Residual Metered Load Aggregate Pricing FAQ

General Questions:

1. When does Residual Metered Load Pricing go into effect?
   a. June 1, 2015
2. Can zones opt-out of Residual Metered Load Pricing?
   a. No. Effective 6/1/2015, non-nodal Real Time load will switch to use of the Residual Metered Load aggregate LMP rather than the physical zone LMP.
3. What does a Residual Metered Load aggregate represent?
   a. A Residual Metered Load aggregate represents all load buses in the fully metered EDC territory, minus all load that has been designated to be priced at a specific non-zonal (or nodal) location.
4. Can PJM provide the definition of the individual Residual Metered Load Aggregates?
   a. The final, Real-Time hourly Residual Metered Load Aggregate definitions are currently being calculated and posted in MSRS ("Locational Congestion/Loss Details" category, and the "Zonal Aggregate Definitions" report).
5. How do I know if the location my real-time load is currently priced must change?
   a. Any load contracts priced at the below locations must change from a physical or nodal definition to a residual definition starting 6/1/2015.

   *Current modeling as of 5/12/2015 Posting Date.
   *Subject to change.

   On 12/1/2014, the OHIO_RESID_AGG was terminated and was replaced with a new aggregate named FEOHIO_RESID_AGG.

Current Pricing Point*	Residual Metered Load Aggregate Equivalent	Pnode ID
AECO	AECO_RESID_AGG	116472927
AEP	AEPOHIO_RESID_AGG AEPKY_RESID_AGG AEPAPCO_RESID_AGG AEPIM_RESID_AGG	1269364670 1269364671 1269364672 1269364674
APS	APS_RESID_AGG	116472931
BGE	BGE_RESID_AGG	116472933
COMED	COMED_RESID_AGG	116472935
DAY	DAY_RESID_AGG	116472937
DEOK	DEOK_RESID_AGG	1069452904
DOM	DOM_RESID_AGG	116472939
DPL	DPL_RESID_AGG	116472941

DUQ	DUQ_RESID_AGG	116472943
EKPC	EKPC_RESID_AGG	1127872598
JCPL	JCPL_RESID_AGG	116472945
METED	METED_RESID_AGG	116472947
PECO	PECO_RESID_AGG	116472949
PENELEC	PENELEC_RESID_AGG	116472951
PPL (fully metered EDC territory in PPL zone)	PPL_RESID_AGG	116472953
UGI (fully metered EDC territory in PPL zone)	UGI_RESID_AGG	116472955
PSEG	PSEG_RESID_AGG	116472957
RECO	RECO_RESID_AGG	116472959
FE OHIO (fully metered EDC territory in ATSI zone)	FEOHIO_RESID_AGG	1258625176
PENN POWER (fully metered EDC territory in ATSI zone)	PENNPOWER_RESID_AGG	126769999
SMECO (fully metered EDC territory in PEPCO zone)	SMECO_RESID_AGG	1288248099
EASTON (fully metered EDC territory in DPL zone)	DPLEASTON_RESID_AGG	1304468347

6. Will existing physical zone definitions continue to be available after the implementation?
   a. Yes. Physical zone definitions will be available indefinitely. This will ensure that the pricing points on long-term contracts or other activities (ex/ Internal Bilateral Transactions, FTR Auctions, Import and Export Transactions, etc.) can remain at the physical zone pricing point, if desired. Note: Real Time load InSchedule contracts currently priced at non-nodal pricing points are required to shift to the residual metered load aggregate. (See the InSchedule Load Contract Questions section for more details)
7. Will the Residual Aggregate LMPs be available via eDATA and eDATA Feed?
   a. Yes. When the Residual Aggregates become biddable points on 6/1/2015, they will be included in eDATA and eDATA Feed via the getAllAggregateLmp call.

Energy Market Questions
1. Does Residual Metered Load Pricing affect the Day-Ahead Market in addition to the Real-Time Market?
   a. Yes. The residual metered load aggregates will be available in the Day-Ahead market. Consistent with the real-time load settlements, day-ahead demand bids will only be allowed at nodal or residual metered load aggregates.
2. If I'm an LSE serving load priced at the Residual Metered Load aggregate, can I submit day-ahead demand bids at the Residual Metered Load aggregate?
   a. Yes. LSEs serving load at the Residual Metered Load Aggregates can submit day-ahead demand bids at the residual metered load aggregate. Zonal aggregates will no longer be available to submit day-ahead demand against starting 6/1/2015. Starting Monday, May 25th, demand bids will be able to be submitted at Residual Metered Load aggregates effective for the 6/1/2015 market day.

3. Will my company be given authorization by PJM to submit demand bids at the Residual Aggregates if I am already able to submit bids at the related zone or will I have to request it?
    a. PJM will grant access to submit demand bids at the Residual Metered Load Aggregates assuming participants are currently authorized to submit demand bids and have submitted a demand bid at the zonal location in the last 3 months. They won't need to manually request the authorization.
4. What is the first day in which participants can submit demand bids for 6/1 in the eMKT Production environment?
    a. Participants who are granted access will be able to submit demand bids at Residual Aggregates in the eMKT Production environment seven days prior (Monday, May 25th) to the 6/1/2015 market day.
5. Do I need to manually add a Residual Aggregate to my eMKT Portfolio?
    a. Yes. Participants that use the eMKT user interface to submit demand bids will need to manually add the Residual Aggregate to their existing portfolio or a new portfolio. For instructions on how to add a new node to a portfolio, please see page 104 of the eMKT User Guide ("Add Price Node to Demand Portfolio").
6. I was able to add a Residual Aggregate to my portfolio, but when I submit a Demand bid at that location am getting an error stating "You are not authorized to create a demand bid." How do I get authorization?
    a. PJM made every effort to properly assign authorization to bid at Residual Aggregates, however if you receive an authorization error when submitting a bid at a Residual Aggregate where you have a confirmed InSchedule contract please contact the Markets Hotline at: markets_hotline@pjm.com and they will assist you.
7. How are the distribution factors used to define the Day-Ahead Residual Metered Load aggregates determined?
    a. Day-ahead distribution factors will default to the final Real Time distribution factors for the Residual Metered Load aggregate at 8:00 a.m. one week prior to the Operating Day. For example, if the Operating Day is Monday, the default distribution is from 8:00 a.m. on Monday of the previous week. Consistent with physical zones, the definition will apply to all hours in the day.
8. What distribution factors are used when calculating the preliminary 5 minute Real Time LMPs?
    a. Preliminary 5 minute Real Time LMPs will be calculated using same Residual Metered Load distribution factors used for the Day-ahead market for the Operating Day. For example, if the Operating Day is Monday, the default distribution is from 8:00 a.m. on Monday of the previous week. Consistent with physical zones, the definition will apply to all hours in the day.

Market Settlements Questions

1. How are the final hourly Real Time distribution factors that are used to define the Final Real Time Residual Metered Load aggregate LMPs used in Settlements determined?
    a. Final hourly Real Time distribution factors will be calculated using InSchedule-submitted nodal load MWh.

2. Does the use of Residual Metered Load aggregates impact the existing Load Reconciliation process?
   a. Differences between Nodal Customers' InSchedule Load (next day) and Reconciled Load (2 months later) may result in RT load distributions being slightly different than the original distributions. An adjusted distribution reconciliation rate will be used to reconcile all load priced at the residual metered load aggregate, including load with no reconciliation MWh. This impacts load reconciliation for transmission congestion and transmission losses. The adjusted distribution reconciliation rate will be posted publicly and reported in MSRS.
3. How does PJM account for the price differences (residual billing) in the current market given that the physical zone price includes load that is being settled nodally?
   a. An EDC may retain for itself all residual load billing that remains in its account after assigning load through its load contracts and pays for the cost themselves. Alternatively, EDCs that hold Provider of Last Resort ("POLR") auctions or similar load auctions direct PJM to automatically assign megawatt hours not specifically assigned by load contracts, as well as residual billing in their accounts, to the auction winners ("POLR Suppliers") based on the tranches they won in the auction as a billing service based on their contracts associated with the POLR load programs. The party that ultimately ends up with the residual billing that was in an EDC's account, whether the EDC or a POLR Supplier, pays a price for that remaining load that is effectively the Residual Zone Price.
4. What MSRS report changes can we expect due to the implementation of Residual Metered Load Pricing?
   a. Several report changes related to the Residual Metered Load Pricing implementation are anticipated:
      i. The Congestion and Loss Charges Report under the Load Reconciliation Report will include two new columns to display the Residual PNODE Adjusted Congestion Rate and Residual PNODE Adjusted Loss Rate.
      ii. A new report "Residual Metered Load Aggregate Reconciliation Charge" will be added to provide supporting information to calculate any Loss and Congestion reconciliation charges to residual load that did not receive a reconciliation adjustment.
      iii. The Daily and Hourly Load Reconciliation Billing Determinants Report will list Additional rows for the Residual PNODE Adjusted Congestion Rate and Residual PNODE Adjusted Loss Rate columns by Residual Aggregate.
5. When will MSRS be updated to include the report changes described above?
   a. Because the report changes described above are dependent on the submission of Load Reconciliation data (due 60 days after the end of the Operating Month), the report changes will not be available until August 2015 (June 2015 reconciliation data will be due by August 31st).
6. Are the MSRS report changes available in the MSRS Sandbox for testing?
   a. Yes. Both the Congestion and Loss Charges Report and the Residual Metered Load Aggregate Reconciliation Charge report have sample data in the MSRS sandbox and is

available for download in CSV and XML formats. Make sure you choose a date range in April 2015 as that is the only month that currently has data populated.

7. PJM training information states that the adjusted distribution reconciliation rate will be posted publicly and reported in the MSRS. Where is the public file located?
   a. The adjusted distribution rate will be posted in the Daily and Hourly Load Reconciliation Billing Determinants file posted here. Note, the file is currently posted after the Operating Month invoices are generated. For example, the June 2015 reports will be available in early July. However, because the Adjusted Distribution Reconciliation Rates cannot be calculated until the load reconciliation data is submitted two months later, they will not be included in the initial posting but will be added when the monthly invoice containing the reconciliation data for that period is billed (i.e. June Reconciliation Data is processed in the August bill issued in early September).

Data Postings

1. Is PJM posting any information on the Residual Metered Load aggregate prices prior to the June 1, 2015 implementation to enable historical analysis?
   a. Because the Residual Metered Load aggregates will not become biddable points until residual zone pricing is implemented, the residual metered load LMPs are posted separately from the existing day-ahead and real-time daily LMP files and monthly LMP files until June 1, 2015. The daily day-ahead and preliminary real-time residual metered load aggregate LMP files are posted alongside the existing day-ahead and real-time daily LMP files on the Daily Day-Ahead LMP and Daily Real-Time LMP pages on pjm.com, respectively. The monthly final real-time residual metered load aggregate LMP files are posted alongside the existing monthly LMP files on the Hourly Real-Time & Day-Ahead LMP page on pjm.com.   The residual metered load LMPs are also published to Data Miner.

2. What will the LMP files look like after June 1, 2015? Will the current daily and monthly LMP files (yyyymmdd-da.csv and yyyymmdd.csv) stop being posted and only the yyyymmdd-daresidual.csv and yyyymmdd-rtresidual.csv posted after June 1?
   a. When Residual Metered Load Pricing is implemented on June 1, 2015, the separate residual files will no longer be posted. The Residual Metered Load LMPs will be included in the current daily and monthly LMP files.   Sample files have been posted to the Residual Metered Load section of the Energy Market page of pjm.com that mimic the expected file format beginning 6/1/2015.

3. When will the final Real Time Residual Metered Load aggregate LMPs be posted?
   a. Similar to the posting of existing physical transmission zones, the *final* Real Time Residual Metered Load aggregate LMPs will be posted when the monthly billing processes have been completed. This is typically posted four to five business days after the end of the month.

4. When will the residual aggregate price nodes be in the regular LMP files? Can they be included in the daily/monthly LMP file before June 1 so we can test our automated download of the new prices?

a. We cannot add the new residual prices to the regular LMP files until they become valid, biddable nodes. As a result, they will not be merged into the official LMP files until June 1, 2015. Sample files have been posted to the Residual Metered Load Pricing section of the Energy Market section of PJM.com that mimic the expected formats once the residual prices are added.

5. Currently prices are only being posted for the AEP_RESID_AGG. Given AEP has decided to split into 4 different settlement areas on June 1, 2015, will PJM be posting the prices for each prior to June 1, 2015 so we would have some historical pricing data?
    a. PJM currently has representative prices for 2014 for each of the four AEP settlement areas posted on the [LMP Model Information](#) page of pjm.com where the other AEP Settlement Area change materials are posted. PJM will continue to post representative prices for 2015 on a monthly lag until the new areas are effective on 6/1/2015.

6. Where can I find the Residual Metered Load Definitions? Are they currently posted?
    a. The final Real Time residual definitions are currently being posted in MSRS (under the "Locational Congestion/Loss Details" category, and the "Zonal Aggregate Definitions" report).

7. The Residual LMPs located in the Monthly files prior to August 2014 for the OHIO_RESID_AGG, PENNPOWER_RESID_AGG, and UGI_RESID_AGG aggregates look to be inconsistent with the zonal prices. Are they correct?
    a. Prior to 8/1/2014, load assigned to the FEOHIO, PennPower, and UGI aggregates was being mis-categorized as nodal load and thus skewing the residual LMP calculations. Load served at these aggregates is not considered nodal, therefore should be included in the corresponding residual definitions. The LMPs posted in the monthly residual files correctly reflect this classification starting 8/1/2014. A separate file has been posted on the Residual Metered Load Pricing section of the Energy Market page of pjm.com that provides recalculated LMPs for the OHIO_RESID_AGG, PENNPOWER_RESID_AGG, and UGI_RESID_AGG for the period spanning 1/1/2014 – 7/31/2014.

8. Why isn't there a Residual Aggregate for the PEPCO zone?
    a. There will not be a PEPCO residual aggregate. All load assigned in PEPCO is currently assigned at one of three nodal aggregates: PEPCO MD, PEPCO DC, and PEPCO SMECO. Load will continue to be assigned to the PEPCO MD and PEPCO DC fixed weighted aggregates after 6/1/2015. Starting 6/1/2015, SMECO is becoming a fully metered EDC and as a result, any load currently assigned to the SMECO fixed aggregate will be assigned to the SMECO_RESID_AGG.

InSchedule Load Contract Questions

1. We have InSchedule load contracts that reference zonal aggregate prices for settlement. Do they need to shift to use the residual metered load aggregate?
    a. RT load InSchedule contracts currently priced at non-nodal pricing points are required to shift to the residual metered load aggregate (See question#5 for the list of impacted pricing points). Other uses of the zonal Pnode (ex/ Internal Bilateral Transactions, FTR Auctions, Import and Export Transactions, etc.) are still allowed.

2. What is the process for transitioning InSchedule contracts to the new Residual Metered Load aggregates?
   a. PJM terminated all real time InSchedule load contracts that use non-nodal pricing points effective 6/1/2015. Participants are required to create new real time load InSchedule contracts using the residual metered load pricing points effective 6/1/2015 and beyond.
3. Is it possible to create new InSchedule contracts using the residual metered load aggregates in advance of the 6/1/2015 implementation date?
   a. Yes. An enhancement was released to InSchedule in mid-October 2014 to prevent any new contracts from being created using the physical zone beyond the 6/1/2015 implementation date. In addition, new contracts will be able to be created using the new residual pricing points effective 6/1/2015 and beyond.
4. Is there a way to change the Source/Sink on existing InSchedule contracts and avoid having to establish new Contract IDs for each LSE using the residual aggregates?
   a. Unfortunately in the InSchedule system the relationship between the unique contract ID and source/sink pricing is static. A given contract ID in InSchedule only has a single Source/Sink price assignment for its life.
5. What contract ID should the reconciliation files reference since there will be two separate contracts, one before 5/31/15 and one starting 6/1/2015?
   a. The contract ID to use in a given Load Reconciliation upload file should be based relative to the given data's effective range. Specifically:
      - Load Reconciliation affecting March 2015 is due by midnight on 5/31/2015 and should use the set of contract IDs that were in effect during March 2015. Note: 5/31/15 is a Sunday, so a given EDC would want to have the March 2015 Load Reconciliation files submitted earlier during the prior business week.
      - Load Reconciliation affecting April 2015 is due by midnight on 6/30/2015 and should use the set of contract IDs that were in effect during April 2015.
      - Load Reconciliation affecting May 2015 is due by midnight on 7/31/2015 and should use the set of contract IDs that were in effect during May 2015.
      - Load Reconciliation affecting June 2015 is due by midnight on 8/31/2015 and should use the set of contract IDs that were in effect during June 2015. This would be the first time the new set of contract IDs is used in submitting a Load Reconciliation file.

FTR Related Questions

1. How does the use of Residual Metered Load aggregates impact the allocation of FTR Credits?
   a. Consistent with the practice used to determine the physical zone distribution used for ARRs/FTRs, the initial distribution for FTRs will be determined based on the contribution of each bus to the total residual load at the time of previous year's PJM annual peak.
2. What are the impacts of Residual Metered Load Aggregate Pricing on ARRs?
   a. ARRs will default to sinking at the pricing point at which the load is settled (nodal or residual), with an option to sink at the physical zone.

3. What process should I follow to choose to sink my ARR at the physical zone for the 2015/2016 Planning Period and for subsequent periods?
    a. Participants wishing to sink ARRs at the physical zone should submit their request to PJM's FTR Group (FTRGroup@pjm.com) no later than November 1st prior to the start of the Planning Period.
4. Does the election to sink my ARR at the physical zone apply to all zones I participate in or can it be on a zone by zone basis?
    a. The selection is done by LSE account and can be different for each zone.
5. Will FTRs already owned and purchased remain with the physical zone definitions?
    a. Any Long Term FTRs already sold for the 15/16 planning period and forward will remain to the physical zone. There are no ARRs effective for the 15/16 planning period yet. Going forward, members can choose to buy FTRs at the Residual metered load aggregates or Physical zone but any self-scheduled FTRs will match the pricing point of the original ARR.
6. Will a residual load zone point be available in each zone as a source and/or sink for the 2015/16 annual FTR auction?
    a. Yes.
7. For the annual ARR nominations for 2016/2017, what will be the sink point for the following IARR projects?
    a. The sink points will remain at the physical zone for the below IARR sources:

   RTEP B0287 SOURCE – DPL
   RTEP B0328 SOURCE – PEPCO
   RTEP B0329 SOURCE - DOM

Load Response Questions

1. Does Residual Metered Load Pricing impact the way I register Economic DR?
    a. Yes. The pricing point associated with Economic and Emergency DR registrations needs to match the point at which the load is priced. Starting 6/1/2015, non-nodal customers need to specify the applicable residual metered load aggregate location.
2. I currently have Economic Registrations that have a termination date after 6/1/2015. What process do I need to follow to change my pricing point from the Zone to the Residual starting 6/1/2015?
    a. In May of 2015, PJM terminated all Economic Registrations as of 5/31/2015 that have Zonal pricing points. CSPs are responsible for creating new registrations using the new Residual Metered Load Aggregates effective 6/1/2015.

Nodal Pricing Questions

1. Does Residual Metered Load Pricing have any effect on LSEs that are currently priced nodally?
    a. Nodal customers will continue to be priced at their elected nodal price.
2. When must an LSE elect to move to nodal pricing? When is it effective?

a. LSEs must provide notice of intent to move to nodal pricing by October 1 for wholesale loads and by January 15 for retail loads. After proper notice, LSEs can begin to be priced nodally the following June 1st.

3. If an LSE selects to be priced nodally, is that a permanent selection?
   a. Yes.

4. Where can I find the requirements needed to elect nodal pricing?
   a. Sections 5.6 and 5.7 of [Manual 27](#) contain the business rules for Nodal Pricing Settlement of Network Load and Business Rules for Changing Settlement Area Definitions of Network Load respectively.

5. Will PJM provide a list of the customers who elect to switch to nodal pricing?
   a. Each time a customer elects to switch to nodal pricing, PJM will email the membership notifying them of the new election according to the guidelines specified in sections 5.6 and 5.7 of [Manual 27](#).

6. What percent of PJM load is currently nodal? Can you provide this by zone?
   a. Historical percentages of nodal load by fully metered EDC are available in the Residual Metered Load Pricing section of the Energy Market page on pjm.com in the "[Nodal vs. Zonal Load by EDC](#)" posting.

References:

Manual 6 – ARR/FTR election language, Sections 3 and 4

Manual 11 – Energy & Ancillary Service Market Operations, Section 2 Default Day-ahead definitions for Residual Metered Load aggregates

Manual 27, Tariff Accounting, Section 5.6 and 5.7 Business Rules for Nodal Pricing and Changing Settlement Area Definitions.

Manual 28 – Operating Agreement Accounting, Sections 3.6 and 3.7 Residual Metered Load and Residual Metered Load Aggregate Definitions

FERC Filings and Orders:

http://www.pjm.com/~/media/documents/ferc/2012-filings/20121109-er13-347-000.ashx

http://www.pjm.com/~/media/documents/ferc/2013-filings/20130130-er13-347-001.ashx

http://www.pjm.com/~/media/documents/ferc/2013-filings/20130430-er13-347-002.ashx

http://www.pjm.com/~/media/documents/ferc/2013-orders/20130108-er13-347-000.ashx

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http://www.pjm.com/~/media/documents/ferc/2013-orders/20130401-er13-347-001.ashx

http://www.pjm.com/~/media/documents/ferc/2013-orders/20130617-er13-347-002.ashx

Residual Metered Load FAQ: Version Tracking

Version 5 – February 10, 2015 – updated version to add SMECO to the Residual Aggregate posting as well as Data Posting Question # 7.

Version 6 – February 24, 2015 – updated version to add SMECO Pnode ID

Version 7 – March 24, 2015

- Updated BGE_RESID_AGG Pnode ID (was previously erroneously listed as the APS_RESID_AGG pnodeid)
- Added questions based on Training Session feedback

Version 8 – May 12, 2015

- Added DPLEASTON_RESID_AGG
- Updated references to locations of reference files on PJM.com

Version 9 – May 21, 2015

- Added more questions and answers to the Energy Market section to assist participants in submitting Day Ahead Demand bids.

Version 10 – June 3, 2015

- Added FTR sink point question for IARR Projects (RTEP B0287, RTEP B0328, RTEP B0329)