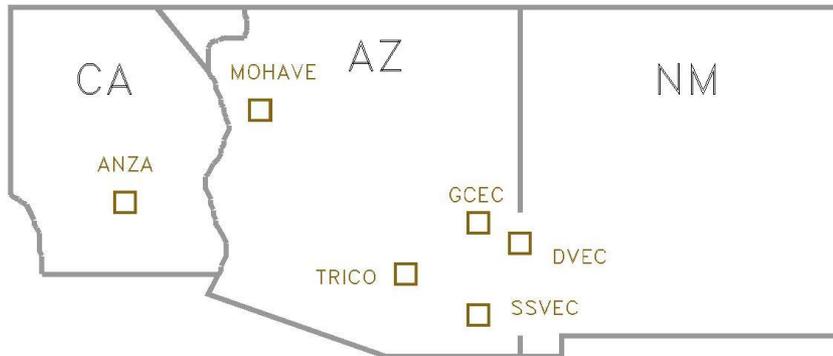


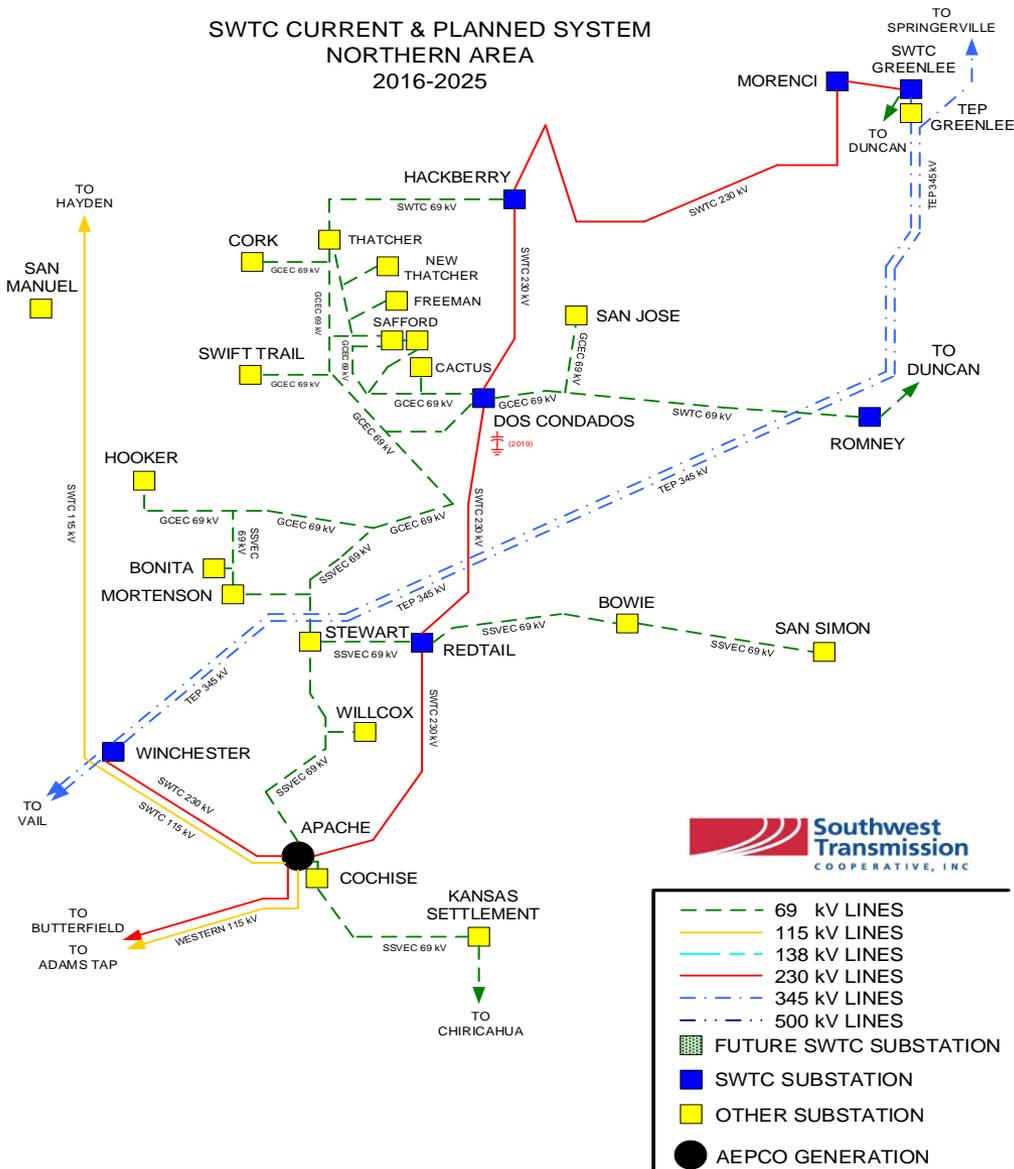
Arizona Electric Power Cooperative, Inc. (AEP
CO)
10 Year Plan Presentation
(2016-2025)
9TH BTA Workshop #1
ACC Hearing Room
June 1, 2016

Overview of AEPCO



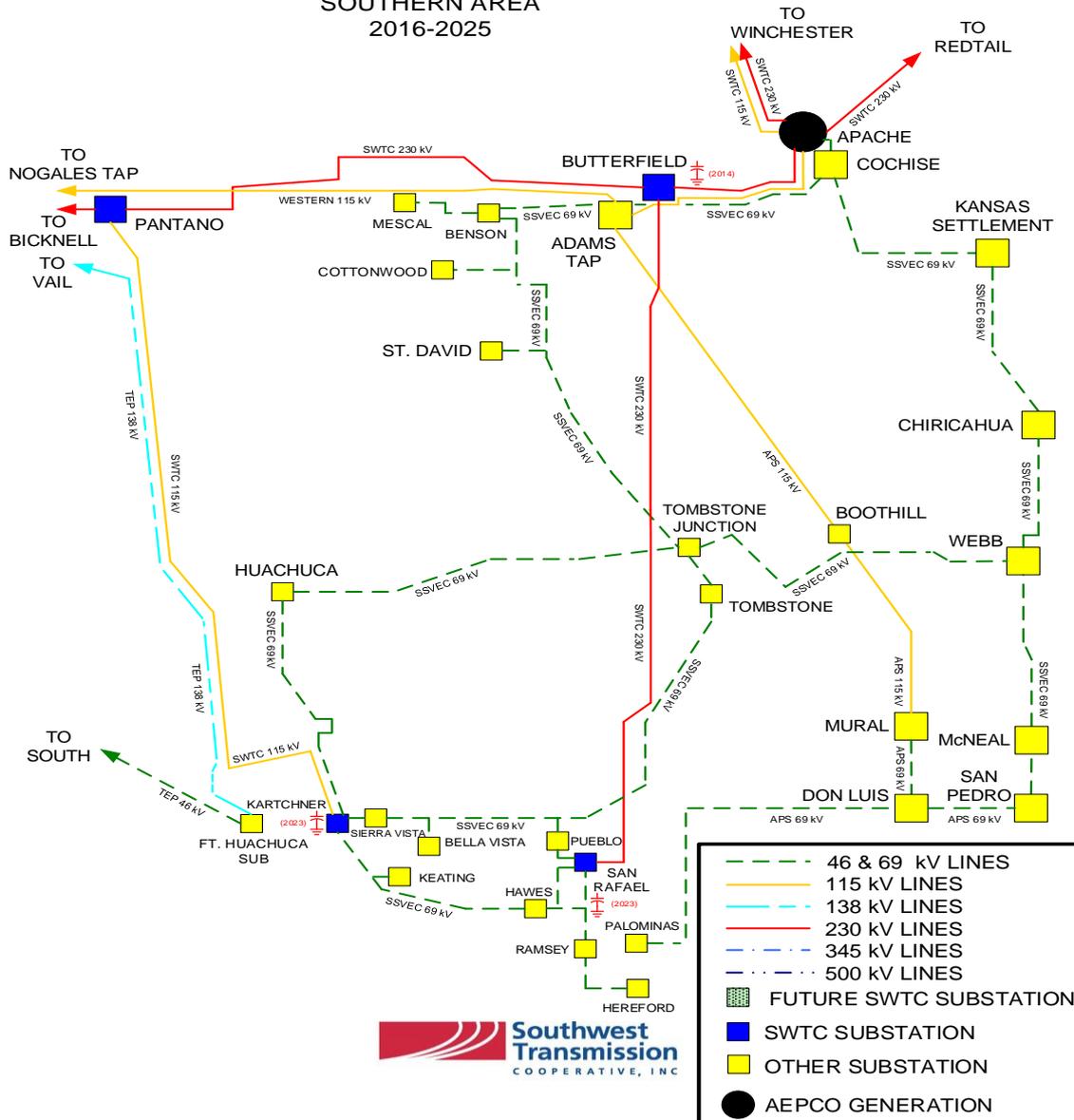
- 6 Member-owners
- 2015 Coincident Peak Load: 635.4 MW (8/15/15 @ 16:00)
- AEPCO's transmission assets include 620.2 miles of transmission line and 26 substations to serve member load.
- AEPCO is in Western's Balancing Authority Area

SWTC CURRENT & PLANNED SYSTEM NORTHERN AREA 2016-2025

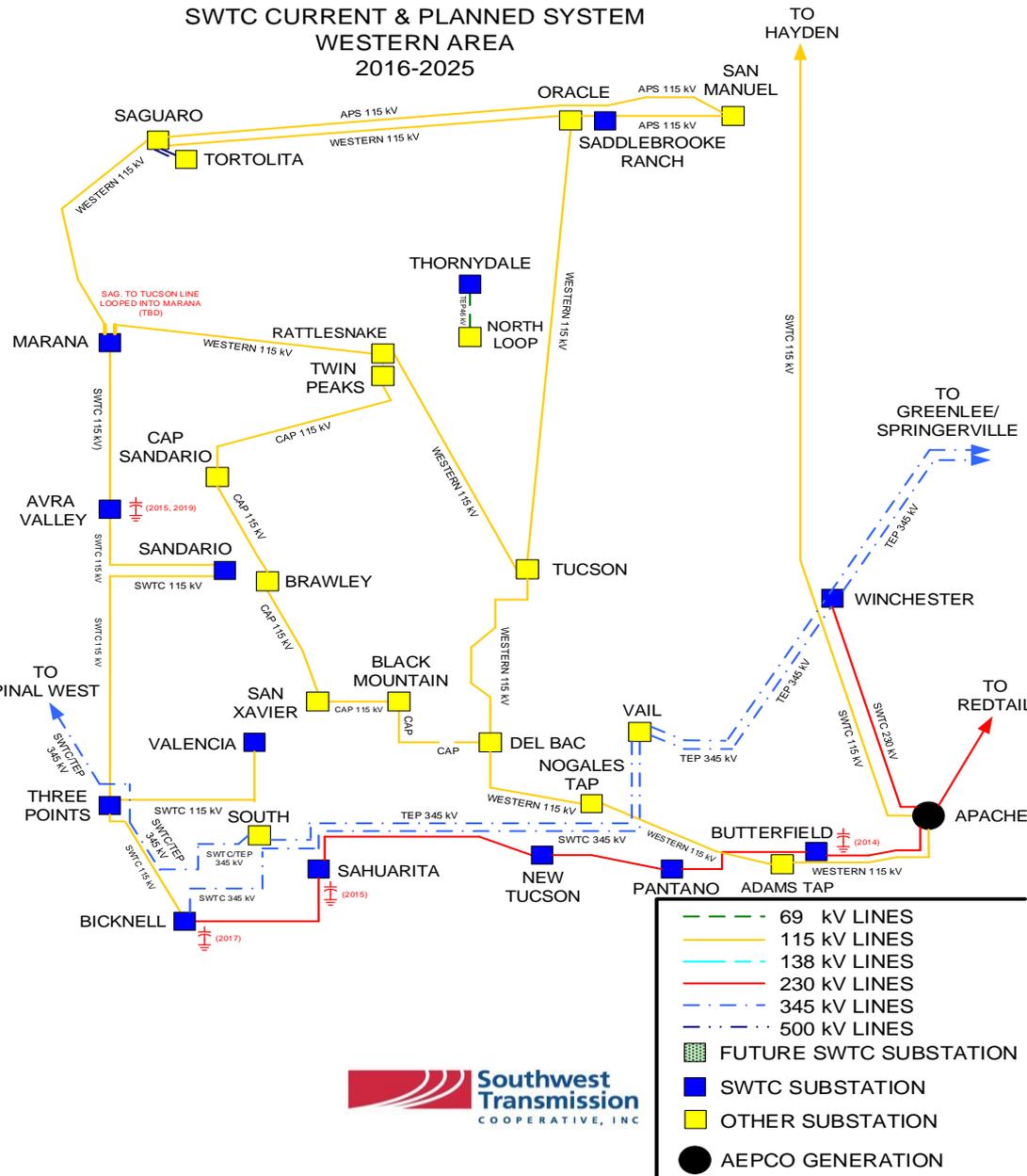


- 69 kV LINES
- 115 kV LINES
- 138 kV LINES
- 230 kV LINES
- 345 kV LINES
- 500 kV LINES
- FUTURE SWTC SUBSTATION
- SWTC SUBSTATION
- OTHER SUBSTATION
- AEPco GENERATION

SWTC CURRENT & PLANNED SYSTEM
SOUTHERN AREA
2016-2025



SWTC CURRENT & PLANNED SYSTEM WESTERN AREA 2016-2025

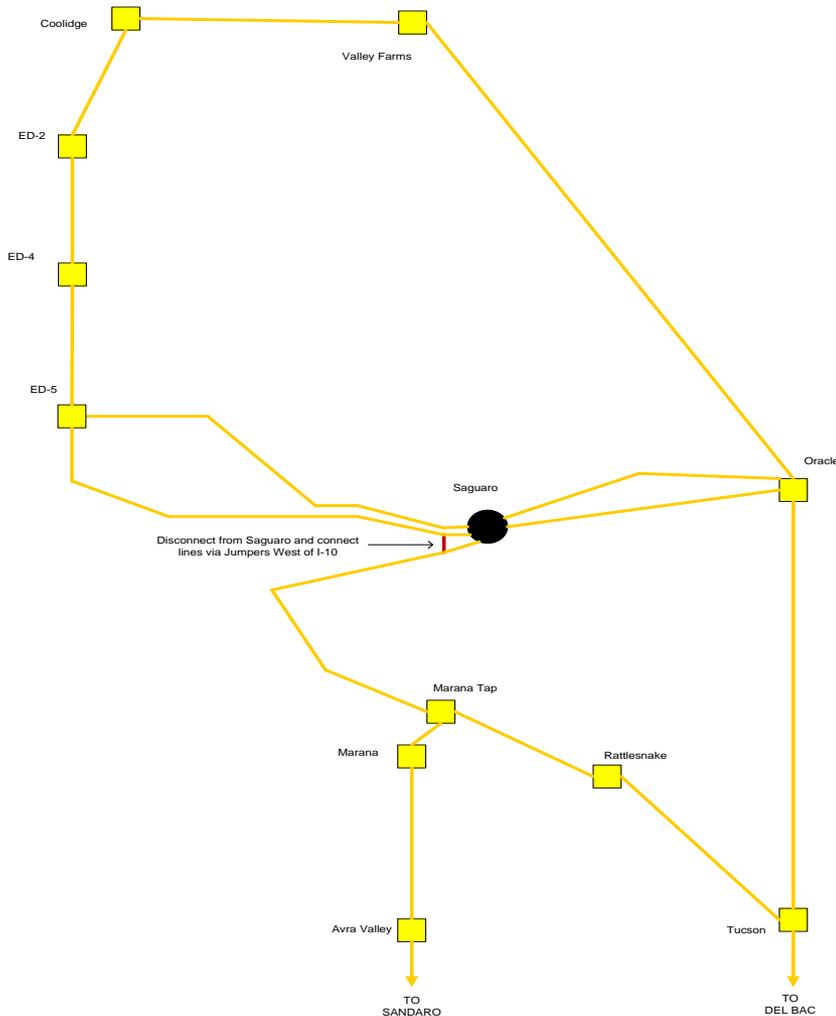


Planned Projects:



- Participation in the Western's Saguaro bypass project.
- Tombstone Junction Project.
- New 115 kV transmission line between AEPCO Valencia substation and CAP's Black Mountain Pumping Station.
- New Capacitor Banks at Bicknell, Butterfield and San Rafael substations.

Saguaro Bypass Project



Description:

One of the ED-5 to Saguaro 115 kV lines and Saguaro to Marana Tap 115 kV transmission line were connected before entering APS Saguaro substation. Both lines disconnected from Saguaro bus.

Temporary alleviates overloads of several transmission lines in this immediate area including Saguaro to Marana Tap and Sandario to Three Points 115 kV transmission lines.

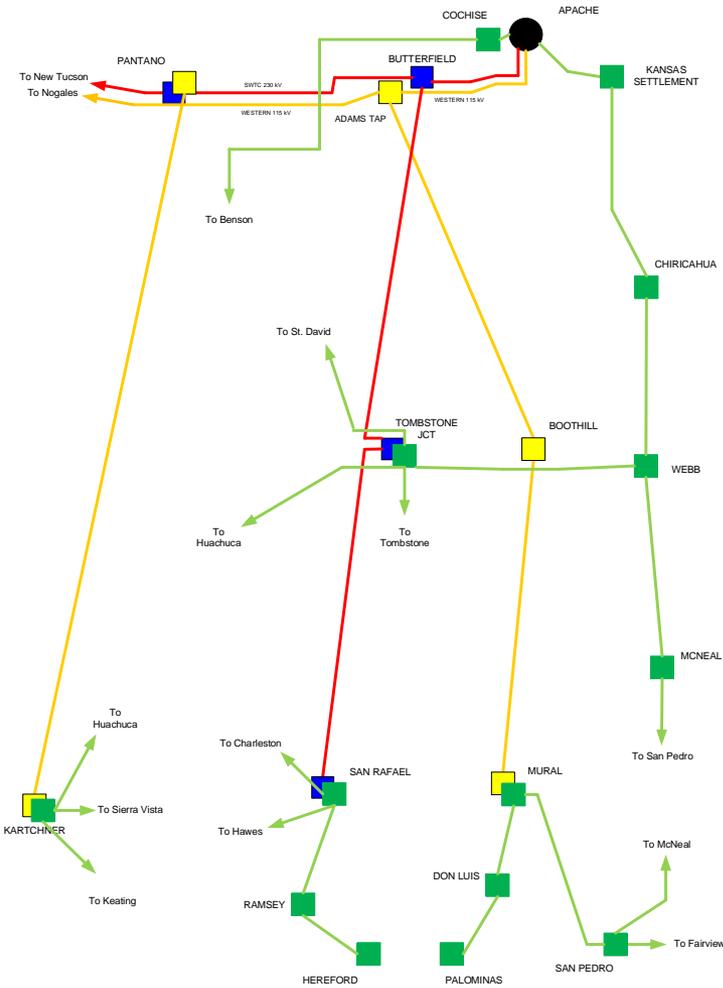
Project Location: Western AEPCO system

Justification: Reliability, Transfer Capability

Estimated Cost: \$0.6 Million

In Service Date: 2016

Tombstone Junction Project



Description:

This Cochise County project involves looping the AEPCO Butterfield to San Rafael 230 kV line into a new Tombstone Junction Substation with a 230/69 kV transformation to the existing SSVEC Tombstone Junction Substation with a potential for additional system enhancements. APS and AEPCO have studied variations of the project that has AEPCO and APS interconnecting their respective systems in the vicinity. This help to further improve system reliability for AEPCO and would include APS loads as a beneficiary of the project. AEPCO continues to meet with APS and SSVEC to discuss joint participation in the project. The driving factor for this project is reliability.

Project Location: Cochise County

Justification: Reliability

Estimated Cost: \$5.6 Million

In Service Date: 2021

Additional Projects Under Consideration



- Apache/Hayden to San Manuel 115 kV Line.
- Saguaro to Thornydale 115 kV Line.
- Thornydale to Marana 115 kV Line.
- CAP 115 kV Line Tap to AEPCO Sandario Substation.
- New interconnection with TEP at Fort Huachuca.

ACC Staff Questions

- ***Describe all technical studies that were performed in support of your filed transmission plan.*** The technical studies performed in support of AEPCO's filed transmission plan include those performed for the NERC TPL Standards, those performed for 10 year plan and those performed with other entities involved in Cochise County Area studies and Marana area studies.
- ***List all reports that exist for the studies identified in item 1 and identify which reports were not included in your ten year plan filing.*** The reports, none of which were previously filed, and are currently in draft form are:
 - 2015 AEPCO Transmission Planning Assessment Report
 - Cochise County Area Transmission Analysis
 - South of Saguaro Transmission analysis
 - CAP Interconnection analysis

ACC Staff Questions, Cont.

- ***Identify all transmission projects in your transmission plan for which power flow and stability analyses have not been performed or for which reports have not been filed. Describe how and when do you intend to respond with the required studies and reports.***
Power flow and stability analyses were performed for all projects, though the attendant reports mentioned in the previous slide have not been filed with the ACC as they have not yet been finalized.

ACC Staff Questions, Cont.

- ***Describe any stakeholder input and review that occurred regarding your transmission plan.*** The current Ten Year Plan was presented at the SWAT Oversight Committee Meeting on January 28, 2016. Twice a year AEPCO plans are presented at joint AEPCO/TEP Quarterly Stakeholder Transmission Planning Meetings as required by FERC Order No. 890. In addition, all projects receive a “peer-review” by AEPCO’s Class A Operating Committee (CAOC) on an on-going basis. Changes agreed to by the CAOC and the AEPCO Board are then incorporated into a Construction Work Plan.

ACC Staff Questions, Cont.



- ***Please identify the subregional transmission planning forum(s) in which your transmission plan was addressed. Were your project(s) or planned facilities studied in that forum? Did your project(s) or plan undergo a peer review in that subregional forum and were they incorporated into the subregional plan?*** AEPCO's plans are addressed at SWAT and WestConnect. The projects are studied and reviewed in these forums and are incorporated into the WestConnect Transmission Plan.

ACC Staff Questions, Cont.

- **Identify all projects in your filed transmission plans that were not addressed in a subregional transmission planning forum.** None.
- **Please identify any transmission projects that are seeking a WECC path rating and identify the progress made in the rating process.** None.
- **Describe the extent to which replacement generation that is required to accommodate actual, planned, or potential coal generation retirements is being considered in your transmission planning process. Please identify any transmission projects that are directly related to actual, planned, or potential coal retirements.** AEPSCO is currently in the process of evaluating the transmission effects of the proposed change from coal to natural gas of one of its larger units at the Apache Generating Station. AEPSCO is also involved in the effort of the WestConnect Planning Management Committee and SWAT Coal Reduction Task Force to study transmission impacts of coal plant closures in the Desert Southwest.

ACC Staff Questions, Cont.

- ***Describe the extent to which renewable generation being added to comply with renewable portfolio standards in neighboring states are being considered in your transmission planning process. Please identify any transmission projects that are directly related to the impacts of the renewable portfolio standards in neighboring states.***
AEPCO is using common power flow database which includes any relevant generation facilities within WECC footprint. AEPCO maintains awareness and participates in analyses of system impacts from any transmission project that may serve for the purpose of transporting new renewable resources.

Questions?

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