PHI Settlement Process / Timeline

Pepco Holdings Inc

PJM Market Settlement Subcommittee

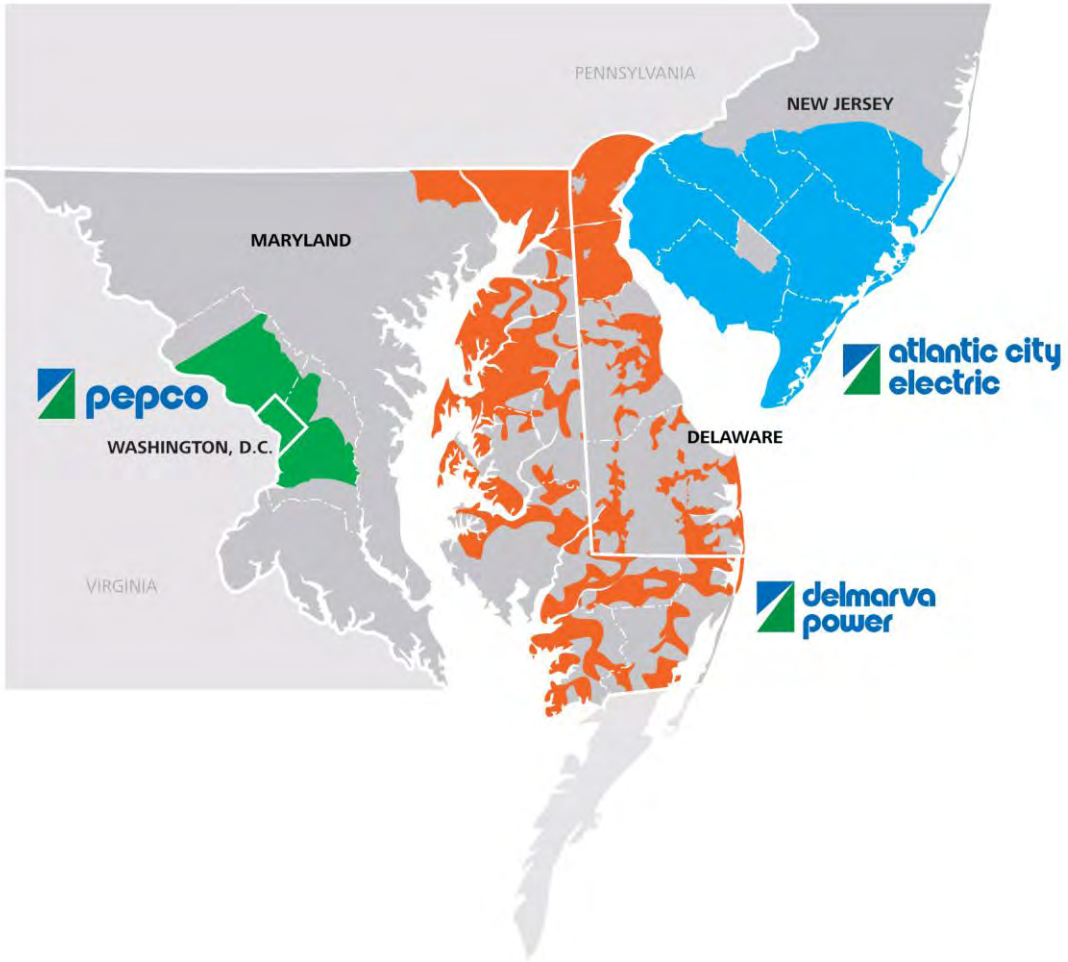
August 21, 2013

About Pepco Holdings, Inc.

- Approximately 2 million customers in Delaware, the District of Columbia, Maryland and New Jersey
  - Atlantic City Electric, Delmarva Power and Pepco provide regulated electricity service
    - Delmarva Power also provides natural gas service
  - Pepco Energy Services is a non-regulated subsidiary that provides energy efficiency and renewable energy services

Pepco Holdings, Inc. Quick Facts

- Incorporated in 2002
- Service territory:
  8,340 square miles
- Customers served
  - Atlantic City Electric:
    - 545,000 – electric
  - Delmarva Power:
    - 503,000 – electric
    - 125,000 – natural gas
  - Pepco:
    - 793,000 – electric
- Total population served:
  5.6 million



Settlement Overview

- Daily
  - eRPM Upload of Capacity and Transmission Responsibilities
  - Initial Zone Load Calculation
  - Initial Load Settlement Calculation
  - eMTR Validation / Submission
  - Reconciliation of Final Zone Load to Load Settlement
  - InSchedule Upload / Confirmation

- Monthly
  - Monthly Meter Correction - eMTR

Initial Zone Load Calculation

- Previous day hourly Generation and Tie Point data are loaded into the Zone Load Processing System (ZLPS)
  - Hourly real-time and batch loads
- Utilize multiple data sources as available to confirm hourly values
  - 7:00 am – 9:00 am
- Initial zone load is calculated for use in the initial Load Settlement energy calculations
  - Ready by 10:00 am

Initial Load Settlement Calculation

- Overnight batch runs are completed to load customer and energy data into the settlement system
- Daily interval data (AMI and large customer) loaded into the settlement system by 9:00 am
  - Approx. 1 million interval customers are currently coming in daily
- Due to the tight deadlines, (12:00 – 2:00 or 3:00 – 5:00) an initial Load Settlement run is performed using the initial zone load values from the ZLPS
  - 10:00 am
- Output is validated and quality checks are performed
  - Generally completed between 10:00 am and 12:00 noon
- Initial UFE is applied to reconcile the settlement totals to the initial zone values

eMTR Validation / Submission

- Download the available eMTR data into ZLPS and compare data that has been uploaded by others with PHI-metered generation and tie-line data
  - 11:00 – 11:55 am
- Work with other companies to resolve any data differences
- Ensure that the best data is in eMTR by the 12:00 pm (3:00 pm) deadline

Reconciliation of Final Zone Load to Load Settlement

- Download the final zone “Load with Losses” from eMTR and load into the Settlement Tracking and Reporting system (STaR)
  - This is considered the “final” hourly zone load
    - 12:15 pm / 3:15 pm
- Calculate a reconciliation factor to allocate the difference between the initial settlement and the final eMTR “Load with Losses” to all suppliers on a ratio-share basis
  - This difference is essentially the 500 kV losses
- Create the InSchedule output file / check
  - 1:30 pm
- If there are post-deadline updates that change the “final” “Load with Losses” values, this process must be repeated

InSchedule Upload / Confirmation

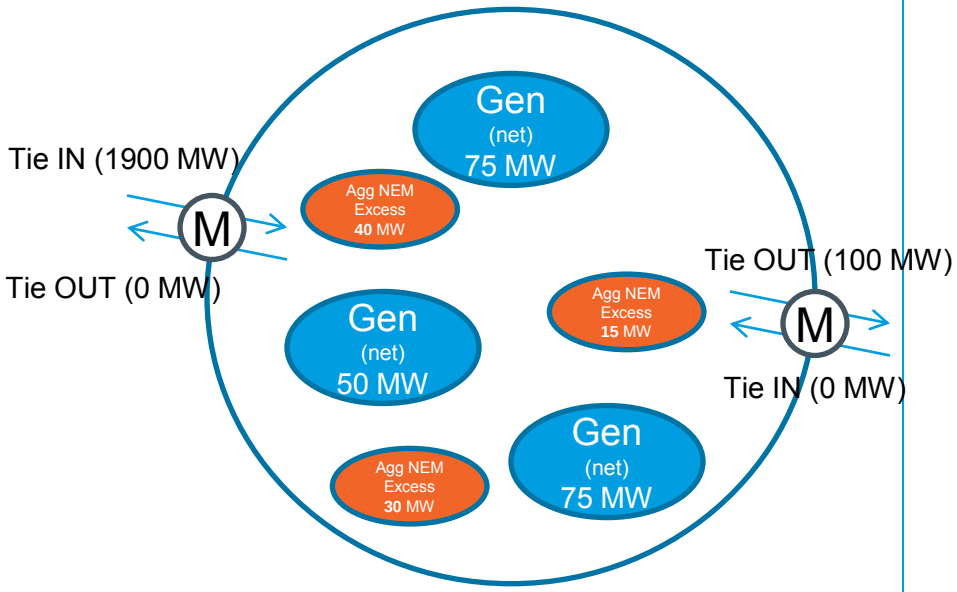
- Upload the final InSchedule file to PJM
  - 1:00 – 2:00 pm
- Download the values and confirm data submitted successfully

Monthly Meter Correction - eMTR

- Request actual revenue-quality meter readings for the tie-lines and send requests to generators to confirm the final monthly values for generation output
  - Meter Department must collect this data within 1 business day after the end of the month in order to allow for data translation and to allow the Load Settlement team to have time to compare / confirm that the correct eMTR data was used for the month
  - If there are discrepancies, there is very little time to make a determination of the correct values
- Manually enter any corrections into eMTR within the 3 business day deadline after the end of the month in question
- Data is only entered as a total MWh correction
  - Financial adjustment by PJM based on average LMP
  - No adjustment is made to the “final” hourly zone load values

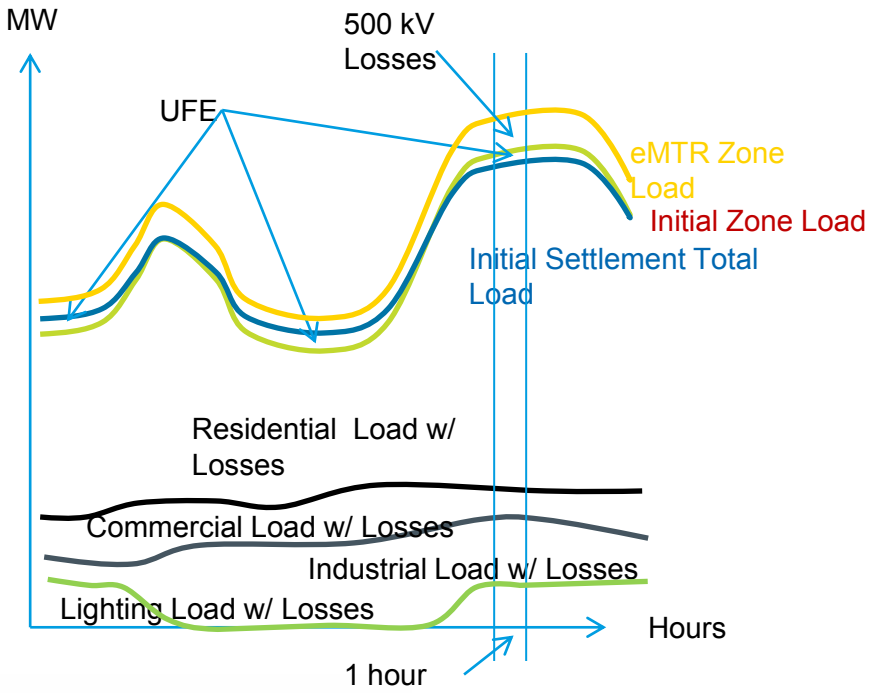
Load Settlement Process

Zone Load (PJM - eMTR)



Zone Load = (1900-0) + (0-100) + 75 + 50 + 75
+ 40 + 30 + 15
= 1900 - 100 + 75 + 50 + 75 + 85
= **2085** MW

Zone Load (Settlement)



Zone Load = [RES Load (kw) * 1.06 + UFE] + [MGS Sec (kw) * 1.06 + UFE] + [AGS Pri (kw) * 1.04 + UFE] + [GSTTOU (kw) *1.02 + UFE] + [OL (kw) * 1.06 + UFE]

Zone Load	= [1080 MWh * 1.06 + 47 MWh]	= 1192
	+ [320 MWh * 1.06 + 27 MWh]	= 366
	+ [215 MWh * 1.04 + 15 MWh]	= 239
	+ [160 MWh * 1.02 + 7 MWh]	= 170
	+ [110 MWh * 1.06 + 2 MWh	= 118
		2085 MWh