New Service Request Study Process Education
and Identification of Potential Process Issues to be Discussed

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Feasibility Study

- High level, initial evaluation of project

- Customer can select a primary and secondary Point of Interconnection (POI)

- Estimates are desk-side level estimates (no field evaluation)

- Customers have 30 days to evaluate results and sign a System Impact Study Agreement (SISA)
System Impact Study

• Refinement of Feasibility Study results

• Customer must select a single POI (if two were evaluated in the Feasibility Study)

• Analysis incorporates any changes that occurred since the Feasibility Study analysis was performed

• Estimates are still desk-side

• Customers have 30 days to evaluate results and sign a Facility Study Agreement (FSA)
• Transmission Owner has majority of work

• PJM analysis required only if work is deferred from the System Impact Study phase

• Field review may be performed if required by Transmission Owner
• High level, initial evaluation of project

• Customers receive indications of impacts to the system
  – No reinforcements, costs, or time to construct

• Customers have 30 days to evaluate results and sign a System Impact Study Agreement (SISA)
Upgrade Request studies

• Types of projects
  1. Customer provides MW quantity with source-sink
     • Determine impacted flow gates through analysis of markets based case
     • Determine impacted facilities by comparing markets based case results to queue case
  2. Customer requests to increase the capability of a system element
  3. Customer requests to advance construction of a reinforcement in the Regional Transmission Expansion Plan
     • Work with transmission owners to provide system impact study
       – Much less time to review impacts and design reinforcements without feasibility study
Require Same Studies To Be Performed?

- Transmission Service Requests
  - Add Feasibility Study after initial study (may require discussion with other external forums)

- Upgrade Requests
  - Add Feasibility Study
  - Does not preclude PJM’s ability to advance studies in the process if no other interactions with other New Service Requests exist
• Developed as a means to remove small project analysis interactions with larger project analysis

• PJM makes determination of Alternate Queue during Feasibility Study load flow analysis

• Alternate Queue projects will not be studied by PJM beyond the initial screening

• Transmission Owners will complete remaining studies required for the project to be consistent with Feasibility, Impact, and Facility Study analysis
• Criteria
  – project cannot be connected to a PJM monitored transmission facility as defined in PJM Manual M-03
  – project cannot be an uprate or addition to an existing facility
  – project distribution factor for any PJM monitored transmission facility may not exceed 5 percent and the MW impact of the project cannot be greater than 1 percent of the element rating
  – project may not connect to the same Point of Interconnection as any other project
  – aggregate impact of all projects connecting on any individual radial connection to a PJM monitored transmission facility shall not exceed 1 percent of line rating
• Options?
  – Remove process
  – Modify process
    • Maintain 6 month queue, but evaluate projects every three months?
Reinforcement costs <$5 million allocated to all in a queue which add load to the violation defining the need for the reinforcement

- Projects which do not overload the element, but add load prior to a project overloading the element, have cost allocation
- See below for example of cost allocation for <$5 million upgrades

<table>
<thead>
<tr>
<th>Project</th>
<th>Loading added to element</th>
<th>Final element load</th>
<th>Cost Allocation?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Yes</td>
<td>95%</td>
<td>Yes</td>
</tr>
<tr>
<td>B</td>
<td>No</td>
<td>95%</td>
<td>No</td>
</tr>
<tr>
<td>C</td>
<td>Yes</td>
<td>102%</td>
<td>Yes</td>
</tr>
<tr>
<td>D</td>
<td>Yes</td>
<td>115%</td>
<td>Yes</td>
</tr>
</tbody>
</table>
PJM must wait to have queue close to determine total impacts
Method was requested by small generation customers to reduce impacts of reinforcement costs
Now being seen as holding up projects which do not cause an overload
Options
  – Remove rule
  – Redefine rule
Next Steps

• Move forward with items to the PC?

• Move forward with additional PC sub-group discussions?

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