

Arizona Extreme Contingency Analysis 2014 & 2023

Arizona Corporation Commission
2014 Biennial Transmission Assessment

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AZ Extreme Contingency Analysis

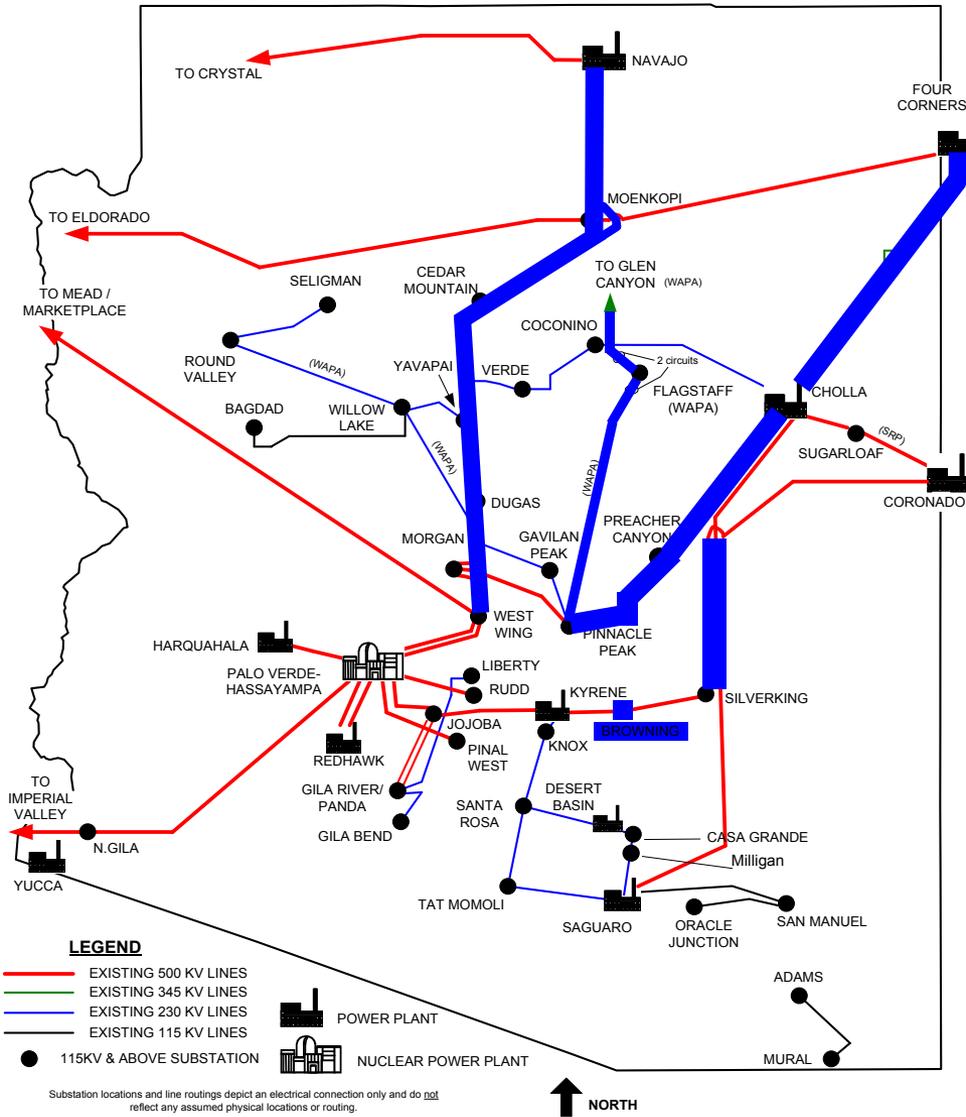
- Filed under a NDA with the ACC
- CEII information
- Presentation is a high level summary of study results
- Phoenix Area Results
- Tucson Area Results

Phoenix Area Analysis

Study Assumptions - Phoenix

- Utilize the 2014 and 2023 heavy summer power flow cases
- The integrated Arizona power system is represented
- Corridors are chosen based upon exposure to forest fires and other extreme events
 - Cholla-Saguaro and Coronado-Silverking 500kV lines
 - Navajo South 500kV lines
 - Four Corners-Cholla-Pinnacle Peak 345kV lines
 - Glen Canyon-Flagstaff-Pinnacle Peak 345kV lines

ARIZONA EHV SYSTEM



Study Assumptions

- Transformer banks studied
 - Browning 500/230kV
- Transformer banks not studied
 - Rudd 500/230kV transformer outage
 - Equivalent to single contingency of Palo Verde-Rudd 500kV line
 - This outage is studied under normal planning for 10 year plans
 - Pinnacle Peak 345/230kV & 500/230kV transformer outages
 - Equivalent to outages of the 345kV lines into Pinnacle Peak
 - Equivalent to outage of the Morgan-Pinnacle Peak 500kV line

SUMMARY OF RESULTS (2014)

- For all outages studied, all load can be served & local Phoenix reserve requirements met
 - Some outages from remote generation would require redispatching from other available sources
 - Maximum redispatch requirement is ~913MW @ Cholla/Coronado
 - Generation made up or purchased from available AZ and CA units
 - Some outages would require some system reconfiguration to alleviate overloads

SUMMARY OF RESULTS (2023)

- For all outages studied, all load can be served & local Phoenix reserve requirements met
 - Some outages from remote generation would require redispatching from other available sources
 - Maximum redispatch requirement is ~1356MW @ Cholla/Coronado
 - Generation made up or purchased from available AZ and CA units
 - Generation in Tucson area was increased
 - Some outages would require some system reconfiguration to alleviate overloads

Questions?