 46

Mike Handlin
Supervisor, Dispatch

- Section 4.1.2 Loading Reserves
 - Added language stating PJM dispatch will utilize Intelligent Reserve Deployment (IRD) in SCED to initiate a Synchronized Reserve Event by approving the latest solved IRD case if there is insufficient regulation and economic generation to recover ACE.
 - Highlighted Automated and Manual Methods of implementing Contingency Reserve

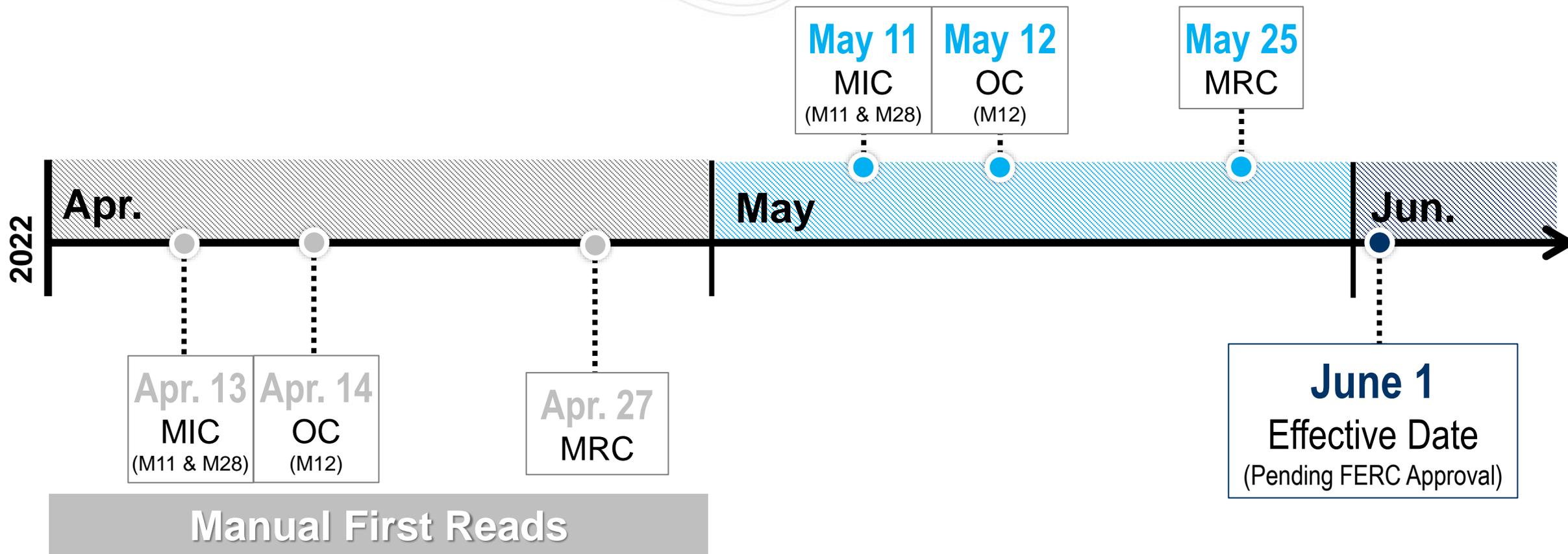


Manual 28 – Operating Agreement Accounting

Rebecca Stadelmeyer
Manager, Market Settlements Development

- 6.1
 - Fixed a reference typo from M11, 4.2.11 to M11, 4.2.10
- 6.2.1
 - Added clarification language to acknowledge that Manual 11 determines the response MW value used in settlements
- 6.3.3
 - Distinguished how the Shortfall MW are calculated for Demand Resources (aggregation allowed) and Generators (aggregation not allowed)

Second Reads/ Endorsements



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Intelligent Reserve Deployment M-11, M-12 & M-28 Revisions

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