Summary of Updates & Clarifications

- Removed references to distribution facilities
- Clarified and simplified load drop levels and durations.
- Removed generation requirements section
- Additional details for equipment assessment and storm hardening
- Additional considerations
  - Towerline crossings
  - Ultimate system design
  - Series reactors
Equipment Assessment and Storm Hardening

• **Inside Plant**
  - Enhanced explanation of drivers leading to replacement of assets and/or potential upgrades:
    - condition assessment (physical condition, age, asset performance relative to peer group)
    - impact of reliability of retiring facility
    - load levels other than peak
    - outages required for maintenance or construction
    - long lead time equipment failure
  - Redundant facilities for station light and power
    - two light and power supplies
    - generator back-up facilities as necessary
    - maintaining oil pressure on pipe type cables
Equipment Assessment and Storm Hardening - cont

- **Outside Plant**
  - Enhanced explanation of drivers leading to replacement of assets and/or potential upgrades:
    - condition assessment (physical condition, age, environmental, asset performance relative to peer group)
    - impact of reliability of retiring facility
    - load levels other than peak
    - loss of capacity on the system and impact on transfer capability
    - loss of ability to construct future circuits on the right of way
    - outages required for maintenance or construction
    - long lead time equipment failure

- **Details considered prior to the recommendation of a solution**
  - future and ultimate needs
    - high capacity
    - higher voltage
    - higher short-circuit ratings
    - resiliency to natural disasters
Additional Considerations

• **Towerline Crossings**
  - Provides guidance to review existing crossings
    - impact on scheduled and forced maintenance work
    - impact to system operations during maintenance and new construction
    - load level interruption and duration criteria for overhead line crossings
  - frequency of system review
  - approach to future line construction

• **Ultimate System Design**
  Given the high density of the service territory and difficulty of obtaining new rights of way, consideration is given to full utilization design of facilities
  - Guides system design
  - All new construction to be built with consideration of the ultimate design to include accommodations for higher capacity, higher voltage, and higher short-circuit ratings as necessary.
Additional Considerations - cont

• **Series Reactors**
  Discusses transmission series reactors, existing and future. Memorializes historical approach.

  - Not to be utilized to control flow
  - Legacy reactors to be eliminate if they fail or retire due to condition