No Harm Testing For RTEP Topology Changes

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Purpose Of No Harm Testing

- Assess for reliability issues caused by new upgrades
- Determine if new upgrades need to be more or less robust and evaluate as needed
- Assess cost efficiency associated with entire package of upgrades needed to mitigate reliability criteria

Topology Changes To The RTEP case

- Types of upgrades
  - Baseline Upgrades
  - Supplemental Upgrades
  - New Service Request Upgrades
- Scope of upgrades (examples)
  - Direct in kind replacement
  - Minor changes to impedances
  - New or changing topology
  - Significant changes to circuit capabilities and associated impedances
- The scope of the upgrade, not the type of upgrade, determines what no harm testing is required

No Harm Testing Evaluation Requirements For Topology Changes

- Not all topology scope changes treated the same in terms of evaluation
  - Direct in kind replacement
    - No analysis required
  - Minor changes to impedances or ratings
    - Minimal analysis required
  - Significant changes to impedances or ratings
    - Significant analysis may be required
  - New or changing topology
    - Significant analysis usually required

No Harm Testing Analysis Requirements

- Minor topology changes – Minimal studies required and engineering judgement will be used to determine the need for and scope of studies
- Significant topology changes – Significant analysis likely required and may involve studies associated with:
  - Load Flow
  - Short Circuit
  - Stability