



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

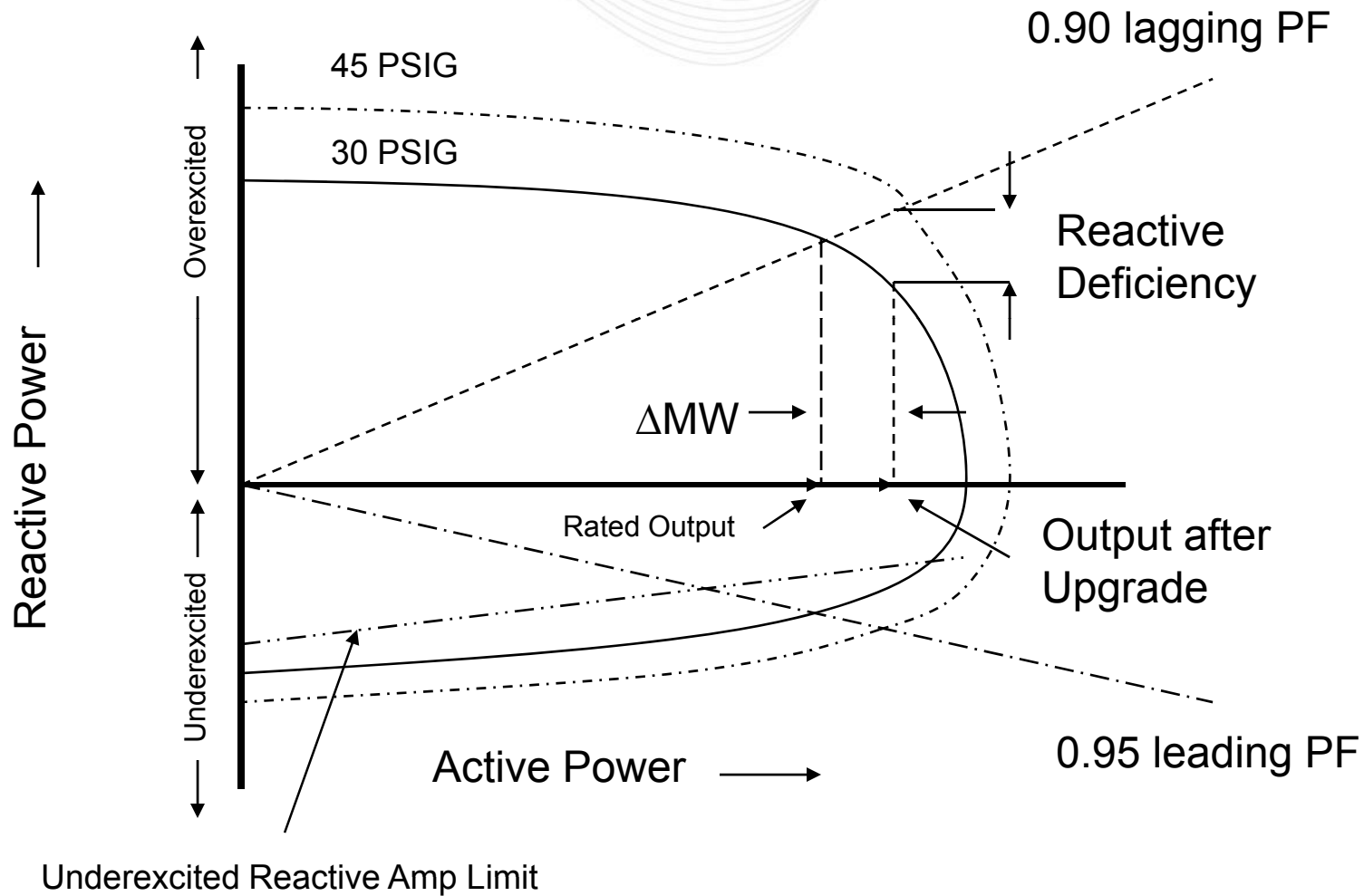
PJM Reactive Power  
Focus Group  
PJM Planning Committee  
Meeting  
October 22, 2009

- Mark Sims (PJM Planning)
- John Syner (APS)
- Terry Clingan (APS)
- Charlie Matassa (BGE)
- Ron Chu (Exelon)
- Jeff Mackauer (FE)
- Esam Khadr (PSE&G)

- Definition - The amount of spinning Vars required to meet the PJM Power Factor Requirements
  - 0.95 leading to 0.90 lagging for existing rated output of a synchronous generator
  - 1.0 to 0.90 lagging for the incremental MW from an upgrade to an existing generator
- Issues were discussed previously at the 2/22/09, 4/23/09, and 5/21/09 PC meetings



# Typical Generator Reactive Capability Curve



## Reactive Power Focus Group Suggestions

- Reactive Deficiency be replaced, if all possible, by generator spinning Vars or, if infeasible or cost prohibited, by dynamic Vars (e.g. SVC).
- Static Vars from shunt capacitors are, in most instances, disallowed.
- Reactive Deficient Interconnection Customers
  - Can install dynamic Vars at the generation site, or
  - Can pay a reactive deficiency charge.
- Reactive Deficiency Charge is equal to the reactive deficiency (in MVar) times the most recent cost estimates (in \$/MVar) for installing SVCs on the PJM systems.



## Reactive Power Focus Group Suggestions

- Reactive Deficiency Charges will be used to fund reactive (e.g. SVC) projects in the Transmission Owner's zone in which the Interconnection Customer's generator is located.
- These reactive projects are treated similar to "But For" projects and can be RTEP Baseline reactive projects in the TO zone.
- Static Vars (e.g. shunt capacitor) projects could be considered if reactive deficiency charges collected for the TO zone are insufficient to fund a SVC project.
- Transmission Owner owns and maintains these reactive projects.



# Feedback

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