



# Qualifying Transmission Upgrades in RPM

MIC - March 2014

- Define a QTU as a supply resource in RPM
- Describe RPM auction eligibility requirements for QTUs
- Explain RPM collateral requirements for QTU participation
- Describe RPM delivery year performance assessments for QTUs



## What is a Supply Resource in RPM?

In RPM, Resources are =

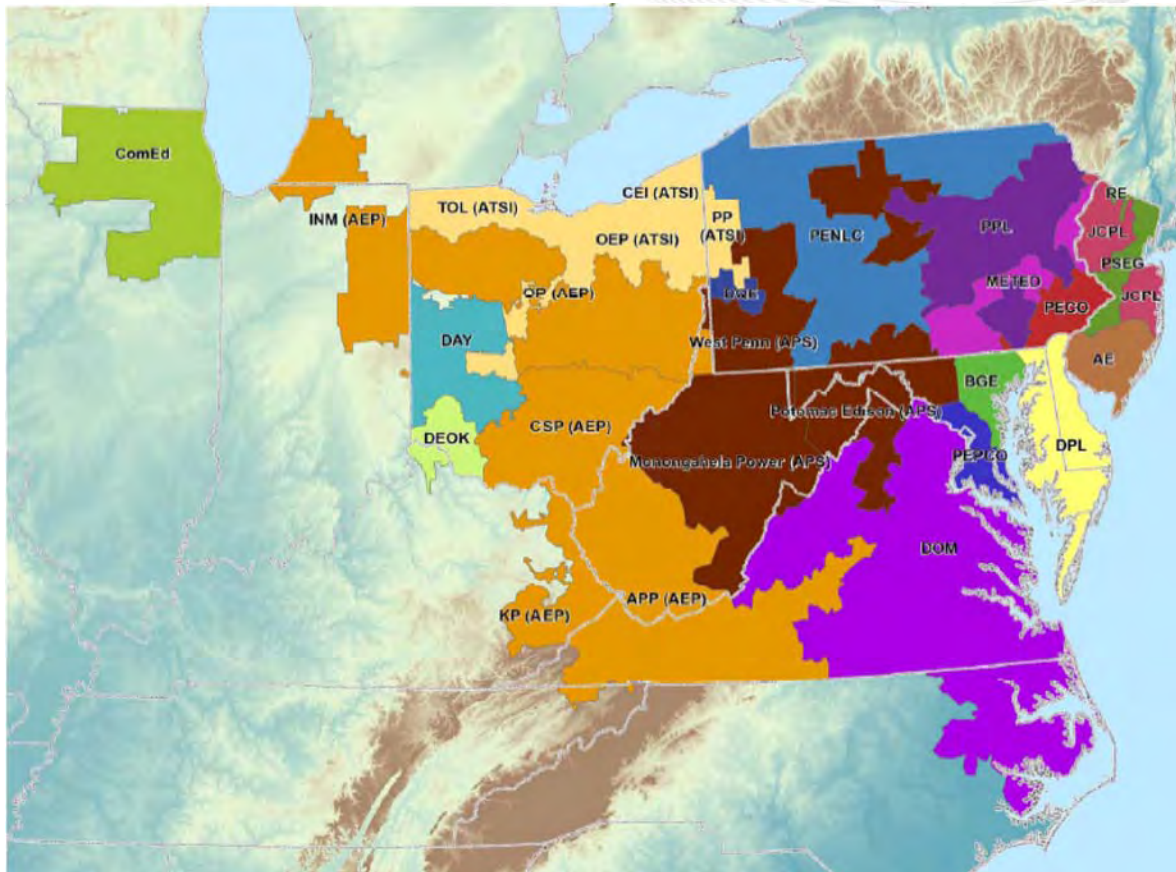
Generation Resources

Demand Resources  
(DR)

Energy Efficiency  
Resources  
(EE)

Qualifying  
Transmission  
Upgrades  
(QTU)

## Requirements for RPM Base Residual Auction Participation



- Executed Facilities Study Agreement
- Conform to all applicable standards of the PJM RTEP Process
- In-service date on or before the start of the Delivery Year
- Incremental import capability value assigned by PJM Planning at least 45 days prior to auction



QTU Auction Revenue

The auction revenue for a Qualifying Transmission Upgrade that clears in the BRA is:

**Locational Price Adder of Sink LDA – Locational Price Adder of Source LDA**



## RPM Collateral Requirements for QTUs

### Pre-Auction

The greater of (i) \$20/ MW-day or (ii) 30% of the PJM Net CONE, times the number of days in the Delivery Year.

### Post-Auction

The greater of (i) \$20/MW-day or (ii) 20% of the Sink LDA Clearing Price, times the number of days in the Delivery Year.

- 50% reduction in collateral for executed full (not provisional) Interconnection Service Agreement
- No collateral required once the QTU is in service



## Qualifying Transmission Upgrade - What if there is a Delay?

### What if there is a delay?

- If the upgrade cleared in the BRA and is not completed by the start of the Delivery Year, the party should provide a replacement in the form of an equivalent amount of capacity resource within the Sink LDA.
- If replacement capacity is not provided, a Transmission Upgrade Delay Penalty will be applied.



## Transmission Upgrade Delay Penalty

Transmission Upgrade Delay Penalty (Daily) =

QTU Delay Penalty  
Rate



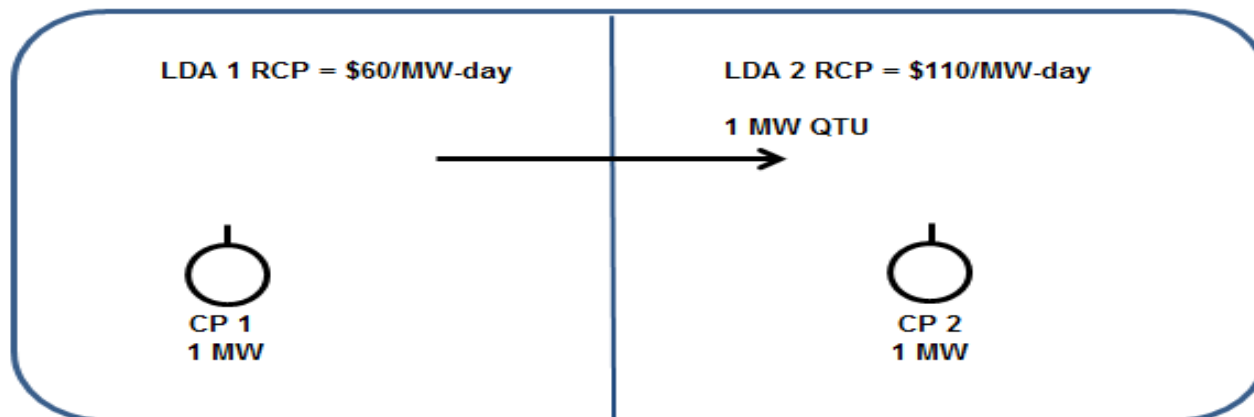
Cleared MW Amount  
of Incremental Import  
Capability Not  
Delivered

QTU Penalty Rate = the higher of:  
(1)  $[2 * (\text{Sink Locational Price Adder}) - (\text{Source Locational Price Adder})]$  or,  
(2) Sink LDA Net CONE less the Resource Clearing Price of Source LDA

Daily Capacity Resource Deficiency Penalty for Generation, Annual DR and EE equals the Weighted Average Resource Clearing Price for such resource plus the higher of 20% of the Party's Weighted Average Resource Clearing Price for such resource or, \$20/MW-day.



	Capacity Resource (Generation, DR or EE)	QTU
<b>RPM Revenue</b>	Cleared Resource MW * RCP	Cleared QTU MW * (Sink LDA RCP - Source LDA RCP)
<b>Capacity Deficiency Penalty</b>	RCP + greater of [(0.2 * RCP) or (\$20)]	greater of [ (2 * (Sink LDA RCP - Source LDA RCP)) or (Sink LDA Net CONE - Source LDA RCP) ]
<b>Post Auction Credit Rate</b>	greater of [(0.2 * RCP) or (\$20)]	greater of [(0.2 * Sink LDA RCP) or (\$20)]



	CP 1	CP 2	QTU
<b>RPM Revenue</b>	1 MW * \$60 = <b>\$60/MW-day</b>	1 MW * \$110 = <b>\$110/MW-day</b>	1 MW * (\$110 - \$60) = <b>\$50/MW-day</b>
<b>Capacity Deficiency Penalty</b>	\$60 + greater of [ \$12 or \$20 ] = <b>\$80/MW-day</b>	\$110 + greater of [ \$22 or \$20 ] = <b>\$132/MW-day</b>	greater of [ (2*(\$110 - \$60) or (\$277 - \$60) ] = <b>\$217/MW-day</b>
<b>Net Penalty</b>	\$80 - \$ 60 = <b>\$20/MW-day</b>	\$132 - \$110 = <b>\$22/MW-day</b>	\$217 - \$50 = <b>\$167/MW-day</b>
<b>Post Auction Credit Rate</b>	greater of [ \$12 or \$20 ] = <b>\$20/MW-day</b>	greater of [ \$22 or \$20 ] = <b>\$22/MW-day</b>	greater of [ \$22 or \$20 ] = <b>\$22/MW-day</b>
<b>Replacement Requirements</b>	Available MWs or cleared Buy Bid located in LDA 1 or LDA 2	Available MWs or cleared Buy Bid located in LDA 2	Available MWs or cleared Buy Bid located in LDA 2

# Questions?