



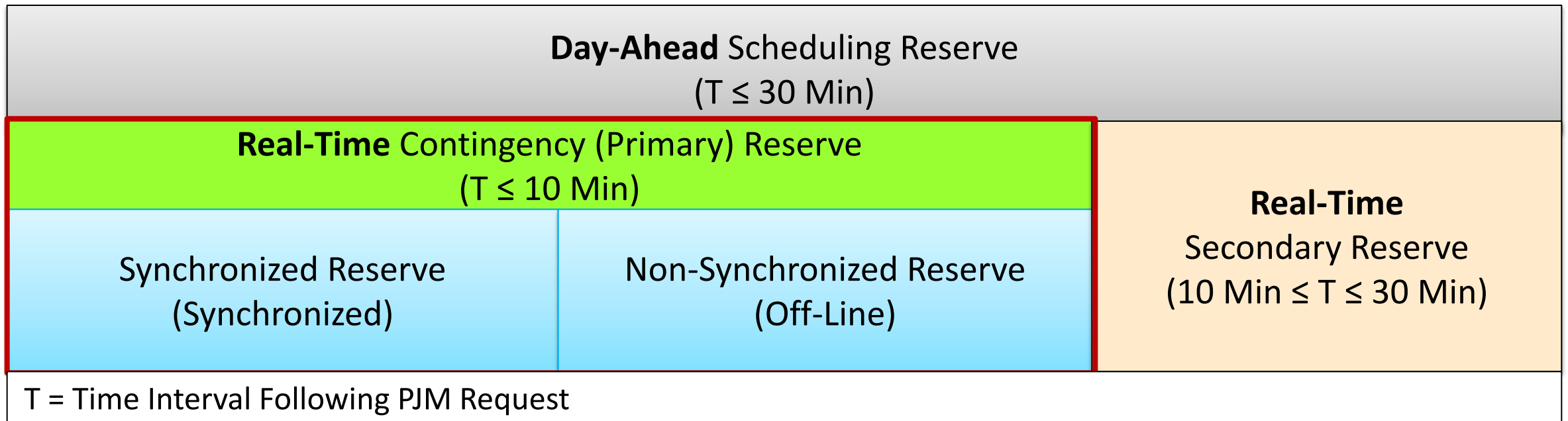
# 30 Minute Reserves

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## Gas Contingencies Reserves

- If the contingency exceeds Day-ahead Scheduling Reserves (DASR) additional reserves will be scheduled in Day-ahead
- Units that are part of the contingency will be economically evaluated on their alternate schedule in Day-ahead
- If Real-Time 30 minute reserves fall short of gas pipeline contingency (calculated by EMS)
  - Tier 2 reserves will be added to increase 30 minute reserves
  - Real-time 30 minute reserve market would address mitigate this step

- Reserves are additional generation capacity above the expected load
- Currently 30 Minute Reserves are only procured Day-Ahead

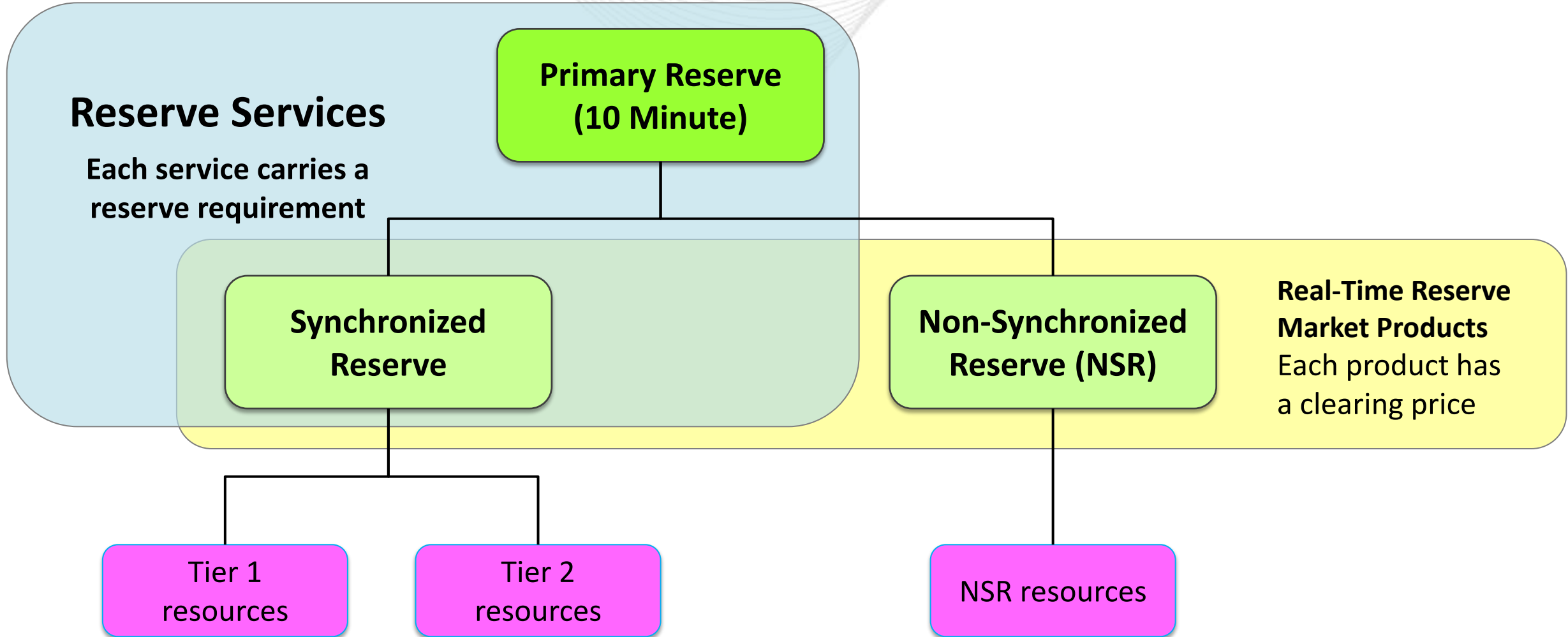


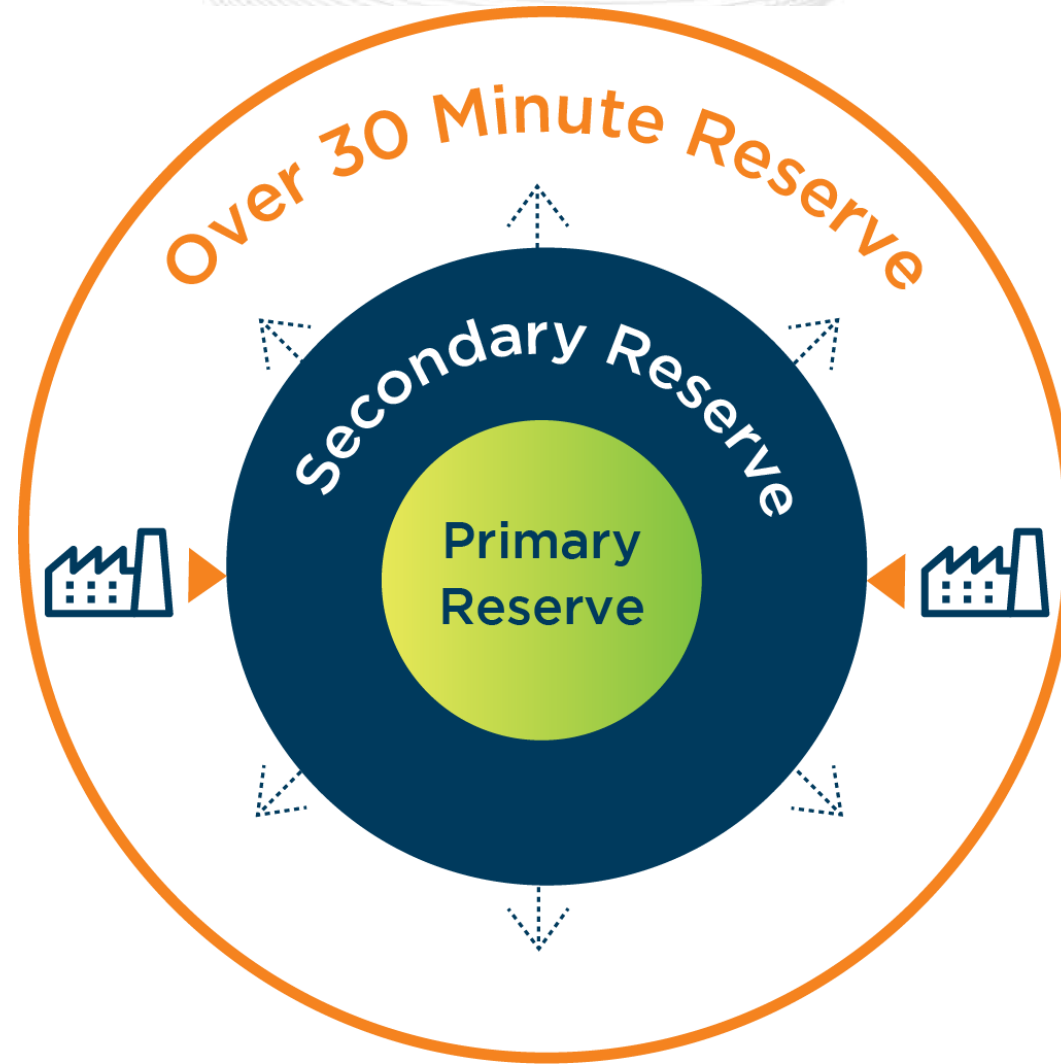
## Real-Time Example from 12/13/17 MIC Meeting:

- RT Operating Reserves (30 min)= 5600 MW (EMS Calculated)
- Gen Loss in Gas Pipeline Contingency = 6000 MW
- Current Synch. Reserve (10 min) Req't = 2000 MW
- Tier 2 Synch. Reserve Adder = 400 MW

## Real-Time Example – Proposed Process:

- RT Operating Reserves (30 min)= 5600 MW (EMS Calculated)
- Gen Loss in Gas Pipeline Contingency = 6000 MW
- Current Synch. Reserve (10 min) Req't = 2000 MW
- **30 Minute Reserve Adder = 400 MW**





- PJM to Develop Problem Statement and Issue Charge
  - Address the need for Real-Time 30 minute reserve product
  - Review with Operating Committee at April 3, 2018 meeting