

Load Management Registration Education Session

DR Registration Impacts
RPM Timeline
Registration Time Window
RPM Model and Existing MW
Performance
Penalties
Add Backs

June 23, 2016
DRS

- Nominated Capacity amount from retail customers
- RPM credit amount (planned vs existing – pre-registration process)
- Dispatch – who needs to respond and when.
- RPM penalties
 - Daily deficiency
 - Event
 - Test (and retest provisions)
- Energy Settlements
- Expected Load Reductions – Expected RT load reductions to make dispatch decisions



3 Years

RPM Timeline

20 months

10 months

3 months

May

May be scheduled at any time prior to DY

Sept

July

Jan.

Feb.

June

May

Delivery Year

Base Residual Auction

Conditional Incremental Auction
(Effective 12/13 DY)

First Incremental Auction

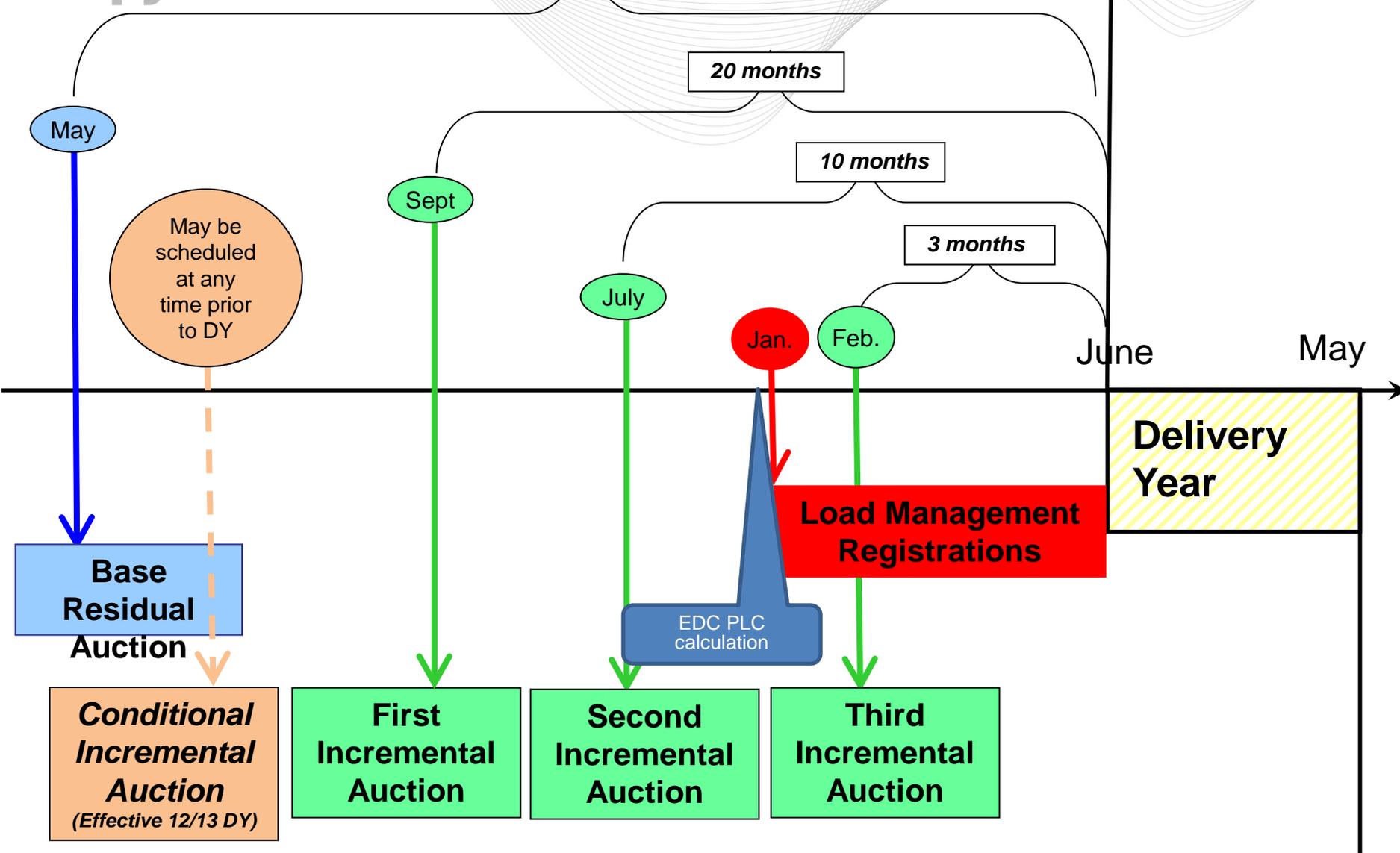
Second Incremental Auction

Third Incremental Auction

EDC PLC calculation

Load Management Registrations

Ongoing Bilateral Market



- Registration window for upcoming DY open from January thru mid-May
 - EDCs have determined Peak Load Contribution values for upcoming DY

- CSP enters location information into eLRS
 - Includes details about the site, examples:
 - Name and address
 - EDC
 - PLC
 - Includes types of load reduction techniques, examples:
 - HVAC
 - Lighting
 - Backup Generator

- CSP submits the registration (one or more locations) for EDC/PJM review
 - CSP links registration to RPM Resource

- EDC reviews:
 - Account number
 - Peak Load Contribution (PLC)
 - Loss Factor
 - Interval meter (PJM reviews if not EDC meter)
 - Pricing Point
 - RERRA
- EDC review “season” for LM registrations ends on May 31

- RPM Team will model DR resources in eRPM by request
 - Will create one resource per:
 - Zone/LDA
 - Product Type
- After DR Resource is modeled, CSP is responsible for completing the DR Setup in eRPM that links their Existing Pre-registration MW and Planned MW to specific DR resources
- The following link has further instruction on the DR Setup process in eRPM
<http://pjm.com/~media/training/core-curriculum/ip-dsr/dr-sell-offer-plan-and-dr-auction-set-up-training.ashx>

Demand Resources in RPM may be classified as either Planned or Existing

Existing	Planned
<ul style="list-style-type: none"> I. Currently have capability to provide reduction in demand and will provide load reduction capability for DY of RPM Auction II. Existing MWs based on pre-registrations in eRPM III. No Credit Requirement 	<ul style="list-style-type: none"> I. Do not currently have capability to provide reduction in demand, but is scheduled to be capable of providing such reduction on or before start of DY II. Planned MWs based on DR Sell Offer Plan submittal III. Credit Requirement is Pre-Clearing BRA Credit Rate * Number of Planned MWs

- Currently have capability to provide reduction in demand and will provide load reduction capability for DY of RPM Auction
- No credit requirement like Planned resources have
- PJM reviews LM registrations for purposes of determining Existing MW quantities for RPM auctions:
 - Review in JAN for 3IA of the upcoming DY
 - Review in APR for BRA for DY three years out
 - Review in JUN for 2IA for the next DY

- Pre-registration of a site is required to enable submission of an “Existing” Demand Resource in an RPM auction
 - Ensure sites will be available during the DY
 - Properly determine credit requirements
 - Only currently registered sites can be considered “existing”

See PJM Manuals 11 and 18 for more detailed information on the registration process

- Pre-Register for 2018/2019 BRA
- Register (PJM will use higher of 15/16 or 14/15) and Select (for 15/16)
 - CSP registers sites as Emergency DR via eLRS:
 - PJM will use the values on the newer of 15/16 or 14/15 registration
 - 15/16 registrations must be in Confirmed status by **April 5, 2015**
 - » Note: submit by **3/22/15** to allow for 10 business day review
 - PJM will supply CSPs with a list of their Confirmed registrations (in eRPM) by COB **April 6, 2015**
 - CSP (via eRPM) selects those sites that they reasonably believe they will have under contract and will reduce load in 2018/2019 DY. The selected sites form the basis of their Existing Demand Resources to offer into the 2018/2019 BRA
 - Selections must be completed in eRPM by COB **April 15, 2015**

DR Registration must be in Confirmed status by April 5, 2015

- Performance is measured in one of two ways:
 - Performance during a mandatory event
 - Reductions are calculated for each registration dispatched for an event
 - Individual reductions are summed to arrive at the total reduction
 - The total reduction is compared to the commitment made in RPM
 - No test is required for a registration if it is part of a mandatory event
 - Performance in a Test event
 - Test events are designed to simulate real events
 - Simultaneous reductions by all registrations in the product/zone group
 - Individual reductions are summed to arrive at the total reduction
 - The total reduction is compared to the commitment made in RPM

- There are two potential penalties types:
 - Deficiency Penalty
 - This is a daily penalty charged when registered MW quantity is less than committed MW quantity
 - The deficient MW quantity is reduced from the commitment for purposes of any performance penalty (below) to avoid double penalty
 - Penalty starts on June 1
 - Performance Penalty
 - This is a penalty charged when reduction MW during a mandatory event or test is less than the committed MW

- Add backs are MW reduction values calculated using the compliance reduction formulas
- PJM provides the values calculated for 5 CPs to EDCs for their use in PLC determination processes
- The values are calculated for event, test and economic reductions performed during the months of JUN - SEP by locations that are part of LM registrations
- Calculation process occurs in mid to late October
- Values posted in November

- Load Drop used to determine capacity compliance; also determines add back
- Guaranteed Load Drop or Economic Load Reduction (where applicable):
 - Minimum of $\{(comparison\ load - Load) * LF, PLC - (Load * LF)\}$
- Firm Service Level:
 - $PLC - (Load * LF)$
- Small Generator (customer PLC < 0.5MW) where load interval metering is not installed
 - Generation output

- **Emergency Event**
 - CSP submits customer specific compliance data up to 45 days after start of month after the event was called
- **Economic Event**
 - CSP submits settlement data up to 60 days after the event
- PJM calculates add backs and uses for Forecast
- PJM posts customer specific add backs for 5 CP in eLRS for CSP, EDC and LSE
- EDC downloads add backs for customer specific PLC determination which is due by 1/1