Market Settlements Subcommittee

September 19, 2011

Residual Zone Pricing

The following topics require further discussion on based on stakeholder feedback:

- Reconciliation

- Opt out vs. Opt in residual zone pricing election

- Impact on demand response

- Notification timelines and procedures

Differences between Nodal Customers' eSchedule Load and Reconciled Load 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.

– Only affects load reconciliation for transmission congestion and losses

Option 1: Recalculate residual zone price when nodal load is reconciled

– Use <u>updated</u> residual zone price to reconcile all load priced at the residual zone, including load with no reconciliation MWh
– More precise, eliminates leftover billing for EDC

Option 2: Do not recalculate residual zone price when nodal load is reconciled

– Use <u>original</u> residual zone price to reconcile all load priced at the residual zone
– Provides price certainty

The process for electing residual zone pricing requires further definition

Option 1: Zone defaults to residual zone pricing unless the EDC opts out
- Opt out notice must be provided annually
- More consistent with nodal pricing principles in the tariff

Option 2: Zone remains with physical zone pricing unless the EDC opts in
- Opt in notice only provided once prior to initial switch to residual zone pricing

The pricing point for Demand Response should be consistent with the pricing point used for settling load in the energy market.

- DR in zones that have elected residual zone pricing will be settled using the residual zone LMP

- *Current language in Manual 27, Section 5.6*

    Demand response offered into all of PJM's load response programs will be settled at the applicable load settlement aggregate point for the load that is reduced (zone, residual zone, or node bus or buses).

Participants requested notification of EDCs' opt out* elections

- EDCs that are unable to switch load from physical zone pricing to residual zone pricing are required to opt-out annually via a PJM form on pjm.com. The form must be provided to PJM by January 1st or at least 45 days prior to the start of PJM's annual ARR/FTR allocation process, whichever is later.

    - Existing business rules require retail LSEs switching to nodal pricing to notify PJM by January 15th or 30 days prior to the start of the ARR allocation (Manual 27)

- No later than 5 business days after the EDC notification due date, PJM will properly transmit this opt out information to members of the Members Committee, Markets and Reliability Committee, Market Implementation Committee, and Market Settlements Subcommittee.

- Does this provide LSEs with enough notice to make nodal pricing decisions?

* Could change to 'opt in' based on stakeholder discussions

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

Tariff / OA and Manual Changes

- **MIC**
  - Review: September 13th, October 4th
  - Vote: November 1st (manuals)
- **MRC**
  - Review: September 15th, October 12th
  - Vote: November 16th (manuals and Tariff/OA)
- **MC**
  - Review: September 22nd, October 20th
  - Vote: November 22nd (Tariff/OA)

  Note: MSS meeting scheduled for September 19th

Additional feedback and questions are welcomed

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Examples

Real-Time Load Settlement Examples

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

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

FERC EQR XML File Format

- FERC notified its EQR Users' Group of the upcoming conversion of the EQR report from CSV format to XML format

- No report content will be updated

- FERC estimated the new XML schema definition (XSD) will not be available until January 2012

- PJM will assess the impacts to the MSRS EQR report after the XSD is published