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UNS ELECTRIC, INC.

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February 1, 2016

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AZ CORP COMMISSION
DOCKET CONTROL

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, AZ 85007

Re: Notice of Filing -UNS Electric, Inc.'s Ten-Year Plan
Transmission Projects 2016-2025
Docket No. E-00000D-15-0001

Pursuant to A.R.S § 40-360.02, attached is an original and thirteen copies of UNS Electric Inc.'s Ten-Year Plan Transmission Projects for years 2016-2025.

If you have any questions, please contact me at (520) 884-3680.

Sincerely,

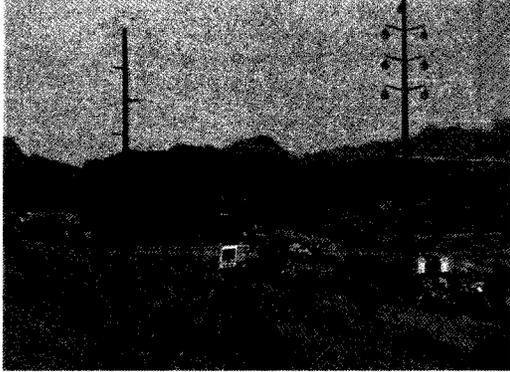
Melissa Morales
Regulatory Services Coordinator

cc: Compliance Section, ACC

Arizona Corporation Commission
DOCKETED

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UniSourceEnergy
SERVICES

UNS Electric, Inc.

**TEN-YEAR PLAN
TRANSMISSION
PROJECTS
FOR YEARS
2016-2025**



**SUBMITTED TO THE
ARIZONA CORPORATION
COMMISSION**

JANUARY 31, 2016

DOCKET NO: E-00000D-15-0001

UNS ELECTRIC, INC.
TEN-YEAR PLAN
TRANSMISSION PROJECTS
2016-2025

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UNS ELECTRIC, INC.
TEN YEAR PLAN
TRANSMISSION PROJECTS
2016-2025

Introduction

General Overview

Pursuant to A.R.S. § 40-360.02, UNS Electric, Inc. (“UNSE”) hereby submits its 2016-2025 Ten-Year Plan for Transmission Facilities (“Ten-Year Plan”) to the Arizona Corporation Commission (“Commission”). This Ten-Year Plan describes the transmission facility projects of 115 kV or higher that UNSE may construct between the years 2016-2025.

This Ten-Year Plan has been prepared consistent with in-service dates for new distribution substations as determined by UNSE distribution planning. The study was conducted in 2015 and the results of the study are represented in the 2016-2025 Ten Year Plan. Estimated in-service dates may vary depending upon changes in regulatory requirements, underlying assumptions, other utilities’ plans and economic conditions.

Included with this plan are transmission facilities planned for both the Mohave and Santa Cruz County service territories. Mohave County’s sub-transmission facilities are radial and are not part of the Bulk Electric System (“BES”). UNSE Facilities in Mohave County are served via Western Area Power’s (“WAPA”) transmission system. UNSE’s Santa Cruz County facilities are radial and are served via Tucson Electric Power Company’s (“TEP”) transmission system.

Load Forecasting

UNSE’s 2016 – 2025 Ten-Year Plan was developed based on UNSE’s Corporate Forecast approved in December 2014. This forecast takes into account distributed renewable

generation and energy efficiency programs, as well as UNSE's retail customer load. The load offset due to distributed renewable generation and energy efficiency programs did not alter the UNSE Ten-Year Plan.

Project Status Definitions

Planned Projects

Included within this Ten-Year Plan are "planned" projects for UNSE's 230 kilovolt ("kV") Extra High Voltage ("EHV") transmission system and UNSE's 138 kV High Voltage ("HV") transmission system.

Conceptual Projects

For informational purposes, UNSE has also included details on "conceptual" projects for the EHV transmission systems. These conceptual projects are not expected to be built within the ten-year planning horizon and are shown as "To Be Determined" ("TBD") for the in-service date. These conceptual projects may become planned projects as they move into the ten-year planning horizon in subsequent studies.

Biennial Transmission Assessment Orders ("BTA")

In the Seventh BTA Decision (Decision No. 73625, December 12, 2012), the Commission ordered suspension of the requirement for Reliability Must Run ("RMR") studies and implemented criteria for re-starting RMR studies based on a biennial review of the factors set forth in the Seventh BTA Decision. Upon review of the factors, UNSE is not required to conduct RMR studies in in the Santa Cruz or Mohave RMR load pockets.

In the Eighth BTA decision (Decision No. 74785, Oct 24, 2014), the Commission ordered utilities with retail load to file a study with the Commission as part of the Ninth BTA docket identifying the effects of DG and EE installation and/or programs. UNSE does not have any BES facilities in the Mohave County area. The UNSE load served in Santa Cruz County is served from the TEP Vail substation. Effects of DG and EE for Santa Cruz County have been considered in the TEP study report submitted under the TEP Ten-Year Plan. Cost and construction requirements would likely increase if the UNSE distribution system were included in any studies.

Transmission System Maps

This Ten-Year Plan includes system maps depicting the existing transmission networks along with the addition of planned or conceptual projects, followed by individual project descriptions for both the EHV and HV transmission systems. The maps and descriptions are intended to be general planning-level documents to describe projects conceptually. Therefore the maps and descriptions do not represent specific routes or geographically correct project locations.

Following this brief discussion of activities on the service territories are conceptual maps of the planned facilities and details of the proposed projects.

Mohave County

UNSE Mohave County load is dependent on the WAPA's ability to serve the majority of its transmission needs in Northwest Arizona. The Commission has approved a Certificate of Environmental Compatibility ("CEC") (Case No. 88) for the Griffith – North Havasu 230 kV line. The Commission subsequently extended the expiration date of this CEC to 2022. The timing for construction of this project will be determined by the growth of UNSE's retail load and limitations on the ability of the WAPA's transmission system to support this load growth. A portion of this project (North Havasu to Franconia) was completed in 2007 and is currently energized at 69 kV to support distribution needs at Franconia. UNSE will continue to work with the Arizona transmission work group of the Southwest Transmission Planning Group ("SWAT") see <http://www.westconnect.com/planning.php>), or a designated work group of SWAT, to address issues in Mohave County.

Santa Cruz County

UNSE is served from a radial line that starts at TEP's Vail 138 kV substation and continues south where it terminates at the UNSE 138 kV Valencia Substation. To serve the Santa Cruz County loads should flow from the Vail substation be lost or should load exceed the capacity of the line, UNSE has four (4) generators located at the Valencia substation as well as an emergency 46 kV tie to TEP.

Transmission System Maps

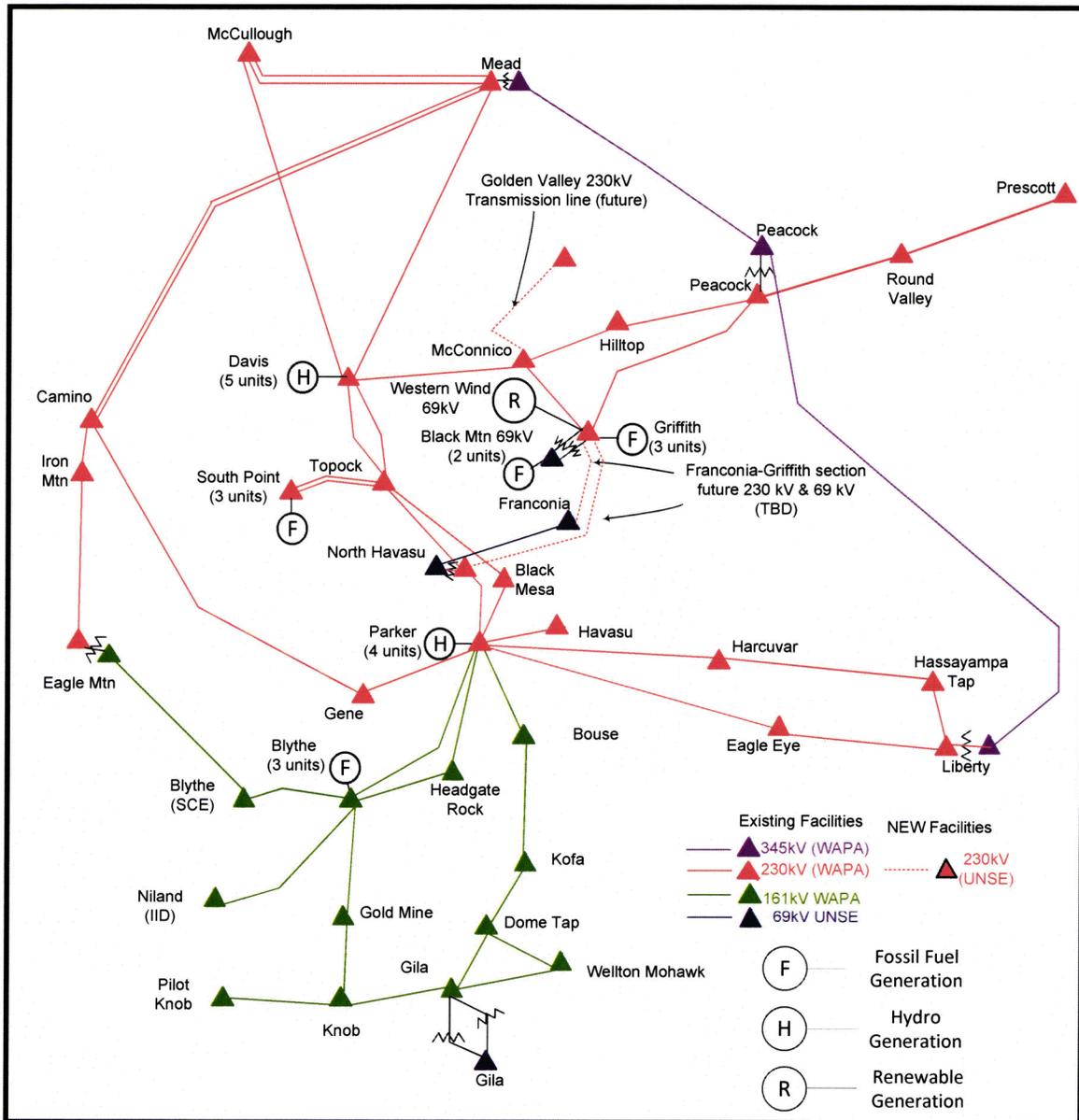


Figure 1. Map of Mohave County Transmission System

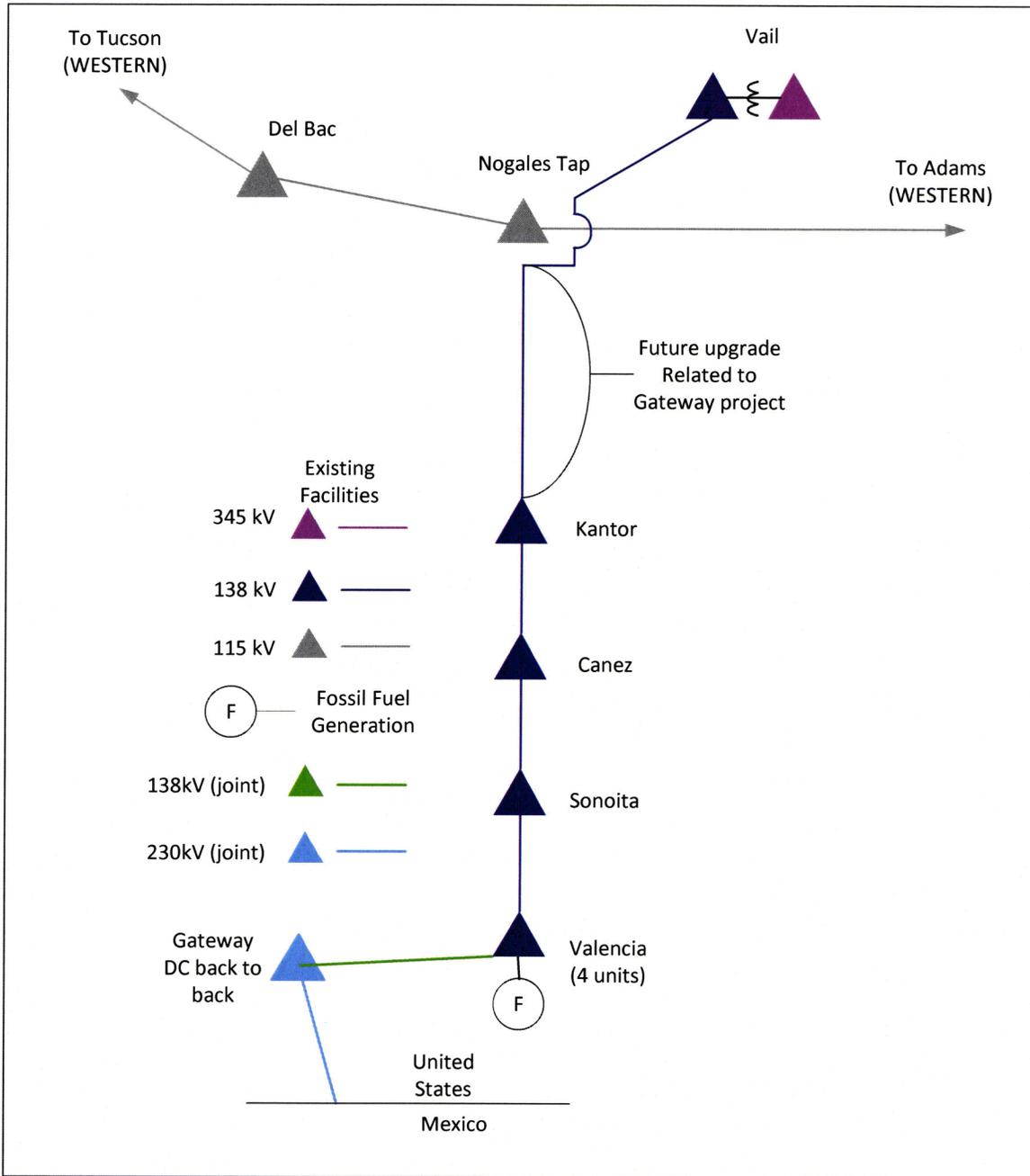


Figure 2. Map of Santa Cruz County Transmission System

Planned EHV Transmission Project

UNS ELECTRIC, INC.
TEN-YEAR PLAN
TRANSMISSION PROJECTS

MOHAVE COUNTY

Line Designation	Golden Valley 230 kV Transmission Line
Size	
a) Voltage	230 kV
b) Capacity	TBD
c) Point of Origin	Harris Substation
d) Point of Termination	Mineral Park Substation
e) Length	Approximately 17 miles
Routing	TBD
Purpose	Improve load serving capability to West Golden Valley
Date	
a) Construction Start	2017
b) In-Service Date	2021
Is Certificate Necessary	Yes
Technical Studies	Required

Conceptual EHV Transmission Projects

UNS ELECTRIC, INC.
TEN-YEAR PLAN
TRANSMISSION PROJECTS

MOHAVE COUNTY

Line Designation	Griffith – North Havasu Transmission
Size	
a) Voltage	230 kV
b) Capacity	300 MVA (thermal)
c) Point of Origin	Griffith Substation
d) Point of Termination	North Havasu Substation
e) Length	Approximately 40 miles
Routing	West of and parallel to I-40 to Santa Fe Ranch Rd. interchange. Diagonal southeast to the Parker Davis line at Highway 95. Parallel to PD-1 to North Havasu Substation site southeast of the Lake Havasu City airport. Routing to be within corridor as approved and described in CEC Order #88.
Purpose	Reinforce the existing transmission grid and provide interconnection between UNS Electric load centers in Mohave County.
Date	
a) Construction Start	North Havasu to Franconia, 2007
b) In-Service Date	North Havasu to Franconia, 2007 <i>Complete</i> Franconia to Griffith, TBD
Is Certificate Necessary	Case # 88 ¹ -- An extension was approved by the ACC in July 2012 which expires in 2022.
Technical Studies	Studies completed via Central Arizona Transmission Study group, Colorado River Transmission Study group, and SWAT, and is part of the WestConnect Transmission Plan

¹ Hilltop to Griffith portion of line already completed by Western Area Power.

UNS ELECTRIC, INC.
 TEN-YEAR PLAN
 TRANSMISSION PROJECTS
 SANTA CRUZ COUNTY

Line Designation Size	Mexico D.C. Interconnection
a) Voltage	138 kV and 230 kV
b) Capacity	150 / 300 MW (phased)
c) Point of Origin	Valencia Substation
d) Point of Termination	U.S. / Mexico Substation
e) Length	Approximately 5 miles
Routing	A 138 kV line would extend west and south from Valencia Substation to a site called Gateway owned by Tucson Electric Power Company which will be the site of a DC converter station, then a 230 kV line south to the border.
Purpose	Proposed joint project by UNSE, Hunt Power, L.P., and others to reinforce the existing transmission grid and provide interconnection between the Western Interconnection in the U.S and the Mexico grid.
Date	
a) Construction Start	2017
b) In-Service Date	2018
Is Certificate Necessary	Likely, some of the alignment may be covered by siting case 111.
Technical Studies	Studies are under way.