

Residual Zone Pricing

MIC

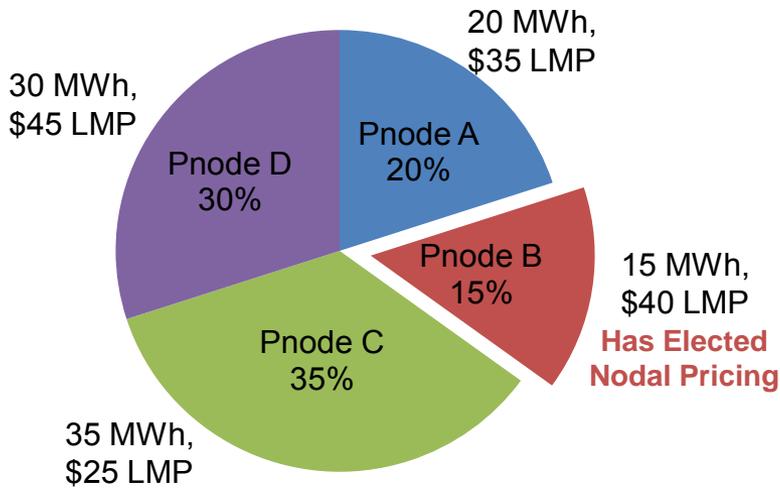
September 13, 2011

- Residual Zone
 - An aggregate containing all load buses in the physical zone, minus all load that has been designated to be priced at a specific non-zonal (or nodal) location
 - Zones with multiple EDCs will have residual metered EDC aggregates
- Residual Zone Pricing
 - Use of the residual zone LMP rather than the physical zone LMP for pricing load and related market activity

- Residual zone aggregate definition is more representative of actual load distributions
- Physical and residual zone prices may become more disparate with the introduction of more nodal load
- Avoid potential resettlements in the future
- Systems in place are capable of calculating the residual zone definition

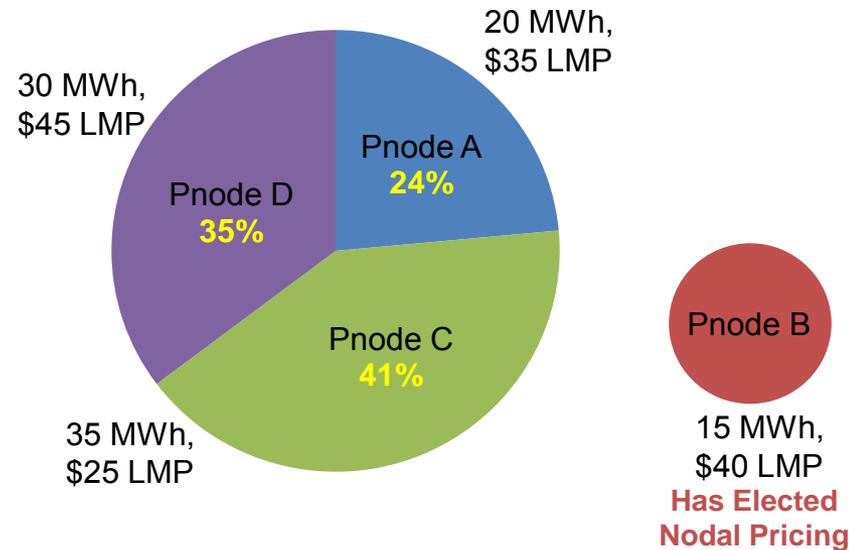
- Price transparency
 - Residual Zone LMP will be posted
 - Residual zone pricing point available in Day-ahead market, FTR/ARR modeling, and bilateral transactions
- All non-nodal load in a zone pays the same price
- Residual zone price more accurately reflects the composition of non-nodal priced load in the zone

Physical Zone Definition



Total Zone Load Charges: \$ 3525
Physical Zone LMP: \$ 35.25

Residual Zone Definition



Total Zone Load Charges: \$ 3525
Residual Zone LMP: \$ 34.41

Pnode	MWh	LMP	Total Zone Load Charges	Zonal Distribution	Weighted Physical Zone LMP	Residual Zone Distribution	Weighted Residual Zone LMP
A	20	35 \$	700	20%	\$ 7.00	23.5%	\$ 8.22
B	15	40 \$	600	15%	\$ 6.00		\$ -
C	35	25 \$	875	35%	\$ 8.75	41.2%	\$ 10.30
D	30	45 \$	1,350	30%	\$ 13.50	35.3%	\$ 15.89
Total	100		\$ 3,525	100%	\$ 35.25	100%	\$ 34.41

Settlements Today

- 15 MWh load priced nodally at Pnode B
 - 15 MW * \$40 = \$600
- Remaining 85 MWh load priced at physical zone
 - 85 MWh * \$35.25 = \$2996.25
- Residual EDC and/or POLR load pays difference
 - 100 MWh – 15 MWh – 85 MWh = 0 MWh
 - \$3525 - \$600 - \$2996.25 = (\$71.25)

Residual Zone Pricing Implementation

- 15 MWh load priced nodally at Pnode B
 - 15 MW * \$40 = \$600
- Remaining 85 MWh load priced at residual zone
 - 85 MW * \$34.41 = \$2925
- Residual EDC and/or POLR load pays difference
 - 100 MWh – 15 MWh – 85 MWh = 0 MWh
 - \$3525 - \$600 - \$2925 = \$0

- Differences between Nodal Customers' eSchedule Load (next day) and Reconciled Load (2 months later) result in real-time residual zone prices being slightly different than original for EDCs, POLR providers, and Retail LSEs priced at the residual zone prices.
- Proposed Reconciliation Implementation
 - Recalculate residual zone price when nodal load is reconciled
 - Use updated residual zone price to reconcile all load priced at the residual zone
- Prices used for nodal load will not change

- Both the residual zone pricing point and physical zone pricing point will be available in the FTR Auctions.
- No conversion of pricing points will occur for existing FTRs.
- During the annual ARR nomination process, LSEs priced at the residual zone would only be able to select the residual zone pricing point.
- If an LSE elects to self-schedule FTRs from ARR, the FTRs have the same pricing point as the ARRs.

- Once a fully metered EDC elects to switch load from physical zone to residual zone pricing, there cannot be a combination of residual zone and physical zone pricing for load within a zone.
- Once a fully metered EDC has elected residual zone pricing for load in its territory, physical zone pricing for load will no longer be available.
- Fully metered EDCs with nodally priced load in their territory should immediately use residual metered EDC pricing upon implementation unless contractual obligations prevent them from doing so.

- Effective date for switching load from physical zone pricing to residual zone pricing is June 1 to coincide with the PJM planning period
- Prior to switching load from physical zone pricing to residual zone pricing, EDCs must confirm via a PJM form that all LSEs (that are not nodal) will be priced at the residual zone and will continue to be priced at the residual zone in the future
 - This form must be provided to PJM by January 15th or at least 30 days prior to the start of PJM's annual ARR/FTR allocation process, whichever is later
 - Implementation will be delayed by 1 year if notifications and forms have not been received

In order for residual zone pricing to be available starting on June 1, 2012:

Residual zone definitions must be finalized prior to use in ARR allocation in
March 2012



EDCs must notify PJM of zone's intent to use residual zone pricing by
January 15, 2012



Tariff changes must be filed with FERC by the
end of 2011

Tariff / OA and Manual Changes

- **MIC**
 - Review: September 13th
 - Vote: October 4th (manuals)
- **MRC**
 - Review: September 15th
 - Vote: October 12th (manuals and Tariff/OA)
- **MC**
 - Review: September 22nd
 - Vote: October 20th (Tariff/OA)

Note: MSS meeting scheduled for September 19th

OATT Attachment K – Appendix / Schedule 1 of OA

- New defined term: Residual Metered Load

1.3.31.01A Residual Metered Load

“Residual Metered Load” shall mean all load remaining in an electric distribution company’s fully metered franchise area(s) or service territory(ies) after all nodally priced load of entities serving load in such area(s) or territory(ies) has been carved out.

- Added description of how the Day-ahead Congestion Price of residual metered load is calculated (mirrors language for how the price is calculated for the physical zone)

5.2.3 Target Allocation of Transmission Congestion Credits

“The Day-ahead Congestion Price of Residual Metered Load is calculated as the sum of the Day-ahead Congestion Price of each bus that comprises the Residual Metered Load multiplied by the percent of the annual peak residual load assigned to each node in the franchise area(s) or service territory(ies) of the Residual Metered Load.”

- Manual 27, Section 5.6
 - Additional peak load data requirement for nodal pricing settlement requests (used to determine residual zone definition for FTR Credit Target Allocation)
- Manual 28
 - Section 3.6 Residual Metered EDC Load Determination
 - Section 3.7 Residual Metered EDC Pricing Definitions and Business Rules
 - Section 7.3 & 8.3 – Reconciliation for Transmission Congestion & Loss Charges
- Manual 11, Section 2.3.2
 - Added description of Residual Metered EDC day-ahead default distribution

Appendix



Residual Zone Pricing Settlements

Pnode	Original MWh	LMP	Total Zone Load Charges	Residual Zone Distribution	Weighted Residual Zone LMP	Net MWh after reconciliation	Revised Residual Zone Distribution	Revised Weighted Residual Zone LMP
A	20	35 \$	700	23.5%	\$ 8.22	20	23.26%	\$ 8.14
B	15	40 \$	600		\$ -	14 (nodal) 1 (residual)	1.16%	\$ 0.46
C	35	25 \$	875	41.2%	\$ 10.30	35	40.7%	\$ 10.18
D	30	45 \$	1,350	35.3%	\$ 15.89	30	34.88%	\$ 15.70
Total	100		\$ 3,525	100%	\$ 34.41	100	100%	\$ 34.48

	Original Settlement	Reconciliation Settlement	Net Settlement
Nodal Load	15 MWh load priced at Pnode B 15 MW * \$40 = \$600	1 MWh less load priced at Pnode B -1 MWh * \$40 = (\$40)	14 MWh * \$40 = \$560 \$600 + (\$40) = \$560
Remaining Load	Remaining 85 MWh load priced at residual zone 85 MW * \$34.41 = \$2925	1 MWh more load priced at residual zone 1MWh * \$34.48 = \$34.48 85 MWh original load priced at difference between new/original residual zone price 85MWh * (\$34.48 - \$34.41) = \$5.52 \$34.48 + \$5.52 = \$40	86 MWh * \$34.48 = \$2965 \$2925 + \$40 = \$2965
EDC / POLR Load	Residual EDC and/or POLR load pays difference 100 MWh – 15 MWh – 85 MWh = 0 MWh \$3525 - \$600 – \$2925= \$0	Residual EDC and/or POLR load pays difference 1 MWh + -1 MWh = 0 MWh \$40 + (\$40) = \$0	 \$0+ \$0 = \$0

* Note: Unrounded distribution weightings and prices must be used to recalculate these settlements