



# Reactive Deficiency due to an Increase in capacity or energy to an existing Generator

PJM Reactive Power  
Focus Group  
PJM Planning Committee  
Meeting  
November 18, 2009



## Reactive Power Focus Group Participants

- Mark Sims (PJM)
- John Snyder (APS)
- Terry Clingan (APS)
- Charlie Matassa (BGE)
- Al Engelman (ComEd)
- Tom Kay (ComEd)
- Ronnie Bailey (Dominion)
- Steve Huntoon (FPL)
- Jeff Mackauer (FE)
- Patti Esposito (NRG)
- Alex Laguardia (NRG)
- Mike Tartibi (NRG)
- Jack Grant (NRG)
- Dave Scarp (ODEC)
- Ron Chu (PECO)
- Esam Khadr (PS)
- Robert Mechler (RRI)
- John Simpson (RRI)

- Reactive Deficiency exists when an existing synchronous generator submits a capacity or energy increase to the Generator Interconnection Queue and such increase results in the generator not meeting the PJM Power Factor requirements
- It is not the intention of the Focus Group to change the existing tariff requirements
- Proposed Reactive Deficiency business rules will not be applied retroactively to existing generators

- Reactive Deficiency will be replaced, if all possible, by generator spinning Vars or, if infeasible or cost prohibited, by dynamic Vars (e.g. SVC or similar reactive devices)
- Shunt Capacitor application could be considered and will be reviewed by PJM on a case by case basis
- Reactive Deficiency is defined as the difference between the MVar to meet the PJM requirements and the MVar capability after the upgrade
- Reactive Deficiency Charge is equal to the reactive deficiency (in MVar) multiplied by the most recent average cost estimates (in \$/MVar) for installing SVCs on the PJM system

- There will be 2 SVC cost estimates – one for installation at and above 230kV and one below 230kV
- Applicable charge is based on the generator's interconnection voltage (POI)
- Reactive Deficiency Charges will be used to fund reactive projects in the Transmission Owner's zone in which the Interconnection Customer's generator is located
- Transmission Owner shall be responsible to construct, own and maintain these reactive projects

- **Minority Opinions:**
  - Use of average cost estimate could lead to that a TO under-collects the cost for constructing the reactive project
  - The reactive deficiency rule should only be applied to the incremental MW due to the upgrade and the initial MW output before the upgrade is obligated to meet the PF requirements
- **Unresolved Items:**
  - When or which Queue should this rule be applied?
  - What would be the approach to handling reactive deficiency for generator upgrade request already in the Interconnection queue?
  - When should the reactive deficiency charges be collected?
  - How long should PJM have to define the reactive project that is funded by the reactive deficiency charges?

- The Focus Group will draft the proposal and the revised Focus Group white paper for review and comment at the 12/16/2009 PC Meeting
- Permission will be requested to work on the necessary PJM Manual changes for endorsement at the January 2010 PC meeting
- Endorsement of the proposal and Manual changes will be requested at the January 2010 MRC and MC meetings
- Implementation of the proposal will begin in February 2010



# Feedback

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