

Arizona's Cooperatives Summer Preparedness Report to ACC 2014

Presented by Arizona's G&T Cooperatives

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Summary

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Arizona's G&T Cooperatives



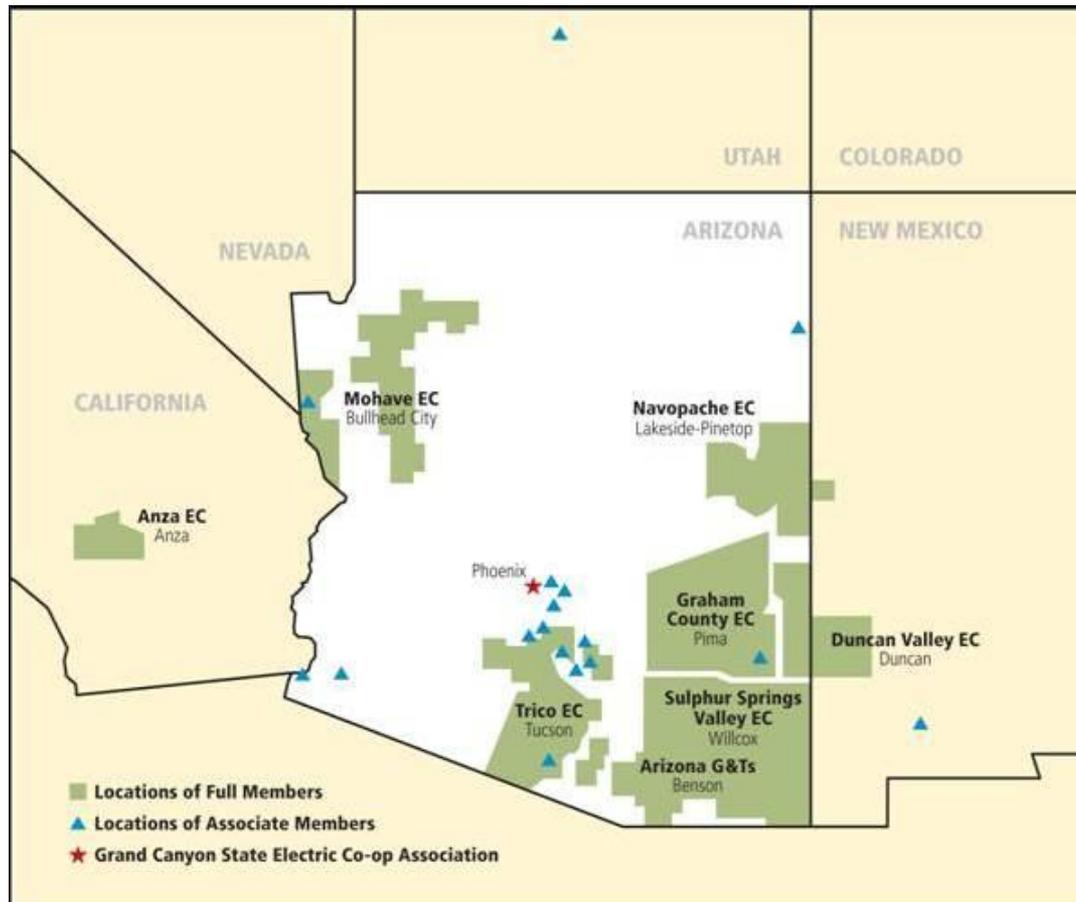
- Arizona Electric Power Cooperative (AEPCO)
 - Generation Owner & Provider for 3 All Requirements Member (ARM) and 3 Partial Requirements Member (PRM) Distribution Cooperatives
 - Power Supply Entity for ARMs and part for PRMs
- Southwest Transmission Cooperative (SWTC)
 - Transmission Owner & Provider for AEPCO and all Members
- Sierra Southwest Cooperative Services (Sierra)
 - Manpower organization for AEPCO and SWTC

Distribution Cooperatives Represented



- G&T ARMs (CARM):
 - Anza Electric Cooperative (Anza, California)
 - Duncan Valley Electric Cooperative (Duncan, AZ)
 - Graham County Electric Cooperative (Pima, AZ)
- G&T PRMs:
 - Mohave Electric Cooperative (Bullhead City, AZ)
 - Sulphur Springs Valley Electric Cooperative (Sierra Vista, AZ)
 - Trico Electric Cooperative (Marana, AZ)
- Navopache Electric Cooperative (Lakeside, AZ)

Cooperatives' Service Territory



4/10/2014

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Cooperatives' Resources - 2014



- G&T Cooperatives
 - Apache 350 MW Coal Fired Units
 - Apache 205 MW Gas Fired Units
 - 110 MW Hydro & Other Purchased Power for 2014
 - Southwest Reserve Sharing Group Capacity
 - Supplemental Market Purchases
 - 622 Miles of Transmission Lines & 26 Substations
- Navopache
 - Federal Hydro Allocation
 - PNM All Requirements Power Contract

Resource Providers' Services



- G&T Cooperatives
 - All Requirements Members receive all resource- related scheduling, trading and ancillary services under their All Requirements contracts.
 - PRMs need to contract for such services from G&T or third party providers. For 2014:
 - Mohave remains in SWTC subsystem of Western Balancing Area; AEPCO is Scheduling & Trading Agent.
 - Sulphur Springs remains in SWTC subsystem of Western Balancing Area; AEPCO is Scheduling & Trading Agent.
 - Trico remains in TEP Balancing Area; TEP is Scheduling & Trading Agent.
- Navopache
 - Receives all necessary resource-related services from PNM and is in PNM Balancing Area.

2013 Actual Peak Load vs Resources

- G&T Cooperatives
 - All Requirements Members collectively had excess net resource compared to their collective 2013 annual peak load of 61.9 MW. AEPCO as agent scheduled the ARM's share of AEPCO Resources (Base, Gas-fired "Other" and certain PPAs) to meet that peak.
 - Each PRM's capacity in AEPCO Resources was not sufficient in 2013 to meet its annual summer peak load.
 - Mohave met its 2013 annual peak load of 201.3 MW by using AEPCO Base and Gas-fired "Other" Resources and purchases of firm market energy. AEPCO, as agent for Mohave, purchases market energy day-ahead and real-time when price is cheaper than AEPCO Base and Other Resources.

2013 Actual Peak Load vs Resources

- G&T Cooperatives (cont'd)
 - Each PRM's...(cont'd)
 - Sulphur Springs met its 2013 annual peak load of 207.9 MW by using AEPCO Base and Other Resources, and market purchases of blocks and supplemental firm energy. AEPCO, as agent for Sulphur, purchases market energy day-ahead and real-time when price is cheaper than AEPCO Base and Other Resources.
 - Trico met its 2013 annual peak load of 194.7 MW by having TEP, as its agent, schedule its share of AEPCO Base and Other Resources, its share of certain AEPCO PPA's, and purchased supplemental market energy. TEP, as Trico's agent, purchases market energy day-ahead and real-time when price is cheaper than AEPCO Base and Other Resources. Trico is responsible for any forward block purchases.
- Navopache - met its annual summer peak load of 70.6 MW by having Public Service Co of NM (PNM) use its federal hydro resources and balance of load was served from PNM resources.

2014 Projected Peak vs Resources

- G&T Cooperatives
 - All Requirements Members project a summer peak load of approximately 61 MW. AEPCO will economically dispatch the ARM's interest in AEPCO Resources (Base then Gas-fired) to meet that peak. If market prices are better than energy cost of AEPCO Other Resources, AEPCO will purchase against those units.
 - Each PRM's capacity in AEPCO Resources is insufficient to meet its projected annual summer peak load.
 - Mohave's projected peak is 206.9 MW, which is greater than its percentage share of the capacity of AEPCO Resources. That load will be served by the most economic dispatch of: (a) its share of AEPCO Base Resources (b) using or buying against its share of AEPCO Other Resources, and (c) buying supplemental firm market energy as needed. Mohave financially hedged natural gas to about 50% of its capacity in AEPCO Other Resources.

2014 Projected Peak vs Resources

- G&T Cooperatives (cont'd)
 - Each PRM... (cont'd) .
 - Sulphur Springs' projected summer peak load is 223.9 MW. SSVEC has purchased firm energy blocks for needs above its interest in AEPCO Resources. Remaining load will be served by economic dispatch of (a) its share of AEPCO Base resources, (b) using or buying against its share of AEPCO Other Resources, and (c) buying supplemental firm market energy as needed.
 - Trico's projected summer peak of 193.4 MW will likely be met by TEP as Trico's agent using Trico's interest in AEPCO Base Resources as supplemented by economic dispatch of a combination of (a) its hedged interest in AEPCO Other Resources (about 75%), (b) using or buying energy against its interest in AEPCO's PPAs, and (c) buying supplemental firm market energy as needed.
- Navopache's projected summer peak load of 71.3 MW will be met by its 7 MW of federal hydro and PNM resources supplied under its power purchase agreement with PNM.

AEPCO Generation Preparedness

- Spring 2014
 - Five-week minor overhaul for summer preparedness of Apache Unit ST3.
 - Completing turbine lube oil fire protection projects on ST1, ST2 and ST3.
 - Apache Gas Turbine 1, 2, 3 & 4 bore scope inspections completed Fall 2013.
 - Test operational readiness of its Combined Cycle unit in early summer.

AEPCO Fuel Situation

- 2014 coal inventory projected to stay between 30 and 45 days of supply for the foreseeable future.
- Coal blending facility continues to be utilized with primarily PRB & New Mexico coal.
- Firm contracts are in place for railroad transportation of coal and pipeline contracts for natural gas supplies.
- Changes effected through last rate case include lowering of both AEPCO and SWTC rates, and improving the Purchased Power and Fuel Adjustment Clause (PPFAC) to provide better commodity fuel cost signals vs market prices.

SWTC Capital Upgrades

- Total Smart Grid (SG) projects cost-to-date = \$12,753,500
- Subtotal SG substation automation = \$5,335,700
- Subtotal SG fiber optic ground-wire install = \$3,548,120
- Subtotal SG maintenance data programming = \$381,110
- Subtotal SG complex billing programming = \$90,420
- Subtotal SG security upgrades = \$3,204,350
- Subtotal SG grant administration = \$193,800

SWTC Transmission Preparedness

- Spring 2014 Activities
 - Completed planned upgrade activities at Apache Generating Station switchyard. Replaced aging 230 and 115kV power circuit breakers and associated protective relays.
 - Completion of all scheduled preventative maintenance activities prior to summer loads.
 - Inspecting and securing as needed 345 kV ground-line wood pole attachments.
 - Focused on line-inspection and vegetation management activities.

G&T Operational Preparedness



- Participated in the WECC Reliability Coordinator regional restoration training.
- Review with System Controllers intercompany backup service agreements (SSVEC and MEC with APS).
- Updated G&T Joint Generation Contingency Reserve Plan for outage of Apache Coal-fired Steam Units.
- Participated in DOE Smart Grid Funding program. This program funded 50% of approved projects. A portion of the funding was used for Smart Grid Security projects, including replacing the Energy Management System (EMS).

Questions?