

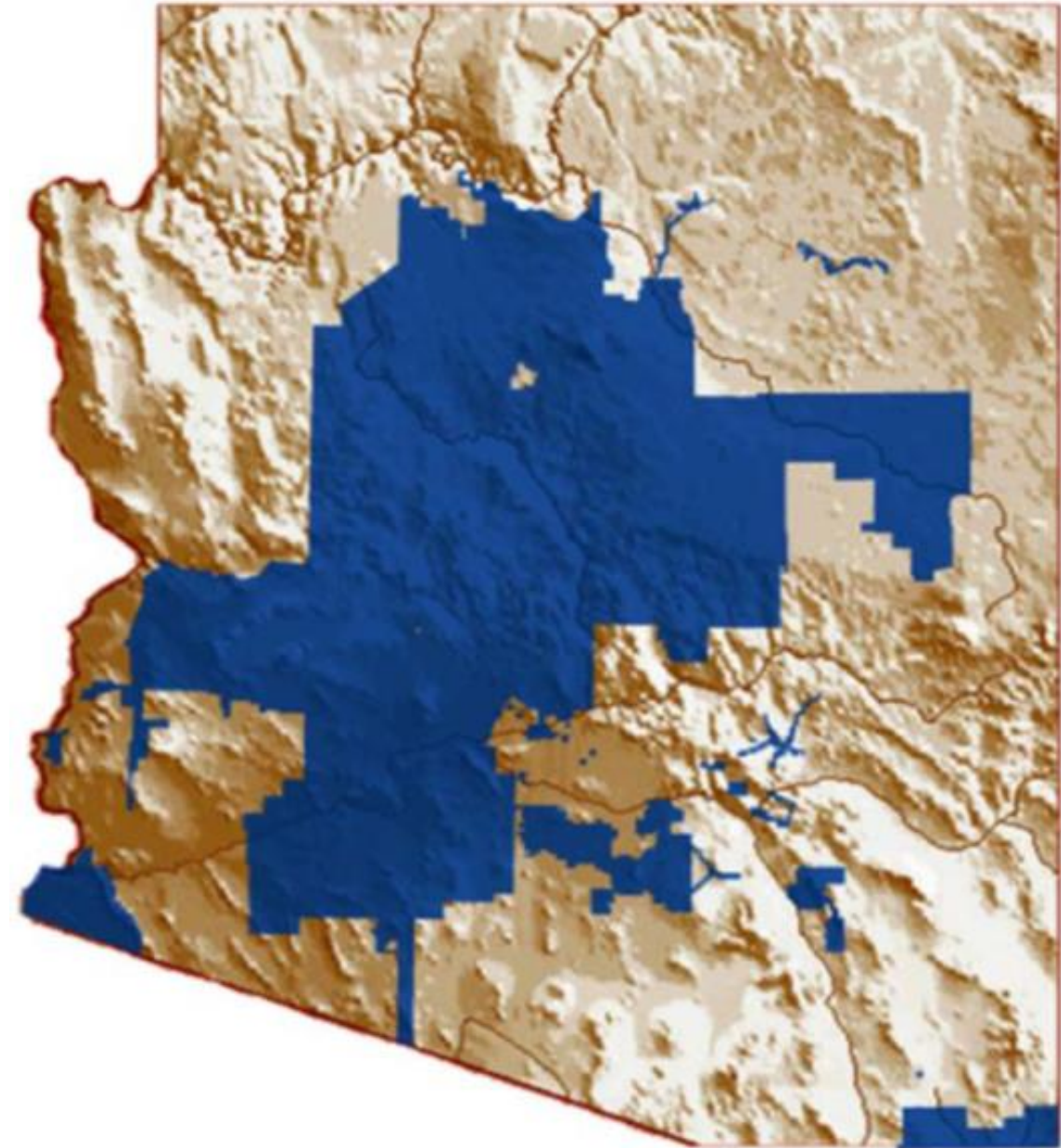
APS: Regional Issues Forum Panel – Stressed System Conditions

September 2022



APS Service Territory

- Largest Utility in AZ
- 11 of Arizona's 15 counties
- 34,646 square mile service area
- Serving more than 1.3 million customers
- Nearly 500 substations; roughly 300,000 transformers; more than 550,000 poles and structures
- Approximately 6,000 miles of transmission lines, 11,000 miles of overhead lines and 22,000 miles of underground cable
- WEIM participant since 2016



Stressed System Conditions

Serving Customers with Reliable Energy

- ❑ We consistently prepare to serve customers at all times
 - ❑ During extreme heat & intense cold
 - ❑ During all hours and any peaks

- ❑ Holistic planning, monitoring, and adjusting are key in providing reliable service to customers
 - ❑ An adequate reserve margin is critical to responding to unplanned events
 - ❑ Identification & reflection of ambient derates in short term & long-term planning
 - ❑ Diversity of generation and fuel sources
 - ❑ Culture of learning
 - ❑ Conduct lessons-learned each summer and winter and implement changes for increased resilience
 - ❑ Tabletop exercises and joint trainings between Marketing & Balancing Authority
 - ❑ No Touch and Constrained Operations Day declarations
 - ❑ Include Generation, Transmission, & IT



Stressed System Conditions

Challenges

- ❑ Gas Management
 - ❑ No mechanism to recognize pipeline constrained/stressed conditions
 - ❑ Extreme Cases enact ITC Limiter or full removal from market
- ❑ Load Forecasting
- ❑ MSG Management
 - ❑ STUC window too short to reflect minimum down times
- ❑ IT Update Planning
- ❑ Market structure matters – constructive policy and market design are key in providing reliable service to customers
 - Confidence in committed system imports is critical
 - Clear accountability for generators and natural gas production in maintaining reliability
 - Requirements for reliability investments

