PROJECT STATEMENT

PNM has the responsibility to provide safe, reliable, affordable and environmentally responsible power for customers. As more people choose to raise their families in the far north Albuquerque area, and more businesses locate there, the increase in electrical demand is also something PNM has to plan for.

The existing 3 substations and associated distribution facilities serving the far northeast Albuquerque area are near full capacity and are increasingly at risk of failure due to electric demand in the area. Palomas (La Cueva) Substation will have sufficient capacity to serve existing and anticipated future customers in the area.

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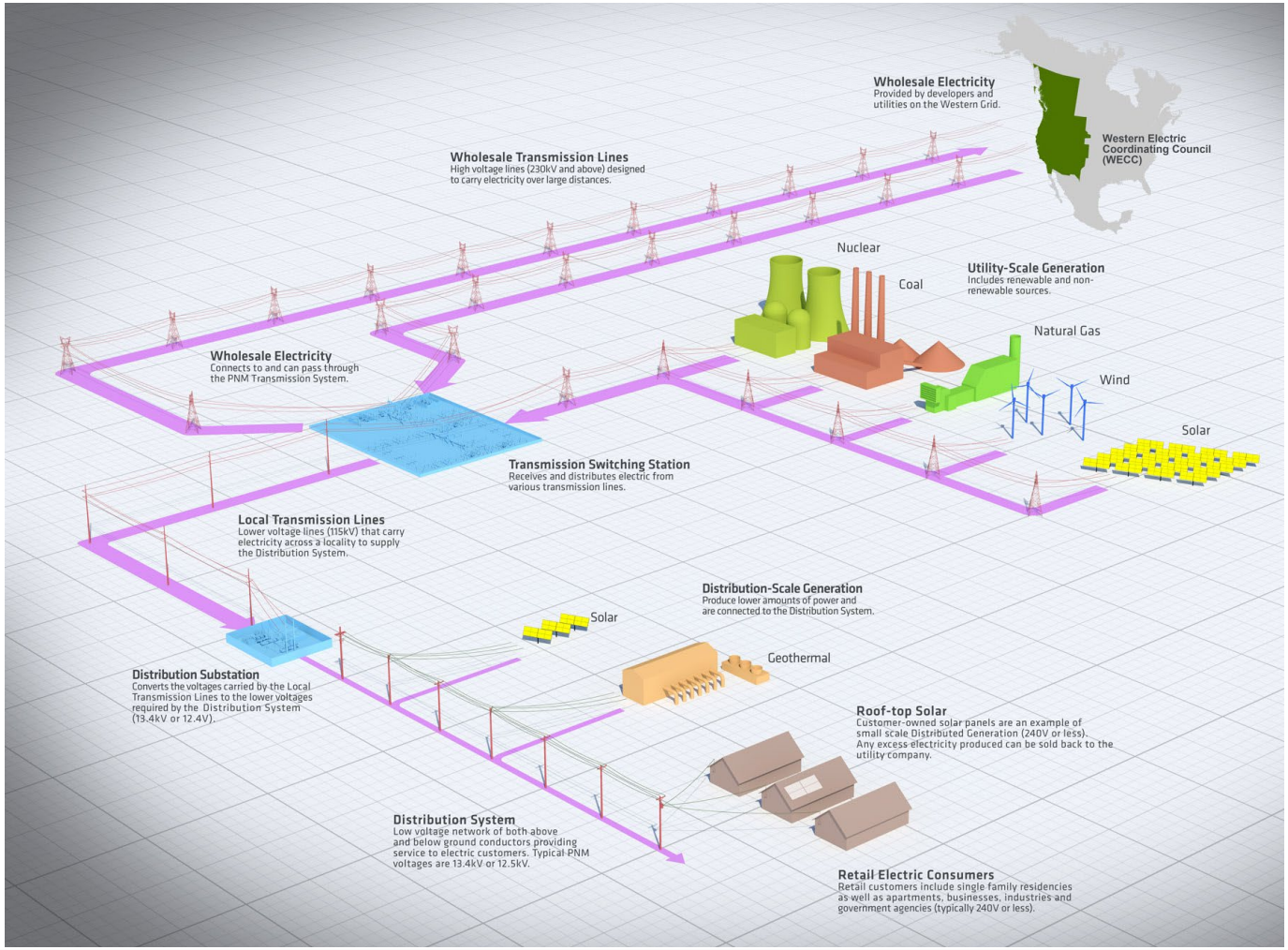
HOW ELECTRICITY GETS TO YOU



From generation stations, power moves via transmission lines, to switching stations, then from switching stations to substations, then via distribution lines to homes and businesses

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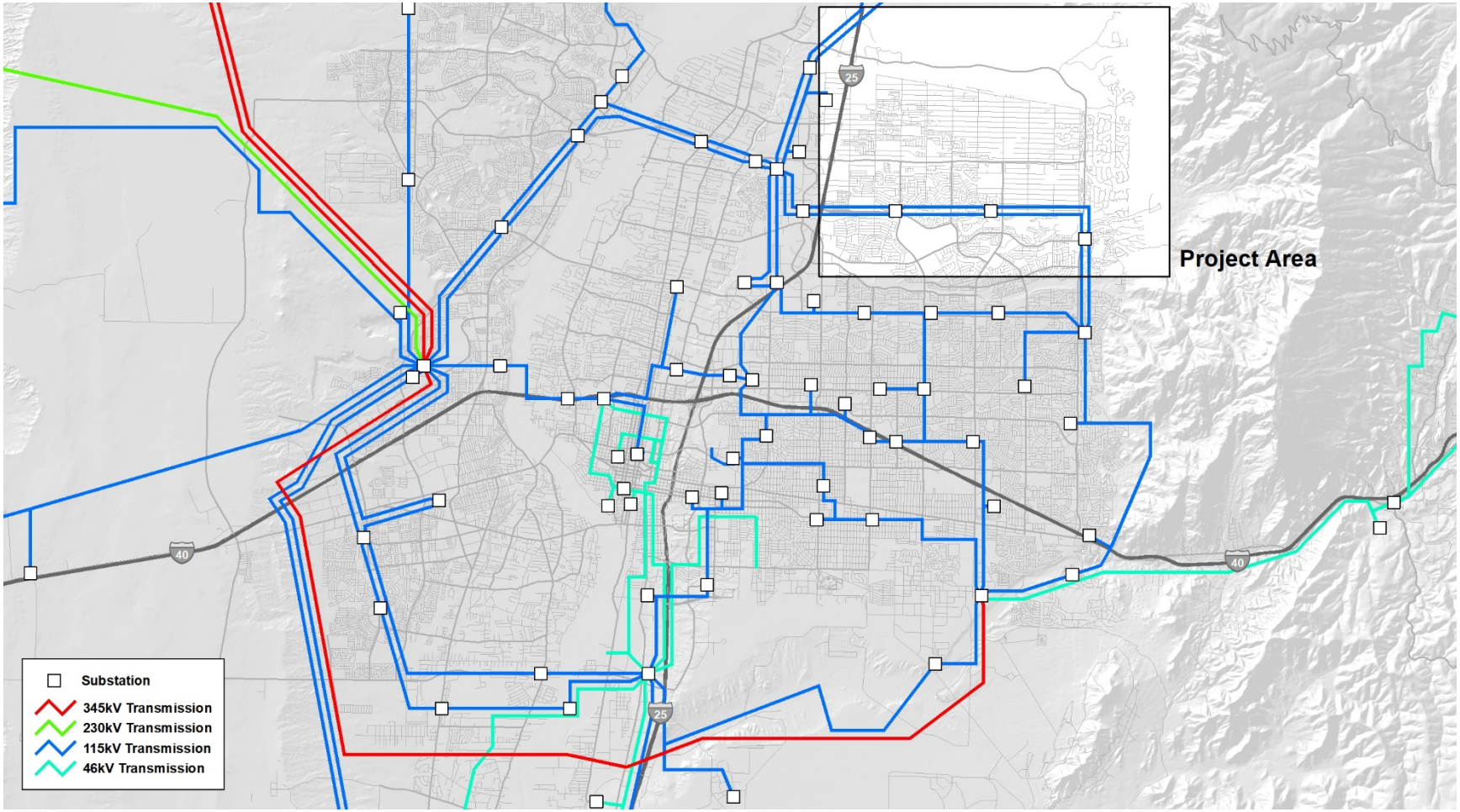
ALBUQUERQUE TRANSMISSION SYSTEM MAP



Colored lines indicate the location and different voltages of transmission lines throughout the Albuquerque metro area. The Project Area is highlighted in the upper right hand corner in the white box.

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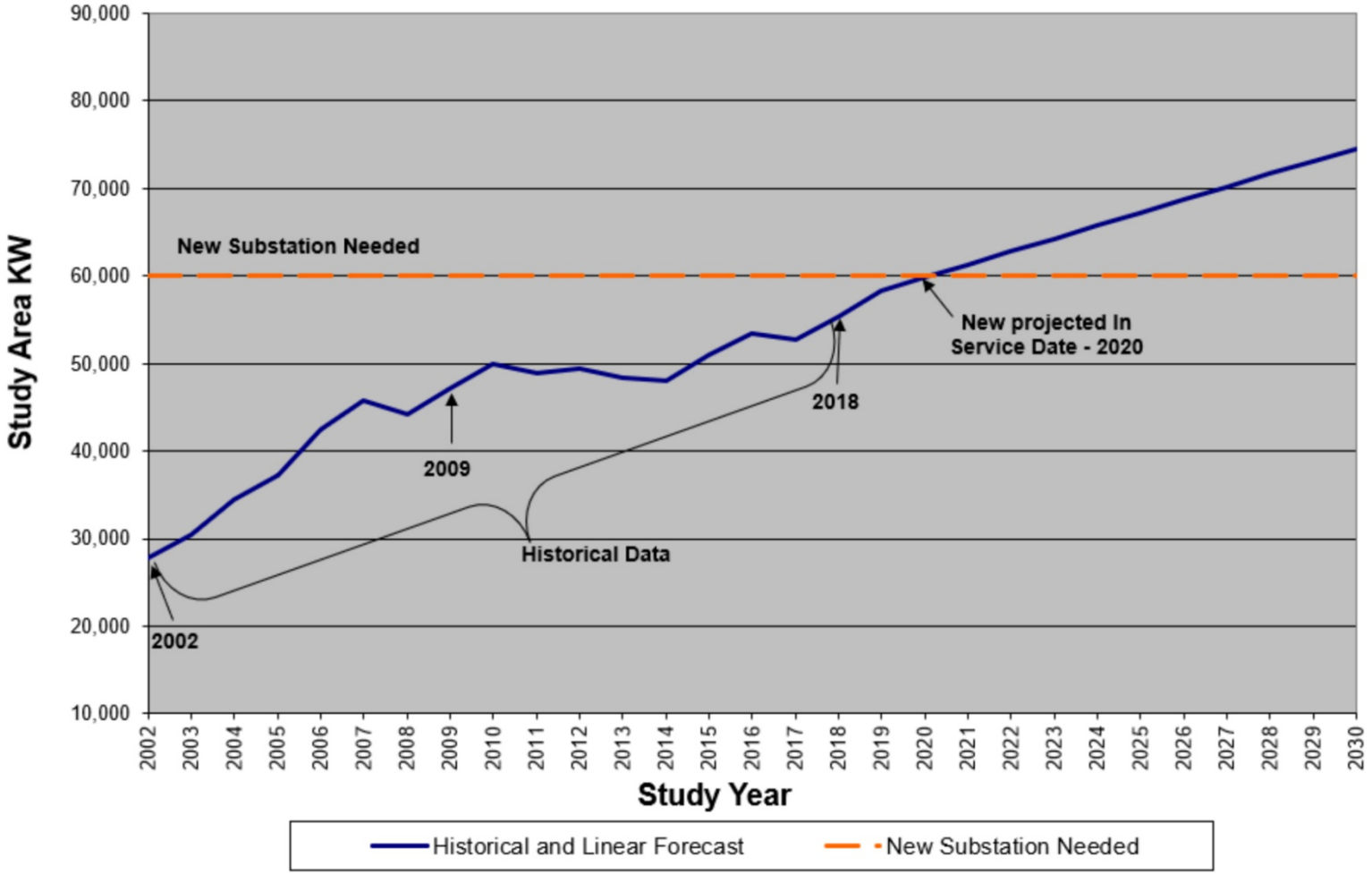
LOAD GROWTH IN THE AREA



Historic and projected load growth in the area is shown with the blue line. The orange line indicates when a new substation is needed.

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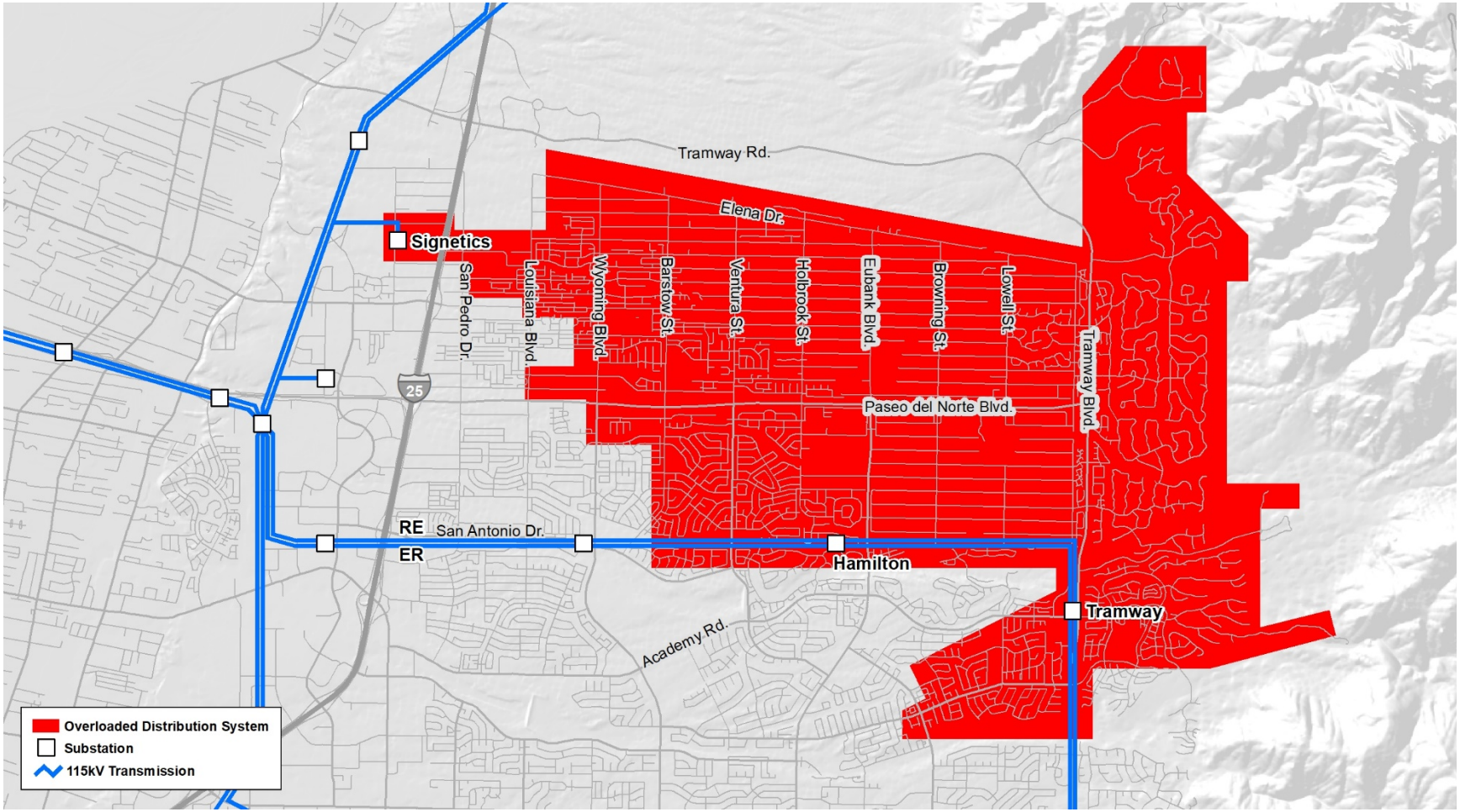
AREA OF OVERLOADED FACILITIES



The area shown in red indicates the overloaded substation transformer service area of Signetics, Hamilton, and Tramway.

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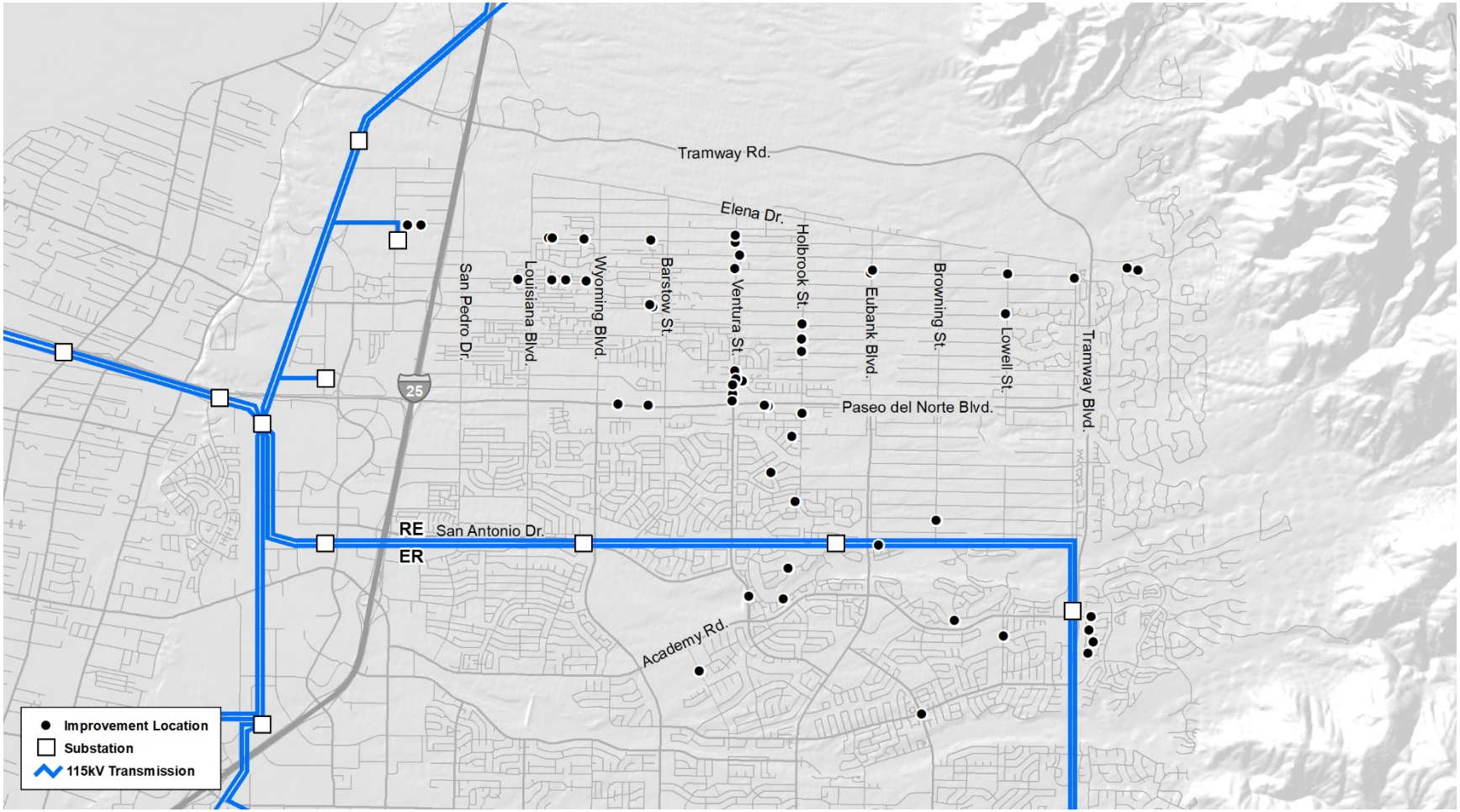
SYSTEM IMPROVEMENTS IN THE AREA SINCE 2003



The dots on the map indicate where improvements have been made to the lines serving homes and businesses in the area since 2003

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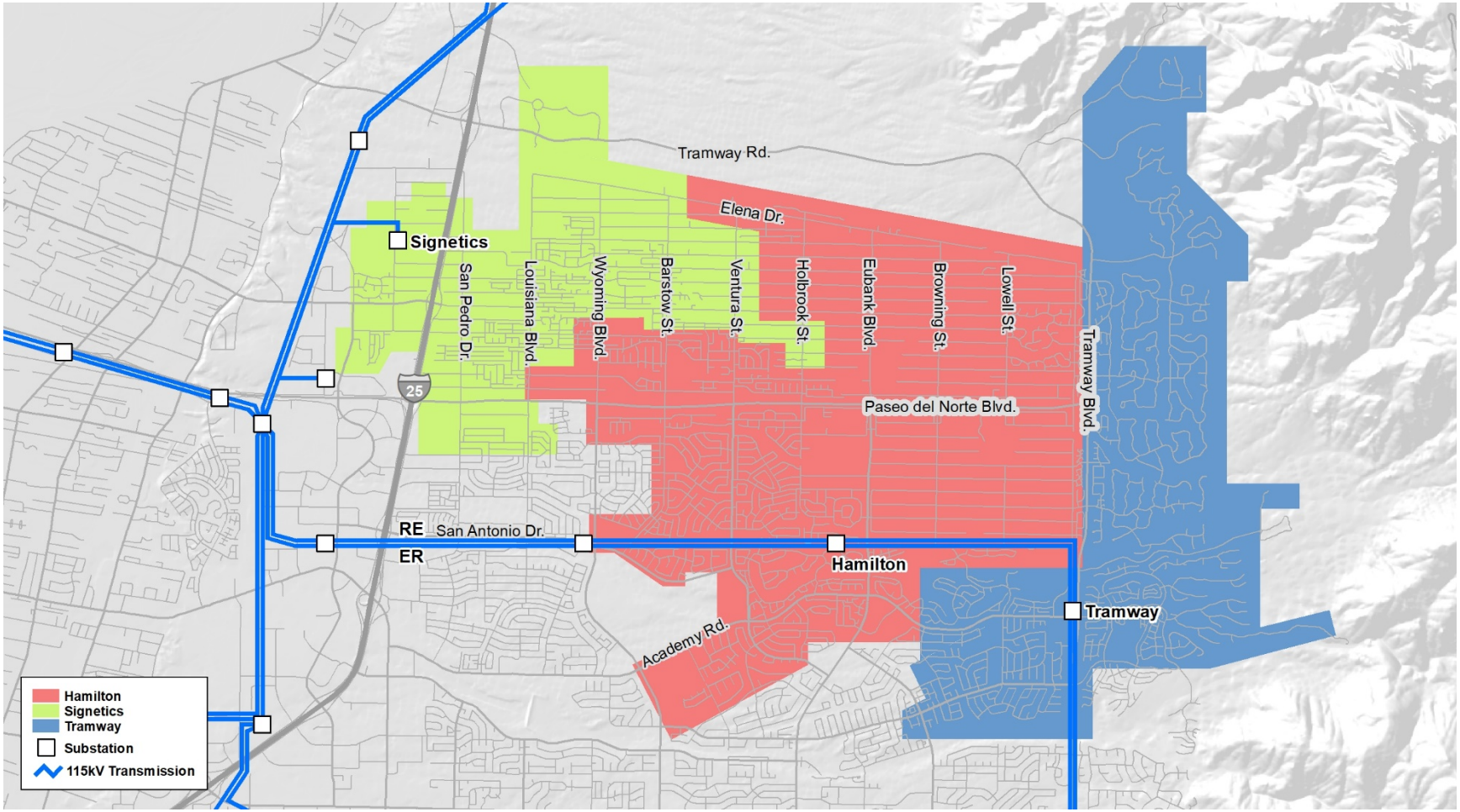
AREA SERVED BY SUBSTATION



The map indicates the individual areas that are currently being served by existing substation transformers

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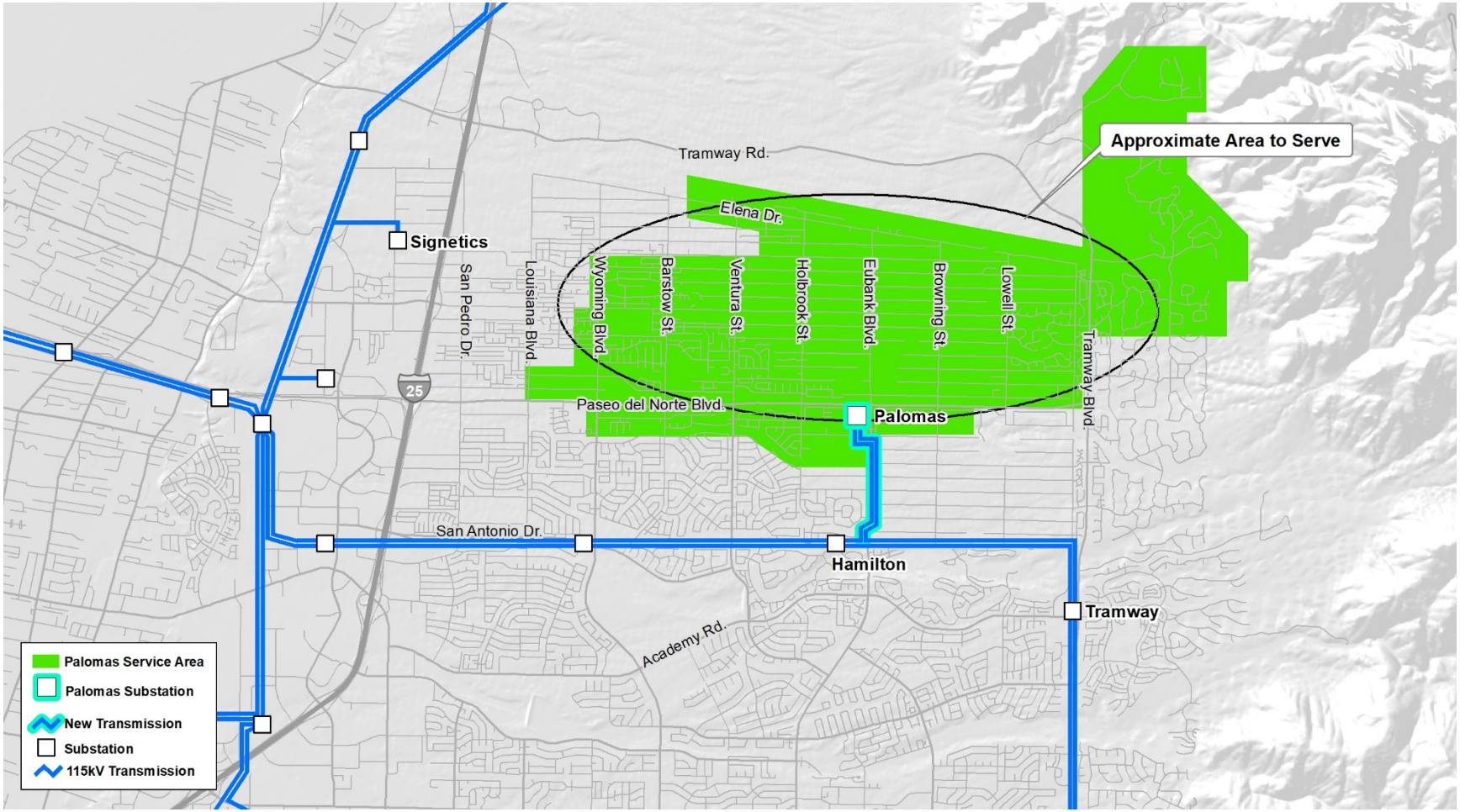
AREA TO BE SERVED BY PROPOSED PALOMAS SUBSTATION



The map indicates the area to be served by the proposed Palomas Substation Project

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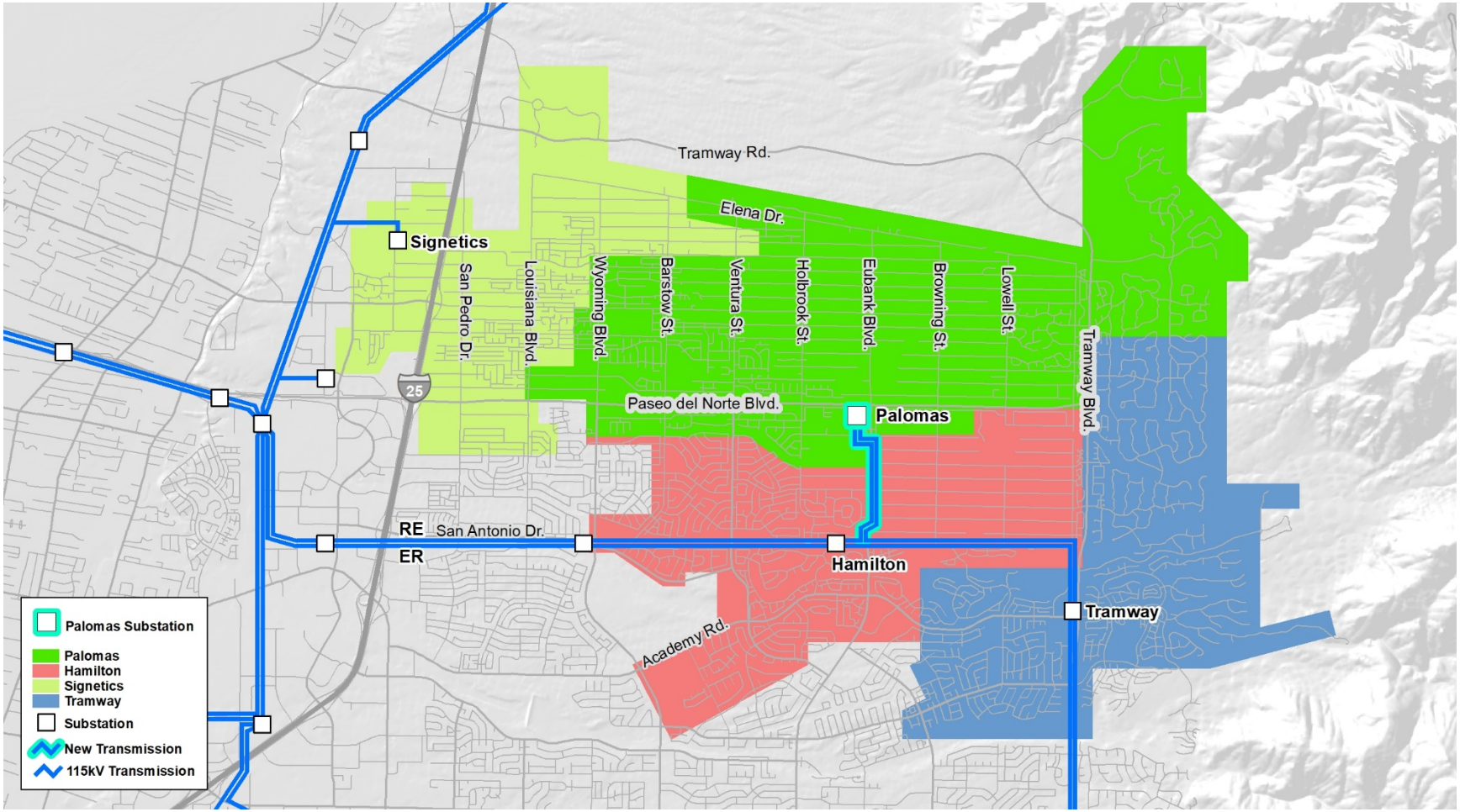
PROPOSED SUBSTATION SERVICE AREAS



The map indicates the reconfigured substation service areas with the proposed Palomas Substation in service.

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ELECTRIC FACILITY PLAN

Adopted by the Board of County Commissioners, November 15, 2011

Adopted by the City of Albuquerque, effective March 11, 2012

The *Facility Plan Electric System Transmission and Generation (2010-2020)* addresses new proposed electric facilities in Bernalillo County and the City of Albuquerque

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ELECTRIC FACILITY PLAN

I. INTRODUCTION
Every metropolitan area requires a large, reliable supply of energy in the form of electricity to meet a variety of demands. Typically, electricity produced at generating plants is transmitted via major transmission lines and stepped down several times for ultimate use (Figure 1).

The system serving each metropolitan area is linked to other systems to form regional multi-state grids to balance supply with demand and to assure reliability. The size and complexity of the system serving a particular metropolitan area is directly related to the area's population and economic base, sources of generating fuel, and to the industrial, agricultural, mineral extraction, or military activities in surrounding areas.

A. Scope and Purpose
Bernalillo County, the City of Albuquerque, and the electric utilities (Public Service Company of New Mexico (PNM) and El Paso Electric Company) recognize the necessity for a Facility Plan for the Electric System (Plan). The Plan has stated policies for the system of electric transmission facilities in the City of Albuquerque and Bernalillo County which are referred to in this Plan as standards.

Transmission line corridors and substation sites are chosen based on the standards contained in this Plan, as well as economic feasibility and other operating requirements. These criteria support the long-range planning goals and policies of the City of Albuquerque, Bernalillo County and the electric utilities.

Electric facility planning has long been recognized as a critical infrastructure component to the health, safety and economic vitality of the community. Electric generation technologies have remained largely the same for decades, though technologies continue to evolve. PNM has an existing gas-fired generation station facility located in the City of Albuquerque and another gas-fired generation station facility in Bernalillo County. These facilities have met the peak demand for electric service for the urban area; however, after a long period where new generation had not been needed, generation will again be under consideration over the coming decades. For this reason, generation technologies and renewable energy generation facilities such as solar and wind have been included in this Plan.

B. Approval Processes
Tables 1, 2, 3 and 4, Approval Processes, describe the various approval paths for the City of Albuquerque and Bernalillo County. See also Section IV of this document.

The definitions included in Section IV on pages 7 and 8 are directly related to the understanding of the approval process for certain actions addressed in the Plan. Other relevant technical terms appear in Section VII, Glossary of Technical Terms.

II. GOAL AND OBJECTIVES
The goal of this Plan is to ensure that the City of Albuquerque and Bernalillo County have an electric transmission and generation system capable of delivering electric energy in the amount and locations needed by present and future area residents, businesses, and industries. This system must be based upon sound technical design, address environmental considerations and be within the economic means of the customer, the City of Albuquerque, Bernalillo County and the electric utilities.

V. PROPOSED UTILITY-OWNED ELECTRIC FACILITIES: 2010-2020
A. General
Proposed facilities for the investor-owned electric utility serving the City of Albuquerque and Bernalillo County are planned to meet the electric utility's forecast requirements for load growth and system reliability through 2020. Projected requirements are reviewed by the electric utility on an annual basis to determine whether current assumptions remain valid. Because of these evaluations, revisions to the present scope of projects may be necessary. These revisions may take the form of a major or minor action; see Tables 1, 2, 3 or 4.

Table 5 identifies the proposed projects in the City of Albuquerque and Bernalillo County to 2020. At least every five years, PNM will provide to the City of Albuquerque and Bernalillo County an updated project list. The project list in Table 5 is provided for informational purposes. Planned projects are four types: new transmission lines; new substations or switching stations; substation expansion; and line upgrades. Maps showing the general location of these proposed projects and existing facilities are shown in Figures 2, 3, 4, 5 and 6. Investor-owned utility generation facility projects can also be considered planned projects.

Approval of this Plan does not constitute blanket approval by the City of Albuquerque or Bernalillo County of the alignments or station sites outlined herein; nor does approval bind the electric utilities to these alignments or station sites. A project location as identified in Figures 4 and 6 may be changed by the electric utilities at the time application is made for project approval.

El Paso Electric Company has indicated that there are no plans to alter their existing transmission line in Bernalillo County (Appendix I).

B. Economic Development
Economic Development: Economic development continues to be promoted in the Albuquerque metropolitan area. Albuquerque Economic Development (AED) and State of New Mexico Economic Development (NMEDD) are actively recruiting companies to relocate to the area. New manufacturing and commercial developments may require expansion of the transmission system and new station(s). These facilities are not anticipated in the Project List, Table 5. The City of Albuquerque, Bernalillo County, and PNM support the economic development efforts of AED and NMEDD.

Electric system expansion to support identified economic development projects is not required to be shown in the Plan but must follow the standards established herein. The City of Albuquerque and Bernalillo County recognize the many benefits of economic development and will strive to assure electric system expansions are approved and permitted in a timely fashion to allow adequate time for construction.

Redevelopment/Revitalization: According to the Comprehensive Plan, the City of Albuquerque and Bernalillo County support redevelopment and revitalization efforts, which typically occur in older areas such as historic districts. These projects are not identified in the Project List. Electric system expansion to support these efforts is not expected to be shown in the Plan but must follow the standards established herein.

The City of Albuquerque and Bernalillo County recognize the many benefits of redevelopment and revitalization and will strive to ensure that electric system expansions are approved and permitted in a timely fashion to allow adequate time for construction. The City and County

The Facility Plan governs, with the Utility, new electric facilities in Bernalillo County and the City of Albuquerque

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DESCRIPTION OF PROPOSED ELECTRIC FACILITIES FOR 2010-2020

TABLE 5
DESCRIPTION OF PROPOSED ELECTRIC FACILITY PROJECTS FOR 2010-2020

Project Number	Description	Proposed Action	In-service Year	Purpose/Function of Facility	Location: CoA/BC*
1	Southwest Mesa Substation	Build a new substation on the southwest mesa to serve area development	2012	Provide substation capacity for area growth and back up support to S. Coors and Central Substations	CoA
2	Journal Center Substation	Build a new substation to serve area development	2013	Provide substation capacity to support growth in the Journal Center area	CoA
3	Scenic Substation	Build a new substation to serve area development	2013	Provide substation capacity for area load growth and back-up support to Black Ranch and Mariposa Substations	CoA
4	98th/I-40 Substation	Build a new substation near 98th and I-40 under the PM and PW 115kV lines	2013	Provide substation capacity for area growth and backup support to Central, St. Joseph, and Volcano Substations	CoA
5	Paradise Hills Substation Unit II	Expand substation to acccommodate additional equipment	2013	Provide capacity for existing and new load	BC
6	Tramway Substation Unit II	Expand substation to accommodate additional equipment	2013	Provide transformer and feeder capacity needed to serve load growth in far northeast area of Albuquerque	CoA
7	PN 115 kV line Reconfiguration	Build a portion of new 115 kV line and reconfigure the existing PN 115 kV line	2014	Improve transmission capacity in the central area of Albuquerque	CoA
8	Paseo del Volcan Substation	Build a new substation to serve area development	2016	Provide substation capacity to serve Tempur-Pedic Mattress Plant and other growth in the area of I-40 and Paseo del Volcan	BC
9	NW 115kV Line Upgrade	Upgrade the NW 115 kV line between West Mesa and Mariposa	2016	Mitigate overloads on this line section for loss of the WP 115 kV line from West Mesa to Prager	CoA
10	Beverly Wood Substation Expansion	Expand existing substation to accommodate needed future equipment	2016	Increase substation capacity to serve Uptown development and other area growth	CoA
11	La Cueva Substation 115kV Line	Build a 115 kV line from Eubank and San Antonio NE to La Cueva Substation	2017	Serve proposed new distribution substations and improve the reliability of the Northeast Albuquerque area	CoA/BC
12	La Cueva Substation	Build a new substation to serve area development	2017	Provide substation capacity to serve the residential and commercial growth in the area surrounding Paseo del Norte and San Pedro/Wyoming	BC
13	Third Street Substation	Build a new substation in the area of 3rd Street and Constitution Ave to serve area development	2017	Increase substation capacity and provide back up support to Lomas and Prager Substations	CoA
14	Arenal Substation and 115kV Line	Build a new substation and 115 kV line from the PM line	2017	Provide substation capacity for area load growth and backup support to Central, Volcano, South Coors and Wesmeco Substations	CoA
15	Downtown Substation	Build a new substation to serve area development	2018	Provide substation capacity for a planned voltage conversion and backup	CoA
16	Image Substation	Build a new substation located within the Mesa del Sol development	2018	Support future growth within the Mesa del Sol development	CoA
17	Mesa del Sol Industrial Substation	Build a new substation located within the Mesa del Sol development	2019	Support future demand within Mesa del Sol development	CoA

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The highlighted text identifies the Proposed Action and Purpose/Function of the Facility for the (La Cueva) Palomas Substation and Transmission Line Project.

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2002 aerial view of the impacted area

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2018 aerial view of the impacted area

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Questions
&
Answers

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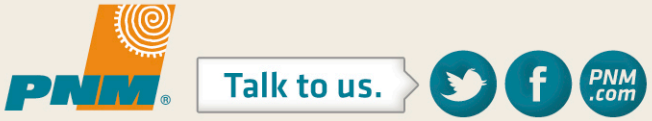
For more information:

PNM.com/palomas-substation

Thank you