



Generator Offer Flexibility Education Session

June 19, 2015

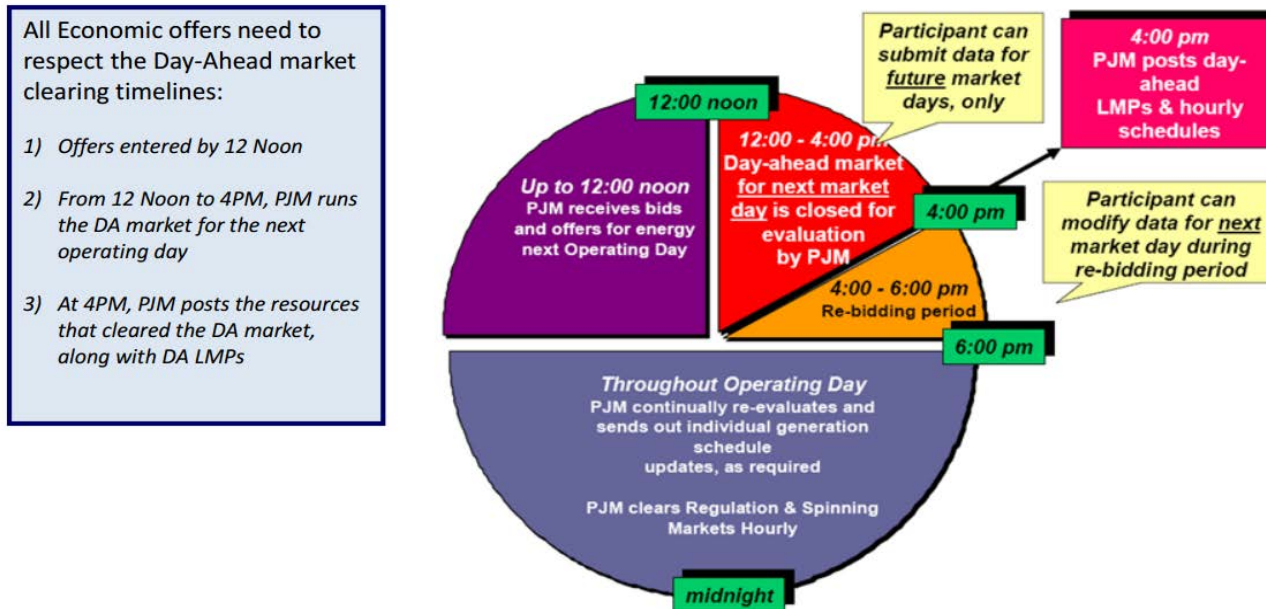
1. Generator Offer Procedure Overview
2. GUCC - Intra-Day Cost-Based Schedule Changing Overview
3. Open Q&A

Generation Offer Types

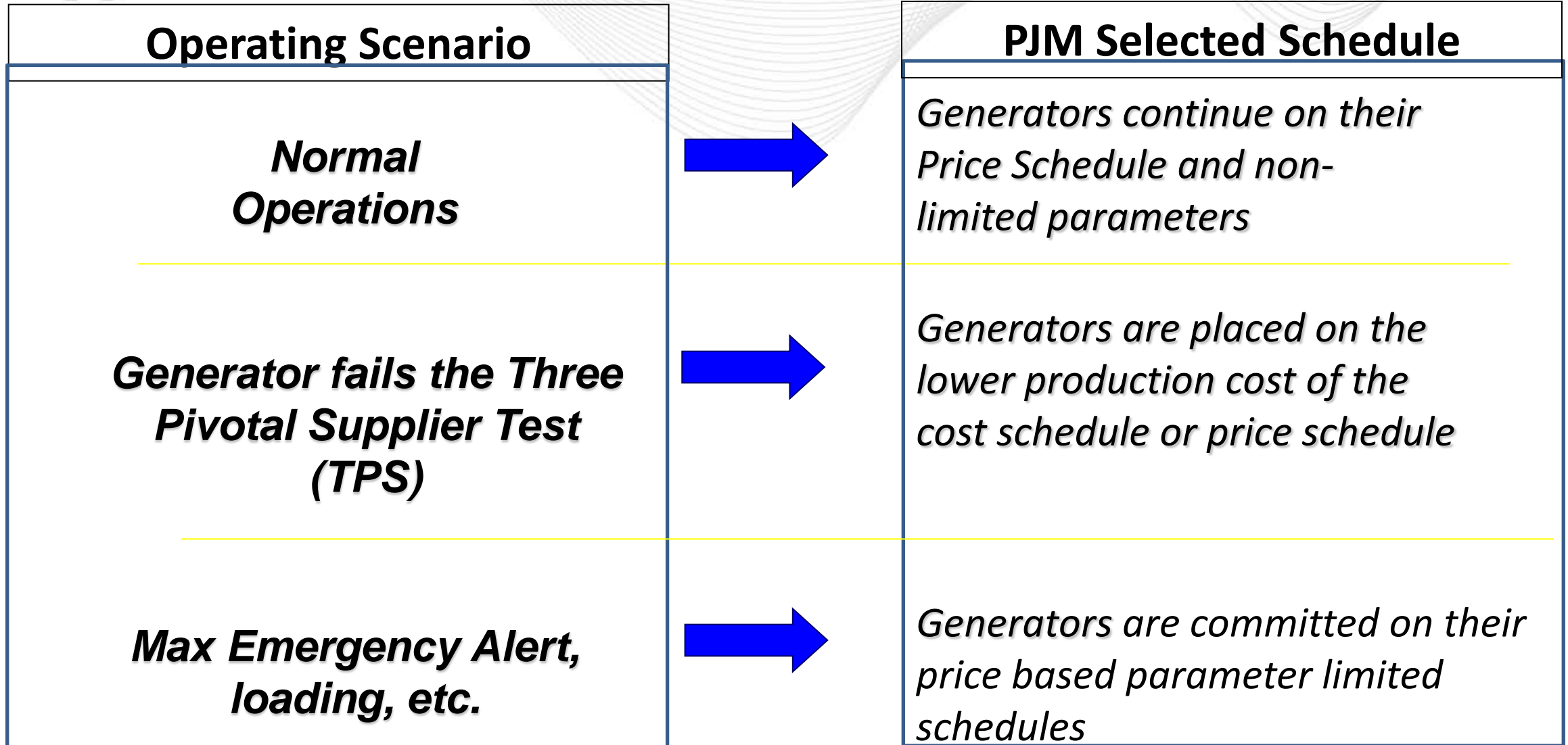
- Price-based offers
 - Cost-based offers
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- Price Based offers and Cost Based offers consist of the following:
 - Incremental - Offers for Energy (\$/MWh)
 - Start-up Cost (\$/start)
 - No-load Cost(\$/hr)

	Incremental Offers	Production Costs	Operation Parameters
Price Offer	No Limits *Capped at \$1000/MWh	No Limits	No Limits
Cost Offers	Cost plus 10% adder	Cost plus 10% adder	Parameter Limited Schedule
PLS Offer (HWA, CWA, MaxE)	No Limits *Capped at \$1000/MWh	No Limits	Parameter Limited Schedule

1. All bids must be submitted to PJM by 12:00pm of the day prior to the operating day (day-ahead)
2. At 4:00pm PJM posts the Day-ahead Market hourly schedules and LMPs
3. From 4:00-6:00pm market participants can submit revised offers for resources not selected in the first commitment
4. Between 6:00pm and the operating day, PJM performs additional resource commitment runs and sends out individual generation schedules updates to those affected

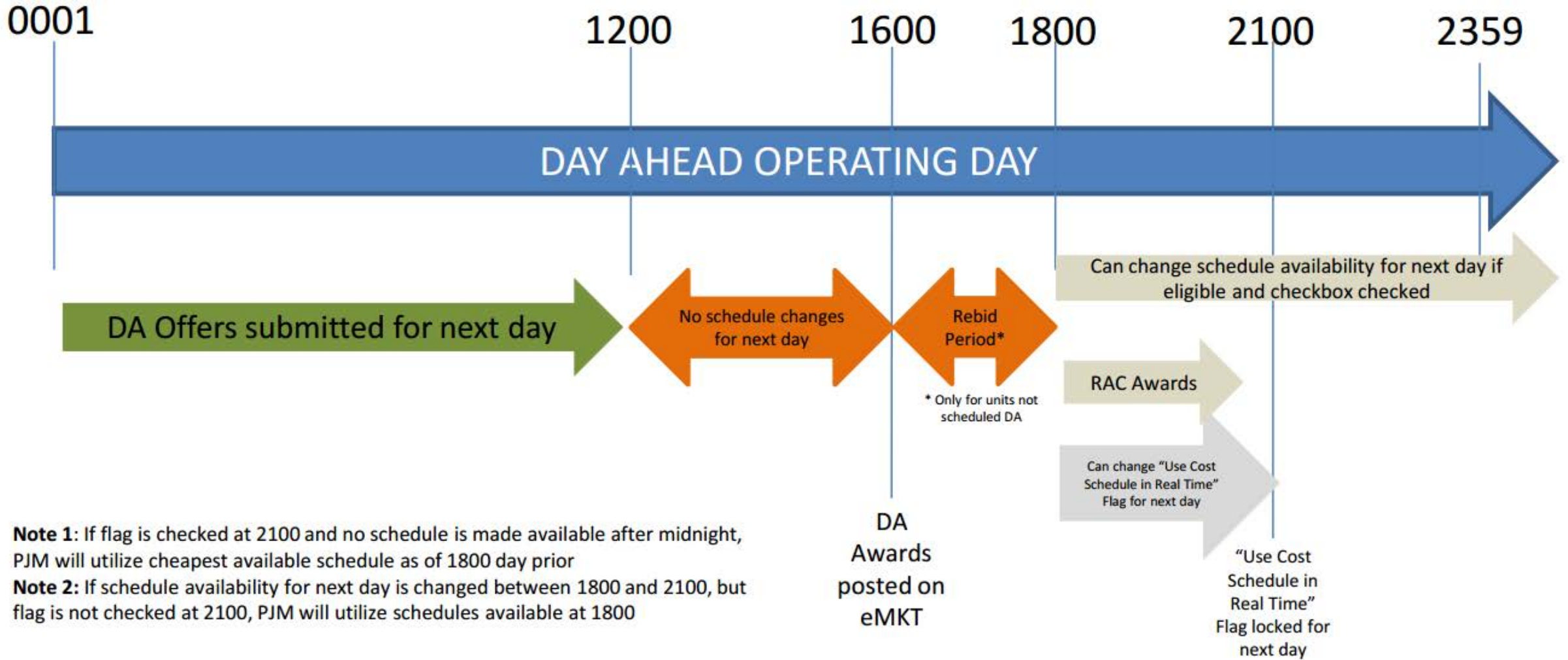


- Generators that are Capacity Resources must submit offers into the Day-ahead Market
- Generators that are Capacity Resources and self-scheduled must submit offer data (in case of emergency procedures call on)
- Once committed in the Day-ahead market, generators will follow the schedule they were cleared on for all committed hours
- If a Generation Capacity Resource is not scheduled in the Day-ahead Market, it may revise its offer and submit into the real-time market or self-schedule



- Purpose
 - Allows generators to more accurately reflect true cost of generation
 - Recognizes potential volatility of gas prices during extreme conditions
 - Improves availability of generation during extreme weather
 - Ensures LMP is set as accurately as possible
- Process is available 365 days, not just during Cold or Hot Weather Alerts

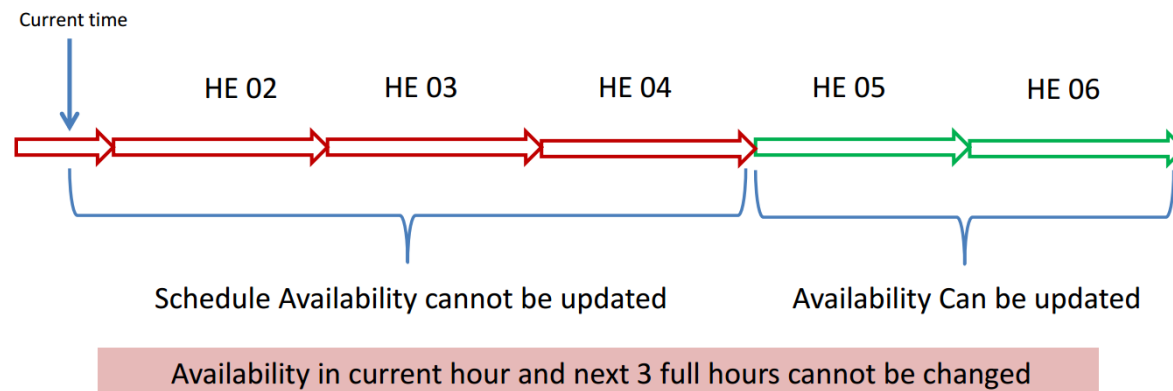
	DA Commitment	RAC Commitment	No Commitment
CT	Cost Switching allowed after the end of last DA committed Hour	N/A	<ul style="list-style-type: none"> • Cost Schedules may change hourly • Fixed on Schedule when committed
Steam	Cost Switching allowed after the end of last DA committed Hour	Cost Switching allowed after the end of last RAC committed Hour	<ul style="list-style-type: none"> • Cost Schedules may change hourly • Fixed on Schedule when committed



Note 1: If flag is checked at 2100 and no schedule is made available after midnight, PJM will utilize cheapest available schedule as of 1800 day prior

Note 2: If schedule availability for next day is changed between 1800 and 2100, but flag is not checked at 2100, PJM will utilize schedules available at 1800

1. Generators utilize the current cost-based schedules to reflect possible costs of generation
2. Selecting “Use Cost Schedule in Real-Time” makes price-based schedule unavailable for operating day selected
3. Committed resources are unable to change cost-based schedule availability for Day-ahead or RAC committed hours
4. Schedules for uncommitted generators can be made available or unavailable hourly to accurately reflect the resource's cost
 - a) Can only change schedule availability three plus hours in advance of operating hour



Example assumes unit is not currently running or current commitment ends at 0400

5. Units committed in Real Time are unable to change cost-based schedules until released
6. Only one cost-based schedule (per fuel type) can be made available each hour

- Price/Cost Based Schedules
- Capacity Resources must offer into Day-ahead Market
- After Day-ahead Market closes, generators are committed to cleared schedule for all committed hours during the operating day
- If “Use Cost Schedule in Real-Time” is checked during Day-ahead, a resources will be able to change cost schedules after committed hours are completed
 - Only one available cost-based schedule per fuel time, per hour
- Questions?