

## Residual Auction Revenue Rights

Brian Chmielewski Sr. Analyst, Market Simulation Market Implementation Committee August 10, 2016

www.pjm.com PJM©2016



- ✓ ARRs are allocated to Network & Firm Transmission Service Customers
- ✓ ARRs entitle the holder to receive an allocation of FTR Auction revenues
- ✓ ARRs are reassigned on a proportional basis within a zone as load switches between LSEs within the planning period
- ✓ ARRs must be simultaneously feasible
- ✓ Residual ARRs may be available within a planning period for increased transmission capability



ARRs prorated in Stage 1B of the Annual Allocation may be allocated Residual ARRs for the following:

- ☐ Increased transmission capability made available by certain transmission upgrades made during the planning year that were not modeled in the Annual ARR Allocation
- ☐ Increased transmission capability made available for periods when Annual ARR modeled transmission outages are not out of service



- ✓ Residual ARR MWs plus previously awarded Stage 1 and Stage 2 MWs cannot exceed the Network Service Peak Load value for a particular participant
- ✓ Residual ARRs are effective the first month the increased transmission capability is modeled in the Monthly FTR Auction
- ✓ Economic value of Residual ARRs are based on the MW amount and the nodal clearing price difference between the source and sink nodes for the FTR Obligations resulting from each monthly FTR Auction the Residual ARR is effective



- ✓ Market is created with prorated stage 1B requests from Annual Allocation
  - ✓ All ARR requests from stage 1B that did not fully clear
- ✓ Proration is done manually by operator until violated facilities are minimized as much as possible
  - ✓ Constraint basis residual requests that impact violated constraints are prorated.



- ✓ Residual ARRs are valued based on the nodal clearing prices from the corresponding monthly FTR Auction
- ✓ Results are posted in eFTR roughly same time as monthly FTR Auction
- ✓ Residual ARRs will shift with load within a zone

✓ Settlements calculates a daily rate – billed weekly evenly throughout month



## **Residual ARR Credit by Month**





## Appendix

www.pjm.com PJM©2016



Market	Residual MW Total	Total Value (Annual)*	Total Value (Monthly)
2014/2015 ARR	22,532.90	\$ 4,894,781.83	\$ 8,160,918.27
2015/2016 ARR	37,043.80	\$ 8,138,975.75	\$ 8,620,612.69

<sup>\*</sup>Represents the total cleared Residual ARR MWs priced at the average 4-round annual clearing prices divided by 12.