



Feasibility Study

IPSTF
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- **Timely completion of studies**
- Move projects to an ISA more quickly
- Reduce number of re-tools
- **Provide greater certainty in results**
- Manage changes associated with projects
- Manage process workload

- For a typical queue PJM identified 2,222 violations with the existing process (i.e. all single contingencies and some common mode contingencies)
- For the same queue running all single contingencies and all common mode contingencies, over 3,800 violations were identified
- 70% increase in the number of violations that would be identified at the feasibility study stage

- Identifying the additional violations earlier in the process would provide useful information to the developer

- Concern - Identifying upgrades and developing cost estimates for the additional violations would require more time and will impact the timeliness of the reports

- Solution
 - Use standard per unit estimates for upgrades
 - Currently used in other parts of the country
 - Reference California ISO Appendix Y Generator Interconnection Procedures

- Tables to be developed by Transmission Owners
 - Include BES facilities and non-BES facilities as required
- Posted to PJM Web
- Used in the development of cost estimates
- Table format and estimates will be standardized to the extent practical
- Regional differences captured
 - Construction in urban areas, rural, mountains, heavy vegetation, new construction versus adding to existing facilities etc.

- New “loop in” substation with line bay for interconnecting generator
- New substation transformers (i.e. 500/230 kV, 230/115 kV)
- New line position (i.e. single breaker, breaker-and-a-half, double breaker double bus including all associated equipment)
- New bus tie breaker(s)
- Replacement equipment (i.e. disconnects, wave traps, CB upgrade, CB replacements)
- Protection and Control (i.e. new line relaying per terminal)
- New Transmission Line
 - Underground
 - Overhead
 - Single circuit (monopole, lattice, wood pole)
 - Double circuit (monopole, lattice, wood pole)
 - Include cost of grading, access roads etc.
- Reconductor / Upgrade Existing Line
- Remove Existing Line (for wreck and rebuild scenario)

- Develop the process around use of per-unit estimates for Feasibility Studies
 - Posting to the web
 - How often the per-unit estimates get updated
 - Process for incorporating actual or as-built costs into the estimates

- Develop templates