

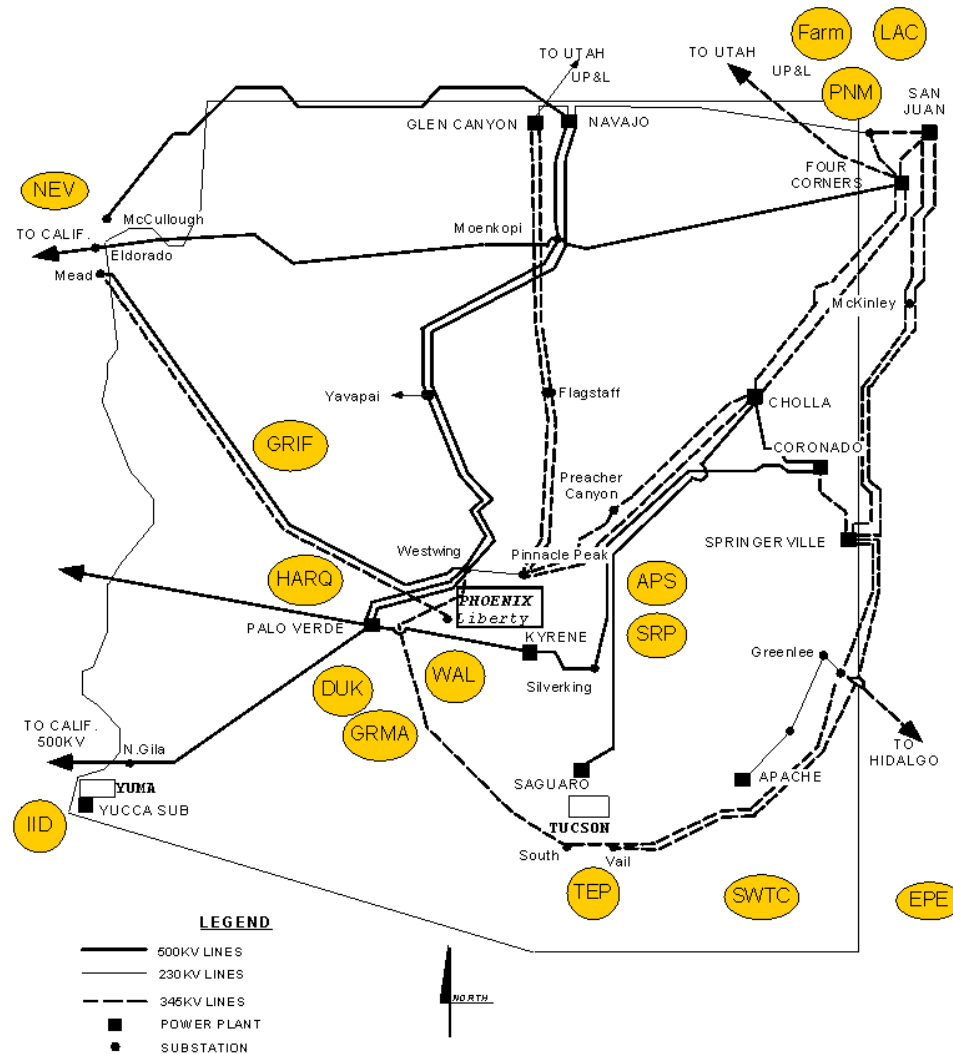
Southwest Reserve Sharing Group

*Presentation to the National Electric Power Company of
Jordan
April 5-10, 2009*



Reserve Sharing in Southwest US

Southwest Reserve Sharing Group



Reserve Sharing in Southwest US

- **Contract by 15 companies to share their hazards**
 - **6 members own part of Palo Verde (largest group hazard)**
 - **990 mw**
 - **APS's share is 405 of the 990**
- **Overall formula for allocation is 7% of load or single largest hazard – for APS that would be $7200 * 7\% = 504$**
 - **If not is reserve group, 504 mw of contingency reserves, half or better spinning, remainder non-spin but available in 10 minutes.**
 - **With reserve group, APS hazard is 405, risk is spread out with the others picking up some.**

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- Risk is shared by others carrying a few mw more, but not as much as would be needed if alone.
- Contract allows for contingency utility to call on other members for assistance, payment either
 - In kind payback of energy
 - SIC of the providing utility
- Assistance is only provided for 60 minutes, or less if the party requiring assistance has other means to replace.
- Utility must recover to pre-disturbance quota by second hour so able to provide assistance to others.
- All other reliability criteria of the Regional Reliability Organization must be met.

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- ACE must be returned to pre disturbance or zero if ACE was positive at disturbance time within 15 minutes of contingency.
- Example assistance request:
 - Company X has loss of 270 mw plant, must activate 170 mw of own reserves and may ask for 100 mw a assistance
 - Common Computer program allocates to other members that can deliver to specified location
 - Supplying members are still require to provide until maximum assistance level reached
 - Once member provides maximum assistance as determined by program, not required to assist next request

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- Contract has been in existence since November 1997
- Originally 11 members, mix of government, public and private
- Members must report each hour their spinning, non spinning and firm commitment for load
- Member that is short of spin or non spin quota penalized \$100 USD per mw everytime
- Must maintain recovery standard of 98% or better
- Member is subject to any addition contingency reserve requirements if they were cause of group not recovering ACE within 15 minutes (group ACE calculated for summing parts)

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- **QUESTIONS ???**