

Reactive Deficiency Mitigation Implementation

November 10, 2010

- Manual 14B Attachment H endorsed by PC
- Applies only to increases greater than 20MW in capacity or energy to existing synchronous generation
 - The mitigation process is optional
- MVAR deficiency magnitude calculation
 - Measured at the generator terminals
 - Existing capability requirement (grandfathered or ISA)
 - Increased capability requirement is 1.0 (unity) to 0.90 (lagging) power factor for increases
- MVAR deficiency cost calculation

- **Primary Implementation Issue**
 - Tax consequence of holding deficiency charge funds across multiple fiscal years
- **Proposed solution**
 - PJM will implement accounts at PJM to hold the deficiency charges until they are used for upgrades as defined in Attachment H
 - Limit tax liability by requiring letters of credit as security in place of cash for deficiency charges greater than \$2M for an individual interconnection request
 - Implement reactive upgrades as soon as possible to allocate deficiency charge to an upgrade

- Average deficiency range approximately 10 – 30 MVAR's
- Potential Maximum deficiency in the 100's of MVAR's
- Approximately 30 interconnection projects per year have a deficiency requirement

- **Reactive Deficiency Charge Example**

Assumptions

- For this example, estimate using \$125,000 / MVAR
- Actual estimates will follow the method defined in Attachment H

– Less than 50 MVAR example

- 15 MVAR deficiency = $15 \text{ MVAR} * \$125\text{k} / \text{MVAR} = \mathbf{\$1.875\text{M}}$
- Deficiency charge could be submitted as either a letter of credit or cash

– More than 50 MVAR example

- 130 MVAR deficiency = $130 \text{ MVAR} * \$125\text{k} / \text{MVAR} = \mathbf{\$16.25\text{M}}$
- 400 MVAR deficiency = $400 \text{ MVAR} * \$125\text{k} / \text{MVAR} = \mathbf{\$50\text{M}}$
- Deficiency charge must be submitted as a letter of credit
- TO will provide an actual cost estimate when a specific SVC installation has been approved

– Next Steps

- Implementation timeline
- MRC approval