



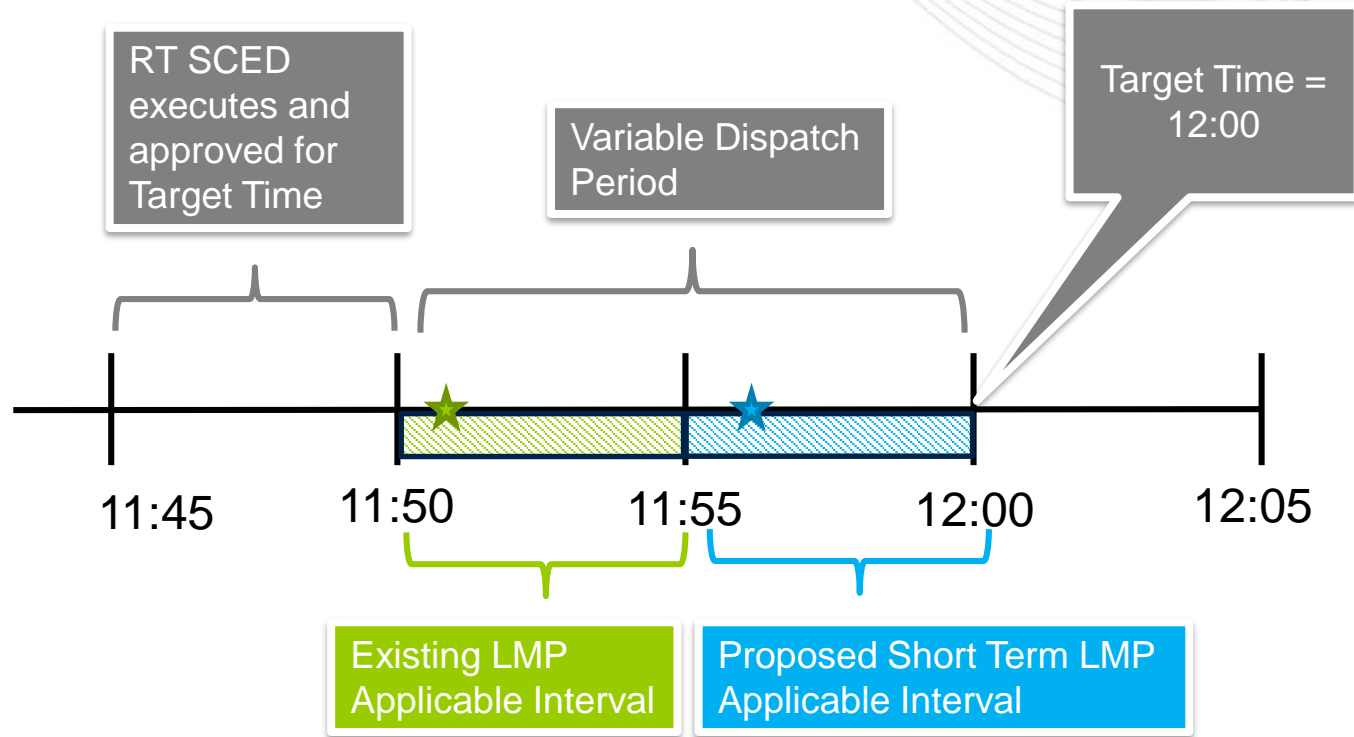
# PJM/IMM Joint Package Highlights

MIC Special Session  
March 31, 2020

- PJM plans to file full joint package for 5 minute Dispatch and Pricing
- PJM proposes to implement the changes in a phased approach
  - Short Term and Long Term
  - All Markets related changes to be made in short term
  - Operational related changes to be made in long term
  - Short term changes are in line with the end goal of final package

- The following changes require significant system changes and operator training and would require an extended implementation timeline
  - RTSCED cases will execute every 5 minutes with a target time of 10 minutes into the future
    - The initial MW for the new case will be adjusted for feasibility using the previous dispatch MW as an input
  - The objective is to approve one RTSCED case for each 5 minute dispatch target time
    - Additional cases maybe be executed and approved as needed
    - The approved case time is to be at least 5 minutes from the target time
    - If a case is not manually approved by dispatch for a target time, a case will be automatically approved at a specified time or deadline
    - A RTSCED case may not be approved for target time in some instances
      - Typical reasons include data errors or software failures

- The following changes can be accommodated in the short term and are therefore included in the long term Operational changes implementation
  - Resource Offers, Parameters and Ancillary Service assignments corresponding to the interval ending at the target dispatch time are used as input to the RTSCED Case.
    - Example: Offers for 11:00 to 12:00 will be effective up to and including the 12:00 target time. Offers 12:00 to 13:00 will be applied to dispatch target time of 12:05
  - Align LPC to use the reference RTSCED case for the same target time
    - Example: LPC calculates prices for interval from 11:55 to 12:00 using RT SCED solution with target time 12:00
  - LPC will use the approved case from previous target time if no approved RTSCED case exists for the same target time



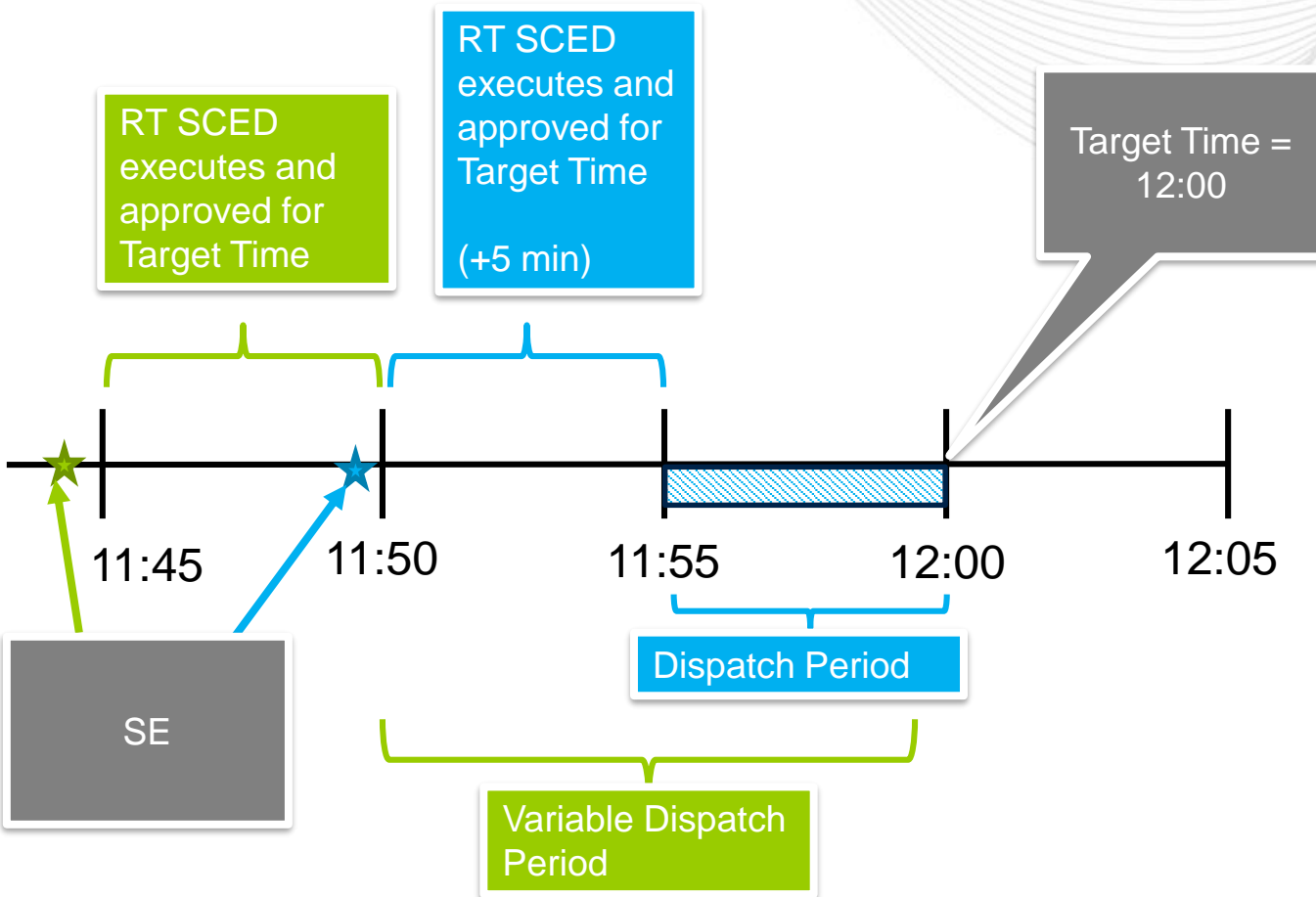
- ★ Existing LPC case execution time
- ★ Proposed LPC case execution time

## SCED Changes:

- Hourly Offer Curves for 11:00 hour used instead of 12:00 hour
- Inflexible Sync Reserve and Regulation awards determined by ASO for 11:00 hour instead of 12:00 hour

## LPC Changes:

- LPC case to use the latest approved RT SCED case for the same target time (**interval ending**)
- LPC case executed no later than 90 seconds after the start of the interval
  - I.e. the LMP for 12:00 is executed at 11:56:30

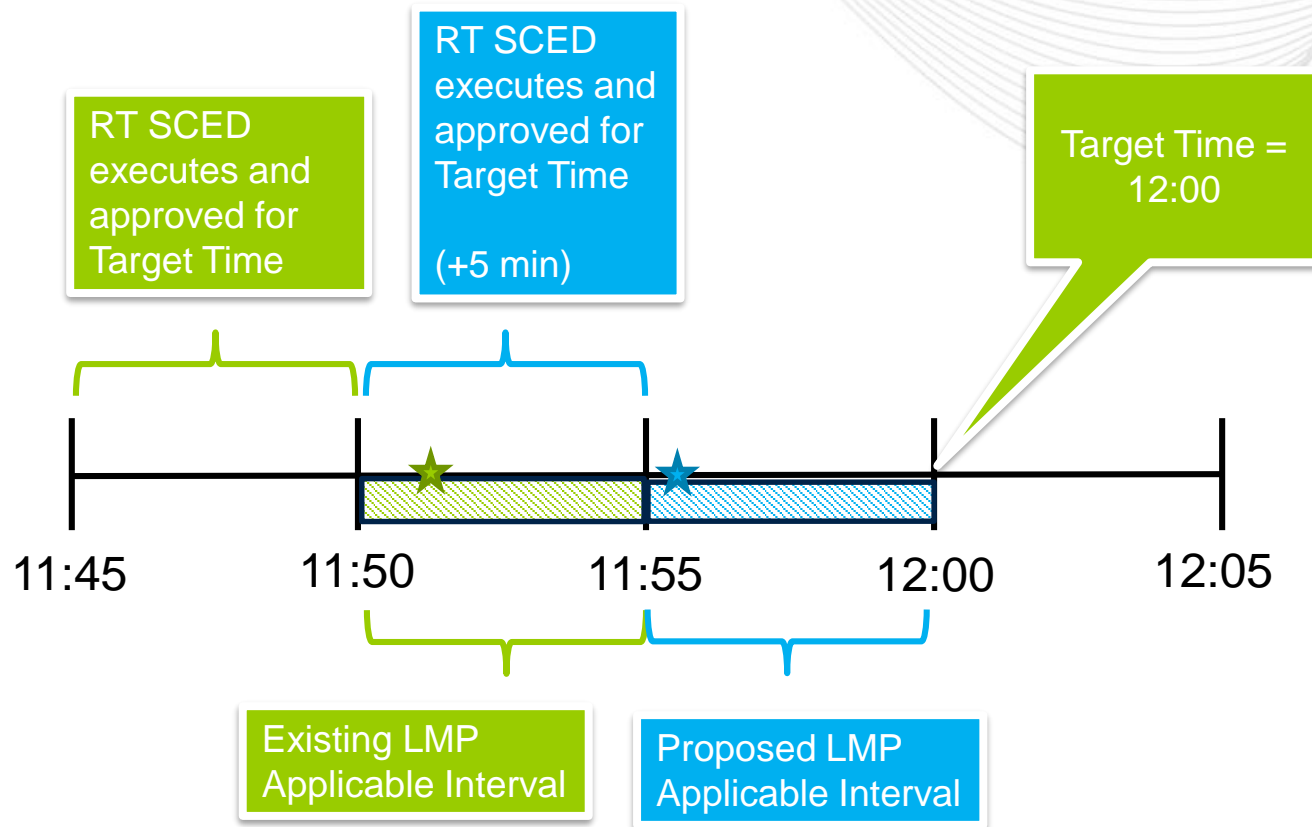


## Current SCED Inputs

- Load Forecast for 12:00 hour
- Hourly Offer Curves for 12:00 hour
- Inflexible Sync Reserve and Regulation awards determined by ASO for 12:00 hour
- Latest available SE solution at execution time (~11:43)

## Proposed SCED Inputs

- Load Forecast for 12:00 hour
- Hourly Offer Curves for 11:00 to 12:00
- Inflexible Sync Reserve and Regulation awards determined by ASO for 11:00 to 12:00
- Latest available SE solution at execution time (~11:49)
- The initial MW for the 11:55 case will be adjusted for feasibility using the previous dispatch MW, 11:50 approved case, as an input



- ★ Current LPC case execution time
- ★ Proposed LPC case execution time

- **Current LPC Implementation**
  - LPC case use the latest approved RT SCED case as the reference case
  - Settlements applies LMP for cases with target time of 12:00 to 11:50 and 11:55
- **Proposed LPC Implementation**
  - Align LPC to use the latest approved RTSCED case for the same target time (SCED/LPC alignment)
  - Settlements to apply LMP to MWh between 11:55 and 12:00