



# 2014 RTEP Assumptions

- Load Flow Modeling
  - Power flow models for world load, capacity and topology will be based on the 2019 summer peak case from the 2013 ERAG MMWG series power flow base case
  - Update of adjacent areas with latest topology
  - PJM topology will be based on the 2018 RTEP case that was used in the 2013 RTEP
    - Include all PJM Board approved upgrades through the December 11, 2013 PJM Board of Manager approvals as well as all anticipated February 2014 PJM Board approvals



# Locational Deliverability Areas (LDAs)

- Includes the existing 27 LDAs
- Total of 27 LDAs
  - All 27 to be evaluated for 2017/2018 delivery year RPM base residual auction and also for the 2019 Summer RTEP case

LDA	Description
EMAAC	Global area - PJM 500, JCPL, PECO, PSEG, AE, DPL, RECO
SWMAAC	Global area - BGE and PEPCO
MAAC	Global area - PJM 500, Penelec, Meted, JCPL, PPL, PECO, PSEG, BGE, Pepco, AE, DPL, UGI, RECO
PPL	PPL & UGI
PJM WEST	APS, AEP, Dayton, DUQ, Comed, ATSI, DEO&K, EKPC, Cleveland
WMAAC	PJM 500, Penelec, Meted, PPL, UGI
PENELEC	Pennsylvania Electric
METED	Metropolitan Edison
JCPL	Jersey Central Power and Light
PECO	PECO
PSEG	Public Service Electric and Gas
BGE	Baltimore Gas and Electric
PEPCO	Potomac Electric Power Company
AE	Atlantic City Electric
DPL	Delmarva Power and Light
DPLSOUTH	Southern Portion of DPL
PSNORTH	Northern Portion of PSEG
VAP	Dominion Virginia Power
APS	Allegheny Power
AEP	American Electric Power
DAYTON	Dayton Power and Light
DLCO	Duquesne Light Company
Comed	Commonwealth Edison
ATSI	American Transmission Systems, Incorporated
DEO&K	Duke Energy Ohio and Kentucky
EKPC	Eastern Kentucky Power Cooperative
Cleveland	Cleveland Area

- Firm Commitments
  - Long term firm transmission service will be consistent with operations
- Outage Rates
  - Generation outage rates will be based on the most recent Reserve Requirement Study (RRS) performed by PJM
  - Generation outage rates for future PJM units will be estimated based on class average rates

- Peak Load
  - Load will be modeled consistent with the 2014 PJM Load Forecast Report
  - The final load forecast data is expected to be available late December 2013
  - Include Demand Response (DR) and Energy Efficiency (EE) that cleared in the 2016/17 BRA
- Light Load
  - Modeled at 50% of the Peak Load forecast per M14B
  - The Light Load Reliability Criteria case will be modeled consistent with the procedure defined in M14B
- Load Management, where applicable, will be modeled consistent with the 2014 Load Forecast Report
  - Used in LDA under study in load deliverability analysis

- All existing generation expected to be in service for the year being studied will be modeled.
- Future generation with a signed Interconnection Service Agreement, or that cleared in the 2016/17 BRA, will be modeled along with any associated upgrades.
  - Generation with a signed ISA will contribute to and be allowed to back-off problems.
- Generation with an executed Facility Study Agreement (FSA) will be modeled along with any associated network upgrades.

- Machine list
  - Updated CIR's for existing units
  - Queues with an executed FSA or higher as of 12/11/2013 will be included in the base model
    - Consult posted machine list for exact modeling assumption
    - FSA will be turned off but allowed to contribute to problems in Generator Deliverability
    - Any identified network upgrades driven by included queue projects will also be modeled
  - Units that cleared in previous RPM auctions that do not yet have an executed FSA or higher will be modeled
  - 2019 RTEP machine list will be presented at February TEAC

- Generation with an FSA will be modeled consistent with the procedures noted in manual 14B
- Generation with an executed FSA will be modeled off-line but will be allowed to contribute to problems in the generation deliverability testing.
  - Generation with an executed FSA will not be allowed to back-off problems.
- Additional generation information (i.e. machine lists) will be posted to the TEAC page.



- Generation that has officially notified PJM of deactivation will be modeled offline in RTEP base cases for all study years after the intended deactivation date
- RTEP baseline upgrades associated with generation deactivations will be modeled

- All PJM bulk electric system facilities, all tie lines to neighboring systems and all lower voltage facilities operated by PJM will be monitored.
- Contingency analysis will include all bulk electric system facilities, all tie lines to neighboring systems and all lower voltage facilities operated by PJM.
  - Contingencies in neighboring systems
- Thermal and voltage limits will be consistent with those used in operations.

- As part of the 24-month RTEP cycle, a year 8 (2021) base case will be developed and evaluated as part of the 2014 RTEP
- The year 8 case will be based on the 2020 case that was developed as part of this year's 2013 RTEP
  - The case will be updated to be consistent with the 2014 RTEP assumptions.
- Purpose: To identify and develop longer lead time transmission upgrades

- Case currently out to TO's for second review
  - Case distributed for second review has the first round of TO updates and updated queue generation
- In progress
  - Contingency update and check
  - Update interchange
  - Update generation dispatch
    - Machine list will be presented at February TEAC
  - Update load per latest 2014 load forecast

- End of January 2014
  - Receive TO feedback and updates, finalize case and associated files
- February 2014
  - Exercise the model using analysis, coordinate quality control check and benchmark
- February 2014 - March 2014
  - Begin formal RTEP analysis

- MOD desk reference completed Q4 2013
- Remote Access Pilot Program (Jan – Feb 2014)
  - Will be underway shortly to ensure TO's can access MOD and all features work correctly
- All TO's requested to use MOD Remote Access to manage PJM RTEP Base case modeling data (March 2014)
  - TO reviewed and updated 2014 MMWG case will be loaded as base case
  - PJM and TO's will work remainder of 2014 to create, upload, and review individual project files

Questions?

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