



**EL PASO ELECTRIC COMPANY
SYSTEM EXPANSION PLAN 2024-2033**

2023



El Paso Electric

PREPARED BY
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SYSTEM PLANNING

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1.0 EXECUTIVE SUMMARY

El Paso Electric Company's ("EPE") System Planning Department performs System Expansion Plan ("Plan") studies annually as described in EPE's Open Access Transmission Tariff ("OATT") Attachment K ("Attachment K"). This process is a technical evaluation of EPE's Bulk Electric System performed for a ten-year planning horizon (currently from 2024 through 2033). The Plan determines system facility additions and upgrades necessary to comply with Western Electricity Coordinating Council ("WECC") and the North American Electric Reliability Corporation ("NERC") reliability requirements under these conditions:

- Equipment will not be loaded more than its normal facility limits for All Facilities in Service ("AFIS").
- Equipment will not be loaded more than its emergency facility limits for any single-element ("N-1") contingency.
- Real-time violations that have been identified because of actual system conditions or real-time contingency analysis will be addressed.
- Conformance with NERC Standard TPL-001-4 and/or TPL-001-5 criteria, as applicable, will be applied to certain planning events.
- Equipment voltage limits (high or low) will not be exceeded.
- System Expansion Projects Scheduled for Completion before Peak of 2024, and Project Schedule for 2024-2033 System Expansion Plan Projects. Future local generation resources serving native load have been identified by EPE Resource Planning input and/or in a 2023 EPE L&R (with updates as of June 29, 2023) as detailed in the Generation Resources are summarized in Table 2. Input from EPE's Resource planning on future generation was taken as modeling assumed this took first assumptions and modeling priority. Second modeling and assumptions priority for generation retirements and additions were 2023 EPE L&R (with updates as of June 29, 2023) assumptions.

This Plan's content has been organized as follows:

- An Introduction Section briefly summarizes requirements and scope of the EPE System Expansion Plan
- A Planning Organizations Section list and summarizes all regional and subregional planning groups that EPE participates in.
- A General Assumptions Section addresses Load Projections, Demand Side Management, Generation Resources, Reliability Criteria, System Operating Limit ("SOL") Methodology for the Operating Horizon, Open Planning Meetings, and Base Case System Assumptions.
- The Tables Section consists of:
 - Table 1 which identifies Peak Energy Efficiency Adjustment assumed for the current System Expansion Plan.
 - Table 2 which identifies Projected EPE Local Generation assumed for the current System Expansion Plan.
 - Table 3A identifies projects scheduled for completion before the peak of 2024.

- Table 3B lists a comparison between recommended completion dates for planned projects listed in the 2022 System Expansion Plan and this current 2023 System Expansion Plan.
- New or modified projects for the current System Expansion Plan are summarized in Tables 4A and 4B.
- Table 5 identifies static reactive support projects identified in the current System Expansion Plan.
- Table 6 identifies dynamic reactive support projects identified in the current System Expansion Plan.
- A description of major EPE planned projects for each year is provided under the Transmission Project Summary. Information includes the Project Name, Operating Voltage, Planned in Service Date, Project Description, and Project Justification.

The basis for Native system peak demand projections has historically been set by EPE’s annual Long-Term Forecast Report. For this year’s Plan, the expected native system MW demand value plus the 50% of the difference between the upper bound native system MW demand value less the expected native system MW demand value within EPE’s 2023 Long-Term Forecast Report are being assumed as the EPE native system demand peak load and losses target values to be met and planned for each future year (i.e. modeled within peak/summer powerflow cases). Incorporated within EPE’s 2023 Long-Term Forecast Report and the 2023 Loads and Resources with updates as of June 29, 2023 (“L&R”) are EPE Public Policy requirements. It is in this manner that Public Policy requirements are considered in the Plan.

The system performance analyses presented in this Plan include an assessment of outage impacts, generator interconnection impacts, and economic planning evaluations. The major projects identified within this report are summarized below by geographical area and estimated in-service year.

WEST EL PASO SERVICE TERRITORY

- Rio Grande-Sunset 69 kV Lines (5500/5600) (Rebuild, Reconductor) (2024)
- Verde 115 kV Switching Station (Non-Serving Load Station) and Related 115 kV Line Reconfiguration (2024)
- Westside Temporary Substation (New) and Related 115 kV Line Reconfiguration (2024)
- WS2 Substation (New) and Related 115 kV Line Reconfiguration (2025)
- Verde 115 kV Substation (Load Serving Station Portion Added) (2027)
- Afton-Afton North 345 kV Double Bundled Line (New) (2028)
- Afton North-Airport 345 kV Line (New) (2028)
- Afton North 345 kV Substation (New) (2028)
- Afton-Newman 345 kV Line Reconfiguration (2028)
- Airport 345/115 kV Autotransformer (New) (2028)
- Airport 345/115/24 kV Substation (2028)
- Anthony-Vado 115 kV Line (Rebuild, Reconductor) (2028)
- Two Vado 345/115 kV Autotransformers (New) (2028)

- Vado-Salopek 115 kV Line (Rebuild, Reconductor) (2028)
- Vado Substation 345/115 kV New (2028)
- WS1 Substation (New) and Related 115 kV Line Reconfiguration (2028)
- McNutt Substation (New) and Related 115 kV Line Reconfiguration (2028)
- Near Macho 345 kV Substation, Airport to Near Macho Springs 345 kV line and Related 345 kV Line Reconfiguration (**Conceptual Project**) (2028)

DOWNTOWN NETWORK AND CENTRAL EL PASO SERVICE TERRITORY

- Austin-Marlow 115 kV Line (Rebuild, Reconductor) (2024)
- CE2 Substation (New) and Related 115 kV West Loop Line Reconfiguration (2027)
- Rio Grande-Sunset North 115 kV Double Bundled Line (Rebuild, Reconductor) (2027)
- CE3 Substation (New) and Related 115 kV West Loop Line Reconfiguration (2029)
- CE4 Substation (New) and Related 115 kV West Loop Line Reconfiguration (2030)
- CE4-Executive 115 kV Line (New) (2030)
- CE2-Rio Grande 115 kV Line (Rebuild, Reconductor) (2033)

NORTHEAST EL PASO SERVICE TERRITORY

- McCombs Substation (New) and Related 115 kV Line Reconfiguration (2027)
- Newman-McCombs 115 kV Line Circuit 1 (Reconductor) (2030)
- Newman-McCombs 115 kV Line Circuit 2 (Reconductor) (2030)
- NE3 Substation (New) and Related 115 kV Line Reconfiguration (2031)
- Dyer 115/69 kV Autotransformer T1 (Upgrade) (2032)
- Newman-Roberts 115 kV Line Circuit 1 (Reconductor) (2032)

EAST EL PASO SERVICE TERRITORY

- Lane-Americas 69 kV Line (Reconductor) (2024)
- Lane-Wrangler 115 kV Line (Rebuild, Reconductor) (2024)
- Ascarate-Trowbridge 115 kV Line (Reconductor) (2025)
- Hawkins Substation 69 kV (New) and Line Reconfiguration (2025)
- EA1 Substation (New) and Related 115 kV Line Reconfiguration (2029)
- Marlow-Trowbridge 115 kV (Rebuild, Reconductor) (2030)

FAR EAST EL PASO SERVICE TERRITORY

- Eastlake Temporary Substation (New) and Related 115 kV Reconfiguration (2024)
- Clint-Valley 69 kV Line (Rebuild, Reconductor) (2024)
- Rio Bosque-Ascarate 69 kV Line (Reconductor) (2024)
- Sparks-Felipe 69 kV Line (Rebuild, Reconductor) (2024)
- Horizon-San Felipe 115 kV Line (New) (2025)
- Pellicano-Montwood 115 kV Line (Reconductor)
- San Felipe Substation 115/69 kV (New) & 1 X 115/69 kV Autotransformer (2025)
- Americas-Passmore 69 kV Line (Reconductor) (2026)
- Caliente-MPS 115 kV Circuits 2 & 3 Common Structure Separation (**Conceptual Project**) (2026)
- Caliente-MPS 115 kV Circuit 1 (Partial Reconductor) (**Conceptual Project**) (2026)
- Eastlake Substation (New) and Related 115 kV Line Reconductor and Reconfiguration (2026)
- Passmore Substation (New) and Related 69 kV Line Reconductor and Reconfiguration (2026)
- Sparks-San Felipe Line (Voltage Conversion, Rebuild, Reconductor) 69kV to 115 kV (2027)
- Pine Switching Station 115 kV (New) (2027)
- Wrangler-Eastlake 115 kV Line (Rebuild, Reconductor) (2027)
- Marvin (FE6) 115 kV New Full Substation (2028)
- Marvin-Pine 115 kV Line (Reconductor) (2028)
- Pine-Seabeck 115 kV Line (New) (2029)
- Seabeck-Horizon 115 kV Line (Rebuild, Upgrade) (2029)
- Seabeck-San Felipe 115 kV Line (New) (2029)
- Seabeck Switching Station 115 kV (New) (2029)
- FE7 Substation (New) and Related 115 kV Line Reconfiguration (2029)
- Caliente 345/115 kV Autotransformer T3 (New) (2030)

LAS CRUCES, HATCH, AMRAD, ARTESIA SERVICE TERRITORY

- Apollo Substation Changes to Operate at 115 kV (2027)
- Apollo-Cox Line (Voltage Conversion, Reconductor) 69 kV to 115 kV (2027)
- Jornada-Arroyo 115 kV Line (Rebuild, Reconductor) (2027)
- Arroyo Variable Line Shunt Reactor (50-100 MVAR) on the Arroyo end of the WestMesa-Arroyo 345 kV Line (2027)
- New Amrad SVC device connecting on high-voltage side to Amrad 345 kV using its own dedicated step-up transformer to a dedicated bay, size assumed +/- 100 MVAR (symmetrical range) (2027)
- HVDC Tie Replacement (New) (2028)

- Leasburg Substation 115 kV New (2028)

**El Paso Electric Company
System Planning Department**

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MEMORANDUM

TO: Bryn T. Davis
Senior Director – Asset Management Services. September 27, 2022

FROM: David Tovar
Manager – System Planning

SUBJECT: EPE 2024-2033 System Expansion Plan

Enclosed is the El Paso Electric Company (“EPE”) 2024-2033 System Expansion Plan (“The Plan”). The Plan is a forecast of recommended electrical transmission and substation capital additions and/or modifications which, from an internal system planning perspective, are deemed necessary for maintaining adequate system reliability.

The Plan has been prepared by System Planning in collaboration and coordination with multiple EPE departments and is presented here to provide formal recommendations to appropriate management, engineering, and operational personnel for implementation in an economical and timely fashion. System expansion projects have been identified with regards to implementation dates, costs, descriptions, and justifications.

Please acknowledge through your signature your approval for dissemination of the Plan to all internal stakeholders.



Date

x 27 September 2023

Bryn T. Davis
Senior Director – Asset Management Services

2.0 INTRODUCTION

El Paso Electric Company's ("EPE") System Planning Department performs System Expansion Plan ("Plan") studies annually as described in EPE's Open Access Transmission Tariff ("OATT") Attachment K ("Attachment K"). This process is a technical evaluation of EPE's Bulk Electric System performed for a ten-year planning horizon (currently from 2024 through 2033). The Plan determines system facility additions and upgrades necessary to comply with Western Electricity Coordinating Council ("WECC") and the North American Electric Reliability Corporation ("NERC") reliability requirements under these conditions:

- Equipment will not be loaded more than its normal facility limits for All Facilities in Service ("AFIS").
- Equipment will not be loaded more than its emergency facility limits for any single-element ("N-1") contingency.
- Real-time violations that have been identified because of actual system conditions or real-time contingency analysis will be addressed.
- Conformance with EPE's Planning Criteria for NERC Standard TPL-001-4 will be applied to certain planning events.
- Equipment voltage limits (high or low) will not be exceeded.

The projects presented within El Paso Electric Company System Expansion Plan 2024-2033 are a result of technical analyses performed by System Planning with contributions from the Interconnections & Transmission Plan Department. This new Plan updates and replaces EPE's previous 2023-2032 System Expansion Plan. This 2023 Plan also includes new conceptual projects that were not included in the 2022 Plan.

3.0 PLANNING ORGANIZATIONS

EPE is involved in regional and subregional planning organizations. EPE's participation in these planning organizations facilitates EPE's coordination of its transmission plans with the plans of the other transmission providers/entities. See EPE's OATT, Attachment K for more details on how these activities relate to EPE's planning process.

3.1 Regional Planning Organizations

3.1.1 Western Electricity Coordinating Council (WECC)

EPE actively participates in WECC committees.

WECC is a non-profit corporation approved by the Federal Energy Regulatory Commission (FERC) to serve as the Regional Entity tasked with assuring a reliable Bulk Electric System in the Western Interconnection geographical area of the United States of America.

3.1.2 WestConnect

EPE actively participates in the WestConnect regional transmission planning process.

WestConnect members collaboratively assess stakeholder needs and may develop cost-effective transmission projects. EPE is an active member participant in the WestConnect regional transmission planning process established by FERC Order No. 1000.

3.2 Subregional Planning Group

3.2.1 Southwest Area Transmission (SWAT) Subregional Planning Group

EPE actively participates in the activities of the Southwest Area Transmission (SWAT) Subregional Planning Group that is comprised of transmission regulators/governmental entities, transmission users, transmission owners, transmission operators and environmental entities.

The SWAT addresses future transmission needs on a subregional basis.

4.0 GENERAL ASSUMPTIONS

4.1 Load Projections

The basis for Native system peak demand projections has historically been set by EPE's annual Long-Term Forecast Report. For this year's Plan, the expected native system MW demand value plus the 50% of the difference between the upper bound native system MW demand value less the expected native system MW demand value within EPE's 2023 Long-Term Forecast Report are being assumed as the EPE native system demand peak load and losses target values to be met and planned for each future year (i.e. modeled within peak/summer powerflow cases). EPE's 2023 native system peak demand exceeded the forecasted Expected native system peak demand from EPE's 2023 Long-Term Forecast report ("Forecast"), published by Economic Research department on April 5, 2023.

The 2023 Forecast predicts 10-year CAGR of 1.6% for native system peak demand. The Forecast includes demand side management and energy efficiency programs as detailed in the next section. For this 2023 Plan, native load, system losses and station service modeled for future years were determined using the expected native system MW demand value plus the 50% of the difference between the upper bound native system MW demand value less the expected native system MW demand value within EPE's 2023 Long-Term Forecast Report.

Each substation load was projected for the planning years based on available historical 2022 coincident peak load; Distribution System's monthly (non-coincident) load reports; load projections from the latest 2023 Distribution Expansion Plan Report update ("2023 Distribution Plan Update"), plus other input from EPE Distribution planning; and input from EPE's Load Forecasting and Commercial Services departments. EPE System Planning Group forecasts future substation loads by substation transformers based on these inputs.

The 2023 Forecast predicted a Native System Energy increase for 2023 of 1.99% compared to year 2022. The 2023 Forecast also predicted that Native System Peak Demand in 2023 will increase between 2.18% and 2.19% compared to the 2022 peak.

4.2 Demand Side Management

In Attachment K within EPE's OATT (posted on EPE's website at www.epelectric.com), EPE includes demand side resources through energy efficiency programs to mitigate the need for new transmission. Mandated energy efficiency goals accounted for in the Forecast are shown in Table 1. EPE expects an increase to its total cumulative energy efficiency load adjustments compared to the previous forecast. The 2023 Forecast shows a continuous increase in the energy efficiency demand adjustment with a projected peak of 97 MW in 2032.

Demand savings achieved through the EPE Energy Efficiency Programs are across all customer classes and across the whole transmission system. No single project or customer provides a significant amount of demand savings to dramatically impact the transmission system.

4.3 Generation Resources

EPE's Resource Planning Department ("RP") identified future generation resources and purchased power to serve native load in its 2023 Loads & Resources 2024-2043 document ("L&R") dated June 29, 2023, and from further input from EPE's Resource Planning Department to this document. This document compares owned resources and power purchases against forecasted load to determine new resources that may be needed.

The basis for future local generation resources serving native load as detailed in the Generation Resources are summarized in Table 2 were EPE Resource Planning Department input conveyed to EPE System Planning together with the 2023 EPE L&R document. Input from EPE's Resource Planning Department on future generation took first priority for generation retirements purposes, generation additions purposes, assumptions, modeling purposes while the 2023 EPE L&R document assumptions took second priority for the same purposes.

The following new generation was assumed in the System Expansion Plan modeling and is reflected on Table 2.

As shown on Table 2, input from EPE's Resource Planning Department in conjunctions with 2023 L&R portfolio identifies the following:

- 228 MW (summer rating)/255 MW (winter rating) Newman 6 GT5 resource/unit is planned to be energized in 2023
- Solar facility of 150 MW in 2024 (Hecate)
- Solar/battery combination storage facility of 130/65 MW in 2025
- Solar/battery combination storage facility of 150/75 MW in 2025
- Solar facility of 100 MW in 2025
- Solar facility of 50 MW in 2025
- Solar facility of 250 MW in 2030
- Battery storage facility of 283 MW in 2030
- Solar facility of 432 MW in 2032
- Battery storage facility of 381 MW in 2032
- 88 MW combustion turbine (CT) in 2032

4.4 Reliability Criteria

The Plan follows Good Utility Practice and planning as described in EPE's OATT Attachment K. It uses a deterministic approach for transmission system planning. Each annual review verifies that modeling, assumptions, and planned facilities meet WECC and NERC compliance requirements under normal (N-0), and single contingency (N-1) conditions for EPE's transmission area. Under these two conditions, the network must be operated within WECC, NERC and EPE's Planning Criteria for NERC Standard TPL-001-4 to supply projected customer loads and firm transmission services over the ten-year planning horizon. In addition, for this 2023 Plan, there was some consideration to study results for initially-out-of-service (IOS) single BES element conditions. The

Plan uses steady-state powerflow analyses to identify transmission projects (facility upgrades and/or additions) required to mitigate any criteria violations with the goal of providing sufficient lead time to incorporate them. The Plan summarizes each individual expansion project's scope, in-service date, justification, and purpose. Additionally, EPE reviews operational planning cases to determine transmission line loading conditions, mitigation practices and the need to upgrade transmission lines to facilitate operational needs and practices.

The Plan focuses on facilities under heavy summer coincidental peak demand conditions which is typically considered worst case scenarios for EPE's system since EPE is a summer peaking utility. Light Winter cases are examined as well.

EPE strives to complete all system improvements in a prudent, safe, and timely fashion. Nevertheless, scheduling factors may delay projects forcing EPE to apply temporary alternatives or measures to mitigate potential overloads.

4.5 Southwest Power Pool Reliability Coordinator Area System Operating Limit Methodology Western Interconnection Revision 1.1

On August 30, 2019, Revision 1.1 of the Southwest Power Pool Reliability Coordinator Area System Operating Limit Methodology Western Interconnection went into effect; subsequently, Revision 1.2, with an effective date of June 1, 2022, of the Southwest Power Pool Reliability Coordinator Area System Operating Limit Methodology Western Interconnection is in effect. The latest revision of these methodology documents require that EPE operate its system in the pre-contingency state (All-Facilities-in-Service, AFIS) so that all facilities shall be within their normal (continuous) facility (thermal) ratings and that for the post-contingency state for single (element) contingencies, all facilities shall be within their emergency facility (thermal) ratings.

4.6 Open Planning Meetings

The transmission planning process, per Attachment K, includes Open Planning meetings while developing this Plan. Two meetings were held -- one in September 2022 and the second in March 2023 -- to allow third party participants to review or submit data and request studies of potential Stakeholder needs. Stakeholders are allowed to submit data up to posted due dates to be incorporated into EPE's Plan case models. Data submitted after the due dates will not be incorporated into the current Plan, although they will be considered in the next year's planning cycle, if applicable. To date, no applicable Stakeholder data has been submitted to EPE that was incorporated into the Plan. The purpose of the Plan is to identify and evaluate, on a regular basis, future electric transmission system modifications and additions or alternatives that may be required to serve the anticipated area load growth, existing third-party customers' transmission needs, Public Policy requirements and NERC/WECC reliability requirements in the EPE service territory for a ten-year planning horizon.

4.7 Plan Case System Assumptions

System expansion analyses utilize powerflow studies and stability studies for each Plan year from 2024 through 2033. These analyses incorporated in-progress system expansion projects assumed to be completed before the peak of 2024. System modeling also includes the following assumptions:

- The forecasted substation load for each Plan year was adjusted to the modified projected coincidental peak loads using the Forecast (dated May 2023 with updates) and historical load data.
- Generation, system configuration, imports, and interchange schedules -- including contractual agreements with third-party entities -- were set according to load demand in each Plan case.
- El Paso Electric load power factor was set to 0.98 per unit (lagging) in each Plan case.
- Plan cases modeled PNM's Afton G1 and Afton S1 as "Off" when the Arroyo PST power flow was set to 151 MW north to south.
- Eddy County flow from the DC tie was modeled at zero (0) MW open ended at the Artesia bus in each of the Plan cases.
- EPE's share of Southern New Mexico Imports ("SNMI") was set at a schedule of 645 MW (per contractual rights) and EPE imports ("EPI") at 747 MW in all Plan cases.
- No on-line generation was modeled at Lordsburg. Luna Energy Facility ("LEF") was left as scheduled in the WECC cases used with the assumption that 100 MW scheduled to EPE under the Phelps Dodge (Freeport) Exchange Agreement and additional power from LEF to EPE, if needed, to meet EPI of 747 MW.
- Rebuilding of 69 kV lines will be designed to operate at 115 kV to support conversion of the EPE 69 kV systems to 115 kV future operational use. Lines will operate at their planned voltage until future conversions are implemented.
- The 59 MVAR line shunt reactor at the Hidalgo 345 kV Substation bus end of the Hidalgo- Greenlee 345 kV Line and the 49 MVAR line shunt reactor at the Macho Springs 345 kV Substation bus end of the Macho-Springerville 345 kV Line are "must-on" line shunt reactors for every Plan case. However, the Luna 345 kV Line shunt reactors were modeled on or off as needed. These reactors can be switched off during an outage of a Path 47 345 kV line.

Note that the final generation sites may have not yet been determined for the resource additions called for in the L&R to be phased in from 2024 to 2033. Therefore, the transmission configuration used in the Plan studies may change requiring different upgrades assumed in future interconnection and facility studies, per FERC's Large Generator Interconnection Procedures ("LGIP").

4.8 Case Development

4.8.1 WECC-Approved Cases

Plan cases were developed with the General Electric Positive Sequence Load Flow (“GE- PSLF”) program which was used for the numerous powerflow and contingency studies performed for the Plan. Each case is a “database” of the WECC transmission system -- originating from the latest “WECC cases” for the appropriate year. These WECC-approved Heavy Summer and Light Winter base cases contain system configurations and conditions from other nearby Transmission Planners. System Planning then incorporates EPE’s latest forecasted loads, expected generation resources, both of which incorporate EPE’s Public Policy requirements, and any topology changes not already included in the WECC-supplied cases. Many projects listed in the previous plan are removed (or reverted to the existing topology) to re-verify their need and schedule in the current Plan.

4.8.2 Topology Changes

In addition to the most current load and generation updates, System Planning incorporates topology changes not already included in the WECC-supplied cases such as planned substation- level and transmission changes. Substation changes, such as those detailed in EPE’s latest 2023 Distribution Plan Update with updates document, include capacity upgrades, additions, deletions, location changes, and/or postponements. Planned transmission changes typically include capacity upgrades, additions, deletions, location changes, and postponements that are usually driven by the substation- level changes, generation changes, other studies (e.g., those in the LGIP), or routing changes due to regulatory orders or right-of-way issues or other input.

If a newly planned substation is postponed, any transmission changes associated with that substation may also be postponed. This may affect study results since many future projects depend on previously identified improvements. Factors affecting completion dates include, for example, those identified above. Where completion targets are not achieved, or in instances in which EPE experiences more rapid load growth than forecasted, EPE evaluates and identifies short-term corrective measures to mitigate impacts, as necessary.

Table 3A shows expansion projects that were called for and budgeted in the last Plan (2024-2033) but are now re-scheduled to be completed before the peak of 2024. These projects have been modeled in the 2024 Plan cases and beyond to help mitigate potential contingency overloads.

Table 3B shows a comparison between project schedule recommended completion dates for planned projects in the 2022 Plan and the current 2023 Plan.

New or modified Plan projects are summarized in Tables 4A & 4B and detailed in each year’s project descriptions.

4.9 System Improvement Methodology

After Plan cases were modified as outlined above, contingency analyses are performed for each Plan year to identify reliability criteria violations on EPE facilities within EPE's service area. If violations were identified, mitigating improvements (e.g., Plan projects) were added to EPE's transmission system. Each year's Plan cases carried over the previous year's system improvements. These upgrades will be reflected in the following year's assessment.

Some Plan projects are a result of studies performed outside of System Planning, such as those from the LGIP, third-party generators or Transmission Service Requests while others are incorporated from the latest EPE capital budget. Projects listed in the Plan are specific to the expansion of the EPE internal electrical transmission system. Any projects outside the local electrical system planning area may be evaluated in separate studies.

Additionally, the Plan does not normally include maintenance projects nor external system expansion projects other than those in the WECC-approved base cases. Furthermore, projects associated with non-EPE large generator interconnections are not included unless a Large Generator Interconnection Agreement (LGIA) has been executed.

4.10 Project's Summary Explained

Tables 4A and 4B identify each year's system improvements. It also includes generic projects as "Additional Future Capital Improvements" added in each year to serve as placeholders in areas of the system where it is difficult, at present, to identify whether and how much specific transmission infrastructure may be necessary. In most cases, System Planning recommends a completion date by June 1 of the given year (unless otherwise noted), to support peak summer load.

The Plan also contains a brief description and justification for each planned system improvement along with basic one-line diagrams illustrating new additions broken down by year (included in Tabs 2024 through 2033). The planned in-service date of the recommended system improvement projects reflects the date the project was modeled to meet planning requirements and it does not represent the construction completion date of the project. Furthermore, deferred projects identified in prior expansion plans are also not included in Tabs 2024-2033. Deferred projects from prior expansion plans are listed on Table 3B.

Table 6 details assumptions for existing EPE thermal generator units retiring and assumed to be converted to synchronous condensers in order to support and offset the inertia and dynamic reactive support/supply potentially lost due to EPE thermal unit retirements. Note that these conversions were modeled in this year's 2023 EPE Plan powerflow cases in the future year noted in Table 6. Note that these conversions were modeled as connected directly on the high voltage part of the EPE system. Also note that planning alternatives to these assumed and modeled conversions include offsets due to the addition of reactive support from capacitors added to the EPE system on the distribution and transmission portions, dynamic reactive support from any added EPE system generation additions and/or their subcomponents capable of supplying such support, and dynamic reactive support from additions or other devices such as SVC and STATCOM devices. Note that there are particular advantages of the use of synchronous condensers technology solutions over other solutions for dynamic reactive support; in addition, it is worth noting the use of any non-

synchronous condenser for dynamic reactive support be sized with the minimum range near the locations noted on Table 6. Evaluation of the balance amongst these reactive supply solutions to offset EPE thermal generating unit retirements will be evaluated through each and will be considered for inclusion in future EPE Plans.

4.11 Acknowledgements

This document was prepared by EPE System Planning in collaboration with contributions from the following EPE departments: Distribution Systems, TSR Engineering, Asset Management Services, Economic Research, Interconnections Department, Resource Planning, System Operations, and other EPE departments or personnel. Supporting documentation for the numerous studies is not included in this document due to space constraints.

5.0 TABLES

Table 1. Yearly Peak Energy Efficiency Adjustment

Calendar Year	Total Energy Efficiency Demand Adjustment (MW)	Calendar Year	Total Energy Efficiency Demand Adjustment (MW)
2023	10	2028	58
2024	19	2029	68
2025	29	2030	78
2026	39	2031	87
2027	49	2032	97

Table 2. Projected EPE Local Generation

Generator	Type	Capacity (MW) (1)	Planned In Service	Planned Retirement (4)	Notes
Airport PV	Photovoltaic	12	Pre-2015		2
Chaparral PV	Photovoltaic	10	Pre-2015		2
Patriot PV	Photovoltaic	10	Jan. 2015		2
Hatch PV	Photovoltaic	5	Pre-2015		2
Santa Teresa PV	Photovoltaic	20	Pre-2015		2
Macho Springs	Photovoltaic	50	Pre-2015		
Copper	Gas Combustion Turbine	63	Pre-2015	Dec. 2030	
MPS 1	Gas Combustion Turbine	90	Jan. 2015		
MPS 2	Gas Combustion Turbine	90	Jan. 2015		
MPS 3	Gas Combustion Turbine	90	Jan. 2016		
MPS 4	Gas Combustion Turbine	90	Jan. 2017		
Newman G1	Gas-fired Steam Turbine	74	Pre-2015	Dec. 2025	
Newman G2	Gas-fired Steam Turbine	74	Pre-2015	Dec. 2027	
Newman G3	Gas-fired Steam Turbine	93	Pre-2015	Dec. 2031	
Newman 4 GT 1	Gas Combustion Turbine	70	Pre-2015	Dec. 2031	
Newman 4 GT 2	Gas Combustion Turbine	70	Pre-2015	Dec. 2031	
Newman 4 ST 1	Combined Cycle HRSG	80	Pre-2015	Dec. 2031	
Newman 5 GT 3	Gas Combustion Turbine	70	Pre-2015		
Newman 5 GT 4	Gas Combustion Turbine	70	Pre-2015		
Newman 5 ST 2	Combined Cycle HRSG	148	Pre-2015		
Newman 6 GT 5	Gas Combustion Turbine	228	Sept. 2023		3
Rio Grande G6	Gas-fired Steam Turbine	45	Pre-2015	<i>Inactive Reserve</i>	
Rio Grande G7	Gas-fired Steam Turbine	44	Pre-2015	Dec. 2025	
Rio Grande G8	Gas-fired Steam Turbine	139	Pre-2015	Dec. 2033	
Rio Grande G9	Gas Combustion Turbine	88	Pre-2015		
Buena Vista	Photovoltaic/Battery Storage	120 (120 Solar/50 Battery)	May. 2023		6
Hecate	Photovoltaic	150	May. 2024		6
BSC1	Photovoltaic/Battery Storage	130 (130 Solar/65 Battery)	May. 2025		5
BSC2	Photovoltaic/Battery Storage	150 (150 Solar/75 Battery)	May. 2025		5
BSC3	Photovoltaic	100	May. 2025		5
BSC4	Photovoltaic	50	May. 2025		5
Renewable Generation Standalone Solar 2030	Photovoltaic	250	May. 2030		5
Renewable Generation Standalone Battery 2030	Battery Storage	283	May. 2030		5
CTR1	Gas Combustion Turbine	88	May. 2032		5
Renewable Generation Standalone Solar 2032	Photovoltaic	432	May. 2032		5
Renewable Generation Standalone Battery 2032	Battery Storage	381	May. 2032		5

Notes:

1. Null, note from former plan does not apply to current plan.
2. This photovoltaic generation connects into EPE's distribution system.
3. Plan identifies Newman 6GT5 approximately 0.5-0.6 mile east of existing Newman Generation Station.
4. Null, note from former plan does not apply to current plan.
5. Planned facilities pending studies to determine location.
6. LGIA Ratings.

5.1 Project Changes from 2022 EPE Plan:

EPE Bulk Electric System project completed projects or planned project changes are noted between EPE’s 2022 Plan and this EPE 2023 Plan. See Tables 3A and 3B for the details of these project completions and changes, respectively.

5.1.1 Completed Projects:

EPE System Expansion Projects scheduled for completion before Peak of Year 2024 (in-service date expected prior to or on June 1, 2024, subject to engineering judgement on exceptions, are summarized in Table 3A below.

**Table 3A. System Expansion Projects Scheduled for Completion Before Peak of 2024
(All projects below are modeled in the 2024 Plan Case)**

System Upgrade Needed	Location of Upgrade	Improvement Identification	Planned In Service Date
Reconductor, Rebuild Line	Newman-Chaparral 115 kV Line	Improves Reliability under N-1	March-23
New Temporary Substation and Related 115 kV Line Reconfiguration	Coyote Temporary Substation	New temporary substation to serve load growth of Far East El Paso	April-23
New Moongate Substation and Related Moongate-Jornada 115 kV Line	Moongate/Jornada Substation	New substation to serve load growth of East Las Cruces	June-23
New 115 kV Capacitors (2 x 15.9 MVAR)	Moongate Substation	Improve reactive capability and voltage profile in Las Cruces Area under N-1	June-23
New Substation and Related 115 kV Line Reconfiguration	Roberts Substation	Generation Resources Portion	September-23
Transformer and substation equipment upgrades at the same location	Dallas (Full) Substation	Assist with Load Growth of Central El Paso	December-23
New Temporary Substation and Related 115 kV Line Reconfiguration	Eastlake Temporary Substation	New temporary substation to serve load growth of Far East El Paso	April-24
New Switching Station and Related 115 kV Line Reconfiguration	Verde Switching Station	New switching station to connect planned EPE generation addition and Related 115 kV Line Reconfiguration	April-24
Reconductor Line	Clint-Valley 69 kV Line	Improves Reliability under N-1	May-24
New Temporary Substation and Related 115 kV Line Reconfiguration	Westside Temporary 115 kV Substation	New temporary substation to serve load growth of West El Paso	May-24

5.1.2 Revised Projects:

EPE System Expansion Projects that were revised are summarized in Table 3B that follows.

**Table 3B. Summary of Previous Plan’s Project Schedule
EPE 2024-2033 System Expansion Plan Project
Schedule**

Project Description	Recommended Completion Date 2022 Plan Month-Year (2)	Recommended Completion Date 2023 Plan Month-Year (2)
Eastlake Temporary Substation (New) and Related 115 kV Line Reconfiguration		April-24
Verde 115 kV Switching Station (New) and Related 115 kV Line Reconfiguration	May-23	April-24
Austin-Marlow 115 kV Line (Rebuild, Reconductor)	May-25 & May-32	May-24
Clint-Valley 69 kV Line (Rebuild, Reconductor)	May-23	May-24
Lane-Americas 69 kV Line (Reconductor)	May-24	May-24
Lane-Wrangler 115 kV Line (Rebuild, Reconductor)	May-24	May-24
Rio Grande-Sunset 69 kV Lines (5500/5600) (Rebuild, Reconductor)	May-25	May-24
Rio Bosque-Ascarate 69 kV Line (Reconductor)	May-23	May-24
Sparks-Felipe 69 kV Line (Rebuild, Reconductor)		May-24
Westside Temporary Substation (New) and Related 115 kV Line Reconfiguration		May-24
Ascarate-Trowbridge 115 kV Line (Reconductor)	May-25	May-25
Hawkins Substation 69 kV (New) and Line Reconfiguration	May-25	May-25
Horizon-San Felipe 115 kV Line (New)		May-25
Pellicano-Montwood 115 kV Line (Reconductor)	May-23	May-25
San Felipe Substation 115/69 kV (New) & 1 X 115/69 kV Autotransformer	May-26	May-25
WS2 Substation (New) and Related 115 kV Line Reconfiguration	May-31	May-25
Americas-Passmore 69 kV Line (Reconductor)	May-24	May-26
Eastlake Substation (New) and Related 115 kV Line Reconductor and Reconfiguration	May-24	May-26
Passmore Substation (New) and Related 69 kV Line Reconductor and Reconfiguration	May-24	May-26
Sparks-San Felipe Line (Voltage Conversion, Rebuild, Reconductor) 69 kV to 115 kV	December-26	March-27
Apollo Substation Changes to Operate at 115 kV	December-24	May-27
Apollo-Cox Line (Voltage Conversion, Reconductor) 69 kV to 115 kV	December-24	May-27
CE2 Substation (New) and Related 115 kV West Loop Line Reconfiguration	May-25	May-27
Jornada-Arroyo 115 kV Line (Rebuild, Reconductor)	December-24	May-27
McCombs Substation (New) and Related 115 kV Line Reconfiguration	May-24	May-27
Pine Switching Station 115 kV (New)	May-27	May-27
Rio Grande-Sunset North 115 kV Double Bundled Line (Rebuild, Reconductor)	May-25	May-27
Verde 115 kV Substation (Load Serving Station Portion Added)	May-27	May-27
Wrangler-Eastlake 115 kV Line (Rebuild, Reconductor)	May-24	May-27
Arroyo Variable Line Shunt Reactor (50-100 MVAR) on the Arroyo end of the WestMesa-Arroyo 345 kV Line	October-25	December-27
New Amrad SVC device connecting on high-voltage side to Amrad 345 kV side using its own dedicated step-up step up transformer to a dedicated bay, size assumed +/- 100 MVAR (symmetrical range)	December-27	December-27

Afton-Afton North 345 kV Double Bundled Line (New)	May-25	May-28
Afton North-Airport 345 kV Line (New)	December-26	May-28
Afton North 345 kV Substation (New)	May-25	May-28
Afton-Newman 345 kV Line Reconfiguration	May-25	May-28
Airport 345/115 kV Autotransformer (New)	December-26	May-28
Airport 345/115/24 kV Substation	December-26	May-28
Anthony-Vado 115 kV Line (Rebuild, Reconductor)	May-28	May-28
Marvin (FE6) 115 kV New Full Substation	May-27	May-28
Marvin-Pine 115 kV Line (Reconductor)	May-27	May-28
HVDC Tie Replacement (New)	May-28	May-28
Leasburg Substation 115 kV (New)	May-27	May-28
Two Vado 345/115 kV Autotransformers (New)	May-28	May-28
Vado-Salopek 115 kV (Rebuild, Reconductor)	May-28	May-28
Vado Substation 345/115 kV (New)	May-28	May-28
WS1 Substation (New) and Related 115 kV Line Reconfiguration	May-31	May-28
McNutt Substation (New) and Related 115 kV Line Reconfiguration	May-29	June-28
CE3 Substation (New) and Related 115 kV West Loop Line Reconfiguration	May-29	May-29
EA1 Substation (New) and Related 115 kV Line Reconfiguration	May-31	May-29
Pine-Seabeck 115 kV Line (New)	May-27	May-29
Seabeck-Horizon 115 kV Line (Rebuild, Upgrade)	May-26	May-29
Seabeck-San Felipe 115 kV Line (New)	June-26	May-29
Seabeck Switching Station 115 kV (New)	May-26	May-29
FE7 Substation (New) and Related 115 kV West Loop Line Reconfiguration		May-29
Caliente 345/115 kV Autotransformer T3 (New)	May-25	May-30
CE4 Substation (New) and Related 115 kV West Loop Line Reconfiguration	May-28	May-30
CE4-Executive 115 kV Line (New)	May-28	May-30
Marlow-Trowbridge 115 kV (Rebuild, Reconductor)	May-30	May-30
Newman-McCombs 115 kV Line Circuit 1 (Reconductor)	May-24	May-30
Newman-McCombs 115 kV Line Circuit 2 (Reconductor)	May-24	May-30
NE3 Substation (New) and Related 115 kV Line Reconfiguration	May-31	May-31
Dyer 115/69 kV Autotransformer T1 (Upgrade)		May-32
Newman-Roberts 115 kV Line Circuit 1 (Reconductor)		May-32
CE2-Rio Grande 115 kV Line (Rebuild, Reconductor)	May-32	May-33

5.2 Planned EPE Bulk Electric System Transmission Projects:

Planned EPE Bulk Electric System Projects with projected in-service dates between 2024-2033 as needed to support the local EPE Bulk Electric System transmission system are summarized in Tables 4A & 4B that follow.

**Table 4A. Project Schedule (2024-2026)
EPE 2024-2033 System Expansion Plan**

Year	Project Description	Recommended Completion Date Month-Year (2)
2024	Eastlake Temporary Substation (New) and Related 115 kV Line Reconfiguration	April-24
	Verde 115 kV Switching Station (New) and Related 115 kV Line Reconfiguration	April-24
	Austin-Marlow 115 kV Line (Rebuild, Reconductor)	May-24
	Clint-Valley 69 kV Line (Rebuild, Reconductor)	May-24
	Lane-Americas 69 kV Line (Reconductor)	May-24
	Lane-Wrangler 115 kV Line (Rebuild, Reconductor)	May-24
	Rio Grande-Sunset 69 kV Lines (5500/5600) (Rebuild, Reconductor)	May-24
	Rio Bosque-Ascarate 69 kV Line (Reconductor)	May-24
	Sparks-Felipe 69 kV Line (Rebuild, Reconductor)	May-24
	Westside Temporary Substation (New) and Related 115 kV Line Reconfiguration	May-24
2025	Ascarate-Trowbridge 115 kV Line (Reconductor)	May-25
	Hawkins Substation 69 kV (New) and Line Reconfiguration	May-25
	Horizon-San Felipe 115 kV Line (New)	May-25
	Pellicano-Montwood 115 kV Line (Reconductor)	May-25
	San Felipe Substation 115/69 kV (New) & 1 X 115/69 kV Autotransformer	May-25
	WS2 Substation (New) and Related 115 kV Line Reconfiguration	May-25
2026	Americas-Passmore 69 kV Line (Reconductor)	May-26
	Eastlake Substation (New) and Related 115 kV Line Reconfigurator and Reconfiguration	May-26
	Passmore Substation (New) and Related 69 kV Line Reconductor and Reconfiguration	May-26

Notes:

1. Table does not include maintenance projects except for transmission line rebuilds and or conductor upgrades.
2. System Planning recommends completion prior to May for the given to aid with the summer peak period.

**Table 4B. Project Schedule (2027-2033)
EPE 2024-2033 System Expansion**

Year	Project Description	Recommended Completion Date Month-Year (2)
2027	Sparks-San Felipe Line (Voltage Conversion, Rebuild, Reconductor) 69 kV to 115 kV	March-27
	Apollo Substation Changes to Operate at 115 kV	May-27
	Apollo-Cox Line (Voltage Conversion, Reconductor) 69 kV to 115 kV	May-27
	CE2 Substation (New) and Related 115 kV West Loop Line Reconfiguration	May-27
	Jornada-Arroyo 115 kV Line (Rebuild, Reconductor)	May-27
	McCombs Substation (New) and Related 115 kV Line Reconfiguration	May-27
	Pine Switching Station 115 kV (New)	May-27
	Rio Grande-Sunset North 115 kV Double Bundled Line (Rebuild, Reconductor)	May-27
	Verde 115 kV Substation (Load Serving Station Portion Added)	May-27
	Wrangler-Eastlake 115 kV Line (Rebuild, Reconductor)	May-27
	Arroyo Variable Line Shunt Reactor (50-100 MVAR) on the Arroyo end of the WestMesa-Arroyo 345 kV Line	December-27
	New Amrad SVC device connecting on high-voltage side to Amrad 345 kV side using its own dedicated step-up step up transformer to a dedicated bay, size assumed +/- 100 MVAR (symmetrical range)	December-27
2028	Afton-Afton North 345 kV Double Bundled Line (New)	May-28
	Afton North-Airport 345 kV Line (New)	May-28
	Afton North 345 kV Substation (New)	May-28
	Afton-Newman 345 kV Line Reconfiguration	May-28
	Airport 345/115 kV Autotransformer (New)	May-28
	Airport 345/115/24 kV Substation	May-28
	Anthony-Vado 115 kV Line (Rebuild, Reconductor)	May-28
	Marvin (FE6) 115 kV New Full Substation	May-28
	Marvin-Pine 115 kV Line (Reconductor)	May-28
	HVDC Tie Replacement (New)	May-28
	Leasburg Substation 115 kV (New)	May-28
	Two Vado 345/115 kV Autotransformers (New)	May-28
	Vado-Salopek 115 kV (Rebuild, Reconductor)	May-28
	Vado Substation 345/115 kV (New)	May-28
	WSI Substation (New) and Related 115 kV Line Reconfiguration	May-28
McNutt Substation (New) and Related 115 kV Line Reconfiguration	June-28	
2029	CE3 Substation (New) and Related 115 kV West Loop Line Reconfiguration	May-29
	EA1 Substation (New) and Related 115 kV Line Reconfiguration	May-29
	Pine-Seabeck 115 kV Line (New)	May-29
	Seabeck-Horizon 115 kV Line (Rebuild, Upgrade)	May-29
	Seabeck-San Felipe 115 kV Line (New)	May-29
	Seabeck Switching Station 115 kV (New)	May-29
	FE7 Substation (New) and Related 115 kV West Loop Line Reconfiguration	May-29
2030	Caliente 345/115 kV Autotransformer T3 (New)	May-30
	CE4 Substation (New) and Related 115 kV West Loop Line Reconfiguration	May-30
	CE4-Executive 115 kV Line (New)	May-30
	Marlow-Trowbridge 115 kV (Rebuild, Reconductor)	May-30
	Newman-McCombs 115 kV Line Circuit 1 (Reconductor)	May-30
	Newman-McCombs 115 kV Line Circuit 2 (Reconductor)	May-30
2031	NE3 Substation (New) and Related 115 kV Line Reconfiguration	May-31
2032	Dyer 115/69 kV Autotransformer T1 (Upgrade)	May-32
	Newman-Roberts 115 kV Line Circuit 1 (Reconductor)	May-32
2033	CE2-Rio Grande 115 kV Line (Rebuild, Reconductor)	May-33

Notes:

1. Table above does not include maintenance projects except for transmission line rebuilds and or conductor upgrades.
2. System Planning recommends completion prior to May for the given to aid with the summer peak period.

**Table 4C. Conceptual Project Schedule (2028)
EPE 2024-2033 System Expansion**

Year	Project Description	Recommended Completion Date Month-Year (2)
2026	Caliente-MPS 115 kV Circuits 2 & 3 Common Structure Separation	May-26
2026	Caliente-MPS 115 kV Circuit 1 (Partial Reconductor)	May-26
2028	Near Macho 345 kV Substation, Airport to Near Macho Springs 345 kV line and Related 345 kV Line Reconfiguration	May-28

5.3 Planned EPE 69 kV and 115 kV Reactive Device Projects:

Planned EPE 69 kV and 115 kV Reactive Device Projects with projected in-service dates between 2024-2033 as needed to support the local EPE 69 kV and 115 kV transmission system are summarized in Table 5 below.

Table 5. 69 kV, 115 kV, and 345 kV Bus Shunt Capacitor and Reactor Additions

System Upgrade Needed	Location of Upgrade	Improvement Identification	Recommended Completion
New 115 kV Capacitors (2 x 15.9 MVAR)	Passmore (Full)	Improve reactive capability and voltage profile in the Far East El Paso area under N-1	May-26
New 115 kV Capacitors (2 x 15.9 MVAR)	Eastlake (Full)	Improve reactive capability and voltage profile in the Far East El Paso area under N-1	May-26
New 115 kV Capacitors (2 x 15.9 MVAR)	San Felipe Substation	Improve reactive capability and voltage profile in the Far East El Paso area under N-1	May-26
New 115 kV Capacitors (2 x 15.9 MVAR)	McCombs Substation	Improve reactive capability and voltage profile in the North East El Paso area under N-1	May-27
Arroyo Variable Line Shunt Reactor (50- 100 MVAR) on the Arroyo end of the WestMesa-Arroyo 345 kV Line	West Mesa-Arroyo 345 kV Line	Improve reactive capability and voltage profile; Replacement of existing reactor	December-27

5.4 Assumed EPE Retiring Thermal Generation to be Converted to Synchronous Condenser:

Assumed EPE retiring thermal generation to be converted to a synchronous condenser are summarized in Table 6 below.

An analysis for inertia and dynamic reactive capability loss was performed by EPE System Planning that identifies some measure of deficit for both in certain years. The 2023 Plan made modeling assumptions that some existing EPE thermal generators would be converted in certain years to partially offset some of the deficit inertia loss from that source and completely offset the reactive margin deficit lost because of EPE thermal unit retirements by use and assumptions of certain retired units. The conversion of EPE thermal units with greater reactive margin range were preferred over those with estimated less range as optimal and O&M were considered the same for such conversion. In using synchronous condenser conversions of retiring thermal units, alternatives for some of this dynamic reactive capability loss from retiring thermal units could be partially met as alternatives by solar renewable addition inverter reactive capability supply, static capacitor additions to the transmission and feeder systems, static var compensators (SVC) additions, STATCOMs, or any other such device. Also, if EPE generation is up for consideration for synchronous condenser conversion the retirement date, reactive capability post conversion, and technology of a EPE unit, should be considerations as to the better candidate retiring unit for conversion. Regardless, the 2023 Plan modeled the synchronous condenser conversion options. Note that these conversions were modeled as connected directly to the 115 kV bus (at Copper and Newman), in reality, they would be connected through a step-up transformer prior to reaching the 115 kV bus; however, other than losses, this does not seem to affect study results.

Table 6. Thermal Generation Conversion to Synchronous Condenser

Name of Retiring Thermal Unit	Year Assumed of Retirement	First Year Assumed Synchronous Condenser Conversion Operational/Modeled	Plant/Location of Retiring Thermal unit and Its Conversion
Newman 2	2027	2028	Newman (-35.1/+66.3 MVAR)
Copper	2030	2031	Copper (-25.246/+72.293 MVAR)
Newman 3	2031	2032	Newman (-35.75/+84.5 MVAR)
Newman 4 ST	2031	2032	Newman (-62.504/+78.728 MVAR)

6.0 EPE BES PLANNED PROJECTS MAP

7.0 TRANSMISSION PROJECT SUMMARY

Transmission Projects will be identified with the following format.

PLANNED PROJECTS **YEAR XXXX**

Project Name: Commonly used name by El Paso Electric Company for a transmission or substation system expansion capital project. Projects of a normal maintenance nature and those located external to the EPE's transmission network are normally not included here.

Operating Voltage: The operational voltage level(s) of the system element(s).

In Service Date: This is recommended project completion date. In general, it is recommended that projects be completed by May of the installation year, so that anticipated system peak load demand is met.

Peak Modeling Year: The year modeled in heavy summer PSLF cases.

Project Description: A general description of the project.

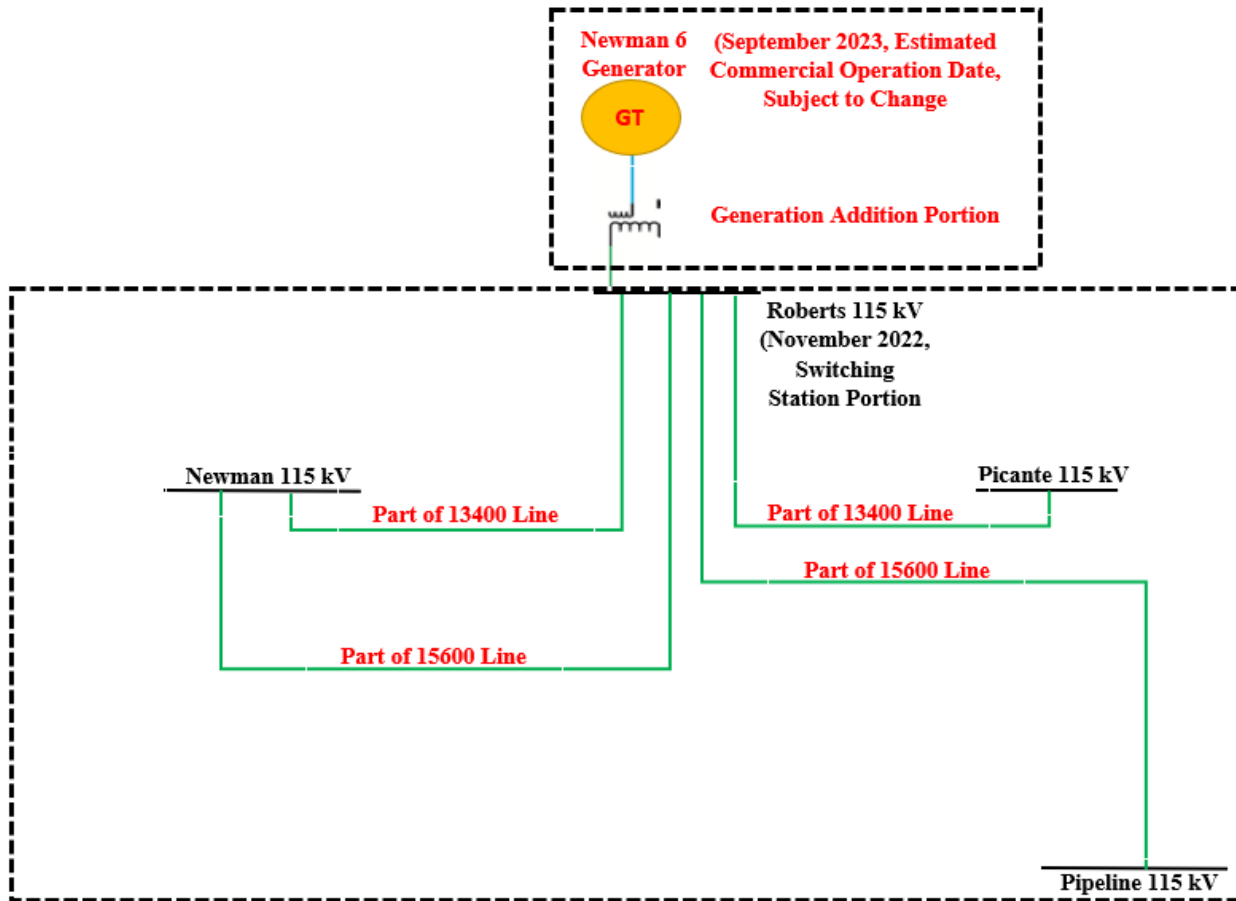
Project Justification: Project need is identified.

Transmission Projects in 2024

**PLANNED PROJECTS
YEAR 2022-2023**

<u>Project Name:</u>	Roberts Substation (New) and Related 115 kV Line Reconfiguration (Related to Newman 6 Generator Addition)
<u>Operating Voltage:</u>	115 kV
<u>In Service Date:</u>	November 2022 (Switching Station Portion)
<u>In Service Date:</u>	September 2023 (Generator Addition Portion)
<u>Peak Modeling Year:</u>	May 2023 (Switching Station Portion) May 2024 (Generator Addition Portion)
<u>Project Description:</u>	This project involves connecting the Newman-Picante and the Newman-Pipeline 115 kV transmission lines as well as the future Newman 6 generator into the Roberts Substation.
<u>Project Justification:</u>	This Substation is needed for the interconnection of the Newman 6 Generator to EPE's 115 kV system.

**ROBERTS SUBSTATION
YEAR 2022-2023**



**PLANNED PROJECTS
YEAR 2024**

<u>Project Name:</u>	Eastlake Temporary Substation (New) and Related 115 kV Line Reconfiguration
<u>Operating Voltage:</u>	115 kV
<u>In Service Date:</u>	April 2024
<u>Peak Modeling Year:</u>	2024
<u>Project Description:</u>	The project involves the construction of a new Eastlake temporary substation. The project includes tapping EPE’s existing Wrangler-Sparks 115 kV transmission line with terminations into Eastlake Temporary 115 kV Substation.
<u>Project Justification:</u>	This is a new distribution planning project that results in an EPE transmission system reconfiguration.

**PLANNED PROJECTS
YEAR 2024**

<u>Project Name:</u>	Verde 115 kV Switching Station (New) and Related 115 kV Line Reconfiguration
<u>Operating Voltage:</u>	115 kV
<u>In Service Date:</u>	April 2024
<u>Peak Modeling Year:</u>	2024
<u>Project Description:</u>	The project involves the construction of a new Verde Switching Station. The project includes splitting EPE's existing Diablo-Santa Teresa 115 kV transmission line with terminations into Verde 115 kV. The Diablo-Santa Teresa 115 kV Line will then become the reconfigured Diablo-Verde 115kV Line and the Verde-Santa Teresa 115 kV Line.
<u>Project Justification:</u>	This is a new new switching station to connect to a generation addition.

**PLANNED PROJECTS
YEAR 2024**

Project Name: Austin-Marlow 115 kV Line (Rebuild, Reconductor)

Operating Voltage: 115 kV

In Service Date: May 2024

Peak Modeling Year: 2024

Project Description: The project consists of rebuilding/reconductoring the Austin to Marlow 115 kV transmission line with conductor that provides a minimum normal capacity rating of 301 MVA and a minimum emergency capacity rating of 301 MVA.

Project Justification: This project has been identified as part of a facilities upgrade required to address and mitigate potential overload conditions under certain planning event contingencies.

**PLANNED PROJECTS
YEAR 2024**

Project Name: Clint-Valley 69 kV Line (Rebuild, Reconductor)

Operating Voltage: 69 kV

In Service Date: May 2024

Peak Modeling Year: 2024

Project Description: The project consists of reconductoring the Clint to Valley 69 kV transmission line with conductor that provides a minimum normal capacity rating of 111.3 MVA and a minimum emergency capacity rating of 148.4 MVA.

Project Justification: This project has been identified as part of a facilities upgrade required to address and mitigate potential overload conditions under certain planning event contingencies.

**PLANNED PROJECTS
YEAR 2024**

Project Name: Lane-Americas 69 kV Line (Reconductor)

Operating Voltage: 69 kV

In Service Date: May 2024

Peak Modeling Year: 2024

Project Description: The project consists of reconductoring the Lane to Americas 69 kV transmission line with conductor that provides a minimum normal capacity rating of 117 MVA and a minimum emergency capacity rating of 117 MVA.

Project Justification: This project has been identified as part of a facilities upgrade required to address and mitigate potential overload conditions under certain planning event contingencies.

**PLANNED PROJECTS
YEAR 2024**

Project Name: Lane-Wrangler 115 kV Line (Rebuild, Reconductor)

Operating Voltage: 115 kV

In Service Date: May 2024

Peak Modeling Year: 2024

Project Description: The project consists of reconductoring the Lane to Wrangler 115 kV transmission line with conductor that provides a minimum normal capacity rating of 353.75 MVA and a minimum emergency capacity rating of 353.75 MVA.

Project Justification: This project has been identified as part of a facilities upgrade required to address and mitigate potential overload conditions under certain planning event contingencies.

**PLANNED PROJECTS
YEAR 2024**

Project Name: Rio Grande-Sunset 69 kV Lines (5500/5600) (Rebuild, Reconductor)

Operating Voltage: 69 kV

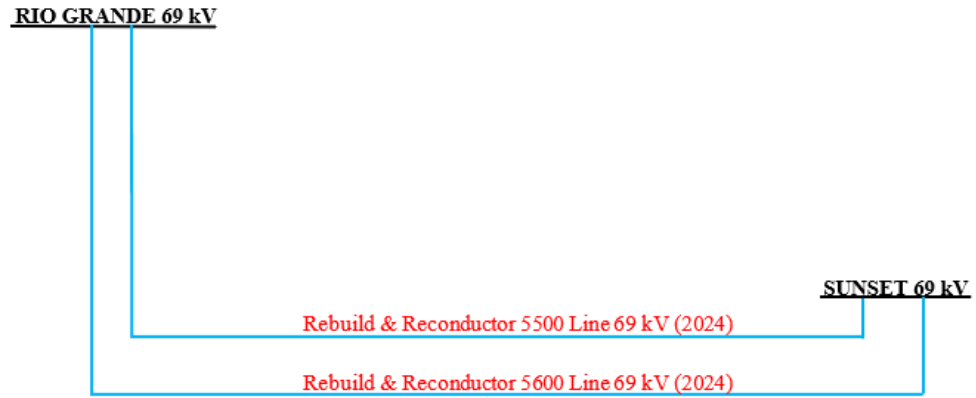
In Service Date: May 2024

Peak Modeling Year: 2024

Project Description: This project involves the reconductoring of two 69 kV lines for a portion of each of these lines, traverse mountainous terrain and extend through the UTEP campus area. The 69 kV lines (5500/5600) connect Rio Grande Substation and Sunset Substation. The rebuilt and reconductoring capacity of the 69 kV (5500/5600) lines require an upgrade with at least a normal capacity rating of 111.3 MVA and emergency capacity rating of 148.4 MVA each.

Project Justification: These lines experience increased loading during the summer peak months, a condition that is difficult to mitigate. The increase in line capacity will relieve operational mitigation measures and mitigate potential overload conditions under certain planning event contingencies.

**RIO GRANDE-SUNSET 69 kV LINES (5500/5600)
(REBUILD/RECONDUCTOR)
YEAR 2024**



NOTE: FOR ILLUSTRATION PURPOSES ONLY.
FINAL DESIGN WILL BE COMPLETED
BY TRANSMISSION LINE DESIGN
AND SR ENGINEERING

**PLANNED PROJECTS
YEAR 2024**

Project Name: Rio Bosque-Ascarate 69 kV Line (Reconductor)

Operating Voltage: 69 kV

In Service Date: May 2024

Peak Modeling Year: 2024

Project Description: The project consists of reconductoring the Lane to Americas 69 kV transmission line with conductor that provides a minimum normal capacity rating of 115 MVA and a minimum emergency capacity rating of 115 MVA.

Project Justification: This project has been identified as part of a facilities upgrade required to address and mitigate potential overload conditions under certain planning event contingencies.

**PLANNED PROJECTS
YEAR 2024**

Project Name: Sparks-Felipe 69 kV Line (Rebuild, Reconductor)

Operating Voltage: 69 kV

In Service Date: May 2024

Peak Modeling Year: 2024

Project Description: The project consists of rebuilding/reconductoring the Sparks to Felipe 69 kV transmission line with conductor that provides a minimum normal capacity rating of 87 MVA and a minimum emergency capacity rating of 87 MVA.

Project Justification: This project has been identified as part of a facilities upgrade required to address and mitigate potential overload conditions under certain planning event contingencies.

**PLANNED PROJECTS
YEAR 2024**

Project Name: Westside Temporary Substation (New) and Related 115 kV Line Reconfiguration

Operating Voltage: 115 kV

In Service Date: May 2024

Peak Modeling Year: 2024

Project Description: This project involves the construction of a new Westside temporary substation. The project includes tapping EPE’s existing Nuway-Montoya 115 kV transmission line with terminations into Westside Temporary 115 kV Substation.

Project Justification: This is a new distribution planning project that results in an EPE transmission system reconfiguration. The addition of WS1 Substation will provide support to the expanding load growth in the area.

Transmission Projects in 2025

**PLANNED PROJECTS
YEAR 2025**

Project Name: Ascarate-Trowbridge 115 kV Line (Reconductor)

Operating Voltage: 115 kV

In Service Date: May 2025

Peak Modeling Year: 2025

Project Description: The project consists of reconductoring the Ascarate to Trowbridge 115 kV transmission line with conductor that provides a minimum normal capacity rating of 255 MVA and a minimum emergency capacity rating of 255 MVA.

Project Justification: This project has been identified as part of a facilities upgrade required to address and mitigate potential overload conditions under certain planning event contingencies.

**PLANNED PROJECTS
YEAR 2025**

Project Name: Hawkins Substation 69 kV (New) and Line Reconfiguration

Operating Voltage: 69 kV

In Service Date: May 2025

Peak Modeling Year: 2025

Project Description: This project involves the construction of a new Hawkins 69 kV Substation.

Project Justification: This project includes the removal of the Phelps Dodge 69 kV Substation as well as reconfiguring the existing Ascarate-Phelps Dodge and Phelps Dodge-Viscount 69 kV Lines to become the new Ascarate-Hawkins and Hawkins-Viscount 69 kV Lines.

**PLANNED PROJECTS
YEAR 2025**

Project Name: Horizon-San Felipe 115 kV Line (New)

Operating Voltage: 115 kV

In Service Date: May 2025

Peak Modeling Year: 2025

Project Description: This project will involve the construction of a 115 kV transmission line from Horizon to San Felipe with at least a normal capacity rating of 185 MVA and emergency capacity rating of 246 MVA.

Project Justification: This project is part of the East Side Loop Expansion Project and is needed to address potential overload conditions under certain contingencies. Additionally, the project will enable EPE to address expected development and load growth in east El Paso County

**PLANNED PROJECTS
YEAR 2025**

Project Name: Pellicano-Montwood 115 kV Line (Reconductor)

Operating Voltage: 115 kV

In Service Date: May 2025

Peak Modeling Year: 2025

Project Description: The project consists of reconductoring the Pellicano to Montwood 115 kV transmission line with conductor that provides a minimum normal capacity rating of 256 MVA and a minimum emergency capacity rating of 256 MVA.

Project Justification: This project has been identified as part of a facilities upgrade required to address and mitigate potential overload conditions under certain planning event contingencies.

**PLANNED PROJECTS
YEAR 2025**

Project Name: San Felipe Substation 115/69 kV (New) & 1 X 115/69 kV Autotransformer

Operating Voltage: 115/69 kV

In Service Date: May 2025

Peak Modeling Year: 2025

Project Description: The project consists of constructing a new San Felipe Substation 115/69 kV that will be part of the East Side Loop Expansion Project.

Project Justification: This project is part of the East Side Loop Expansion Project and is needed to address projected overload conditions on the EPE system under certain contingencies. Additionally, the project will enable EPE to address expected development and load growth in eastern El Paso County.

**PLANNED PROJECTS
YEAR 2025**

Project Name: WS2 Substation (New) and Related 115 kV Line Reconfiguration

Operating Voltage: 115 kV

In Service Date: May 2025

Peak Modeling Year: 2025

Project Description: This project involves the construction of the WS2 Substation with an in-and-out connection on the existing Cromo-Patriot 115 kV Line. The Cromo-Patriot 115 kV Line will then become the Cromo-WS2 115 kV Line and the WS2-Patriot 115 kV Line.

Project Justification: This is a new distribution planning project that results in an EPE transmission system reconfiguration. WS2 Substation will be located near the mountains near Coronado Country Club. The addition of WS2 Substation will provide support to the area addressing load growth due to EVs and commercial electrification.

Transmission Projects in 2026

**PLANNED PROJECTS
YEAR 2026**

Project Name: Americas-Passmore 69 kV Line (Reconductor)

Operating Voltage: 69 kV

In Service Date: May 2026

Peak Modeling Year: 2026

Project Description: The project consists of reconductoring the future Americas-Passmore 69 kV transmission line with conductor that provides a minimum normal capacity rating of 103 MVA and a minimum emergency capacity rating of 108 MVA.

Project Justification: This project has been identified as part of a facilities upgrade required to address and mitigate potential overload conditions under certain planning event contingencies.

**CONCEPTUAL PROJECT
YEAR 2026**

<u>Project Name:</u>	Caliente-MPS 115 kV Circuits 2 & 3 Common Structure Separation
<u>Operating Voltage:</u>	115 kV
<u>In Service Date:</u>	May 2026
<u>Peak Modeling Year:</u>	2026
<u>Project Description:</u>	This project involves the separation of the Caliente-MPS 115 kV lines, circuits 1 and 2, from the common structure they currently reside on.
<u>Project Justification:</u>	There are potentially conditions where this project would help mitigate related loading issues under these conditions. As loading increases in the area this project can help mitigate this. Further studies will help keep monitoring the need for this project and the year that it should be in service.

**CONCEPTUAL PROJECT
YEAR 2026**

<u>Project Name:</u>	Caliente-MPS 115 kV Circuit 1 (Partial Reconductor)
<u>Operating Voltage:</u>	115 kV
<u>In Service Date:</u>	May 2026
<u>Peak Modeling Year:</u>	2026
<u>Project Description:</u>	This project involves the partial reconductoring of the current Caliente-MPS 115 kV Line, circuit 1.
<u>Project Justification:</u>	<p>There are potentially conditions where this project would help mitigate related loading issues under these conditions. As loading increases in the area this project can help mitigate this. Further studies will help keep monitoring the need for this project and the year that it should be in service.</p> <p>Any uprate in the rating may potentially be done piecemeal according to needs that arise due to load increases in the area and the associated increases in loading on this line dictating line rating specifications under certain contingency conditions; further studies will examine this project.</p>

**PLANNED PROJECTS
YEAR 2026**

Project Name: Eastlake Substation (New) and Related 115 kV Line Reconductor and Reconfiguration

Operating Voltage: 115 kV

In Service Date: May 2026

Peak Modeling Year: 2026

Project Description: The project involves the construction of a new permanent Eastlake Substation. The project includes the connection to the permanent substation by splitting the existing Wrangler-Sparks 115 kV Line, which will then become the Wrangler-Eastlake 115kV Line and the Eastlake-Sparks 115 kV Line.

Project Justification: This is a new distribution planning project that results in an EPE transmission system reconfiguration.

**PLANNED PROJECTS
YEAR 2026**

Project Name: Eastlake Capacitor Bank Additions

Operating Voltage: 115 kV

In Service Date: May 2026

Peak Modeling Year: 2026

Project Description: The project consists of the addition of two 15.9 MVAR bus shunt capacitor banks connected to the 115 kV bus.

Project Justification: This project has been identified to provide reactive and voltage support in the far East El Paso area.

**PLANNED PROJECTS
YEAR 2026**

Project Name: Passmore Substation (New) and Related 69 kV Line Reconductor and Reconfiguration

Operating Voltage: 69 kV

In Service Date: May 2026

Peak Modeling Year: 2026

Project Description: The project involves the construction of a new Passmore Substation. The project includes splitting EPE's existing Americas-Valley 69 kV transmission line with terminations into Passmore 69 kV. The Americas-Valley 69 kV Line will then become the Americas-Passmore 69 kV Line and the Passmore-Valley 69 kV Line. Please see the project above, for the reconductor portion of this project.

Project Justification: This is a new distribution planning project that results in an EPE transmission system reconfiguration.

**PLANNED PROJECTS
YEAR 2026**

Project Name: Passmore Capacitor Bank Additions

Operating Voltage: 69 kV

In Service Date: May 2026

Peak Modeling Year: 2026

Project Description: The project consists of the addition of two 15.9 MVAR bus shunt capacitor banks connected to the 69 kV bus.

Project Justification: This project has been identified to provide reactive and voltage support in the far East El Paso area.

**PLANNED PROJECTS
YEAR 2026**

Project Name: San Felipe Capacitor Bank Additions

Operating Voltage: 115 kV

In Service Date: May 2026

Peak Modeling Year: 2026

Project Description: The project consists of the addition of two 15.9 MVAR bus shunt capacitor banks connected to the 115 kV bus.

Project Justification: This project has been identified to provide reactive and voltage support in the far east El Paso area.

Transmission Projects in 2027

**PLANNED PROJECTS
YEAR 2027**

Project Name: Sparks-San Felipe Line (Voltage Conversion, Rebuild, Reconductor) 69 kV to 115 kV

Operating Voltage: 69 kV and 115 kV

In Service Date: March 2027

Peak Modeling Year: 2027

Project Description: This project will involve the conversion and reconductoring the Sparks-San Felipe transmission line from 69 kV to 115 kV with at least a normal capacity rating of 185 MVA and emergency capacity rating of 246 MVA. Note that a 115/69 kV autotransformer will be assumed for San Felipe Substation (as mentioned in the 2025 San Felipe Substation planned project, above). All of the above is planned to occur before the in-service date of December 2026. Also, the 2023 Plan assumes that Felipe 69 kV Substation remains in service until the above Sparks-San Felipe 115 kV Line is in service.

Project Justification: This project is part of the East Side Loop Expansion Project and is needed to address potential overload conditions on the EPE system under certain contingencies. Additionally, the project will enable EPE to address expected development and load growth in east El Paso County.

**PLANNED PROJECTS
YEAR 2027**

Project Name: Apollo Substation Changes to Operate at 115 kV

Operating Voltage: 69 kV and 115 kV

In Service Date: May 2027

Peak Modeling Year: 2027

Project Description: This project consists of changing the operation of the substation and associated line(s) from 69 kV to 115 kV.

Project Justification: The existing Apollo Substation will be converted and upgraded to 115 kV to mitigate N-1 contingency conditions.

**PLANNED PROJECTS
YEAR 2027**

Project Name: Apollo-Cox Line (Voltage Conversion, Reconductor) 69 kV to 115 kV

Operating Voltage: 69 kV and 115 kV

In Service Date: May 2027

Peak Modeling Year: 2027

Project Description: This project consists of converting from a nominal operating voltage of 69 kV to a nominal operating voltage of 115 kV of the Apollo Substation. As part of this conversion, the removal of the Cox 69 kV Substation is planned. In addition, this project will involve a portion of partial new build and the completion of a portion of line reconductoring. After completion of this project, the resulting lines will be Moongate-Arroyo and Moongate-Apollo 115 kV Lines as described in the sections that follow.

The project consists of the completing of reconductoring of the Moongate-Arroyo 115 kV transmission line in addition to partial new build on the same line with a conductor that provides a minimum normal capacity rating of 185 MVA and a minimum emergency capacity rating of 246 MVA.

Project Justification: The existing Apollo Substation will be converted and upgraded to 115 kV to mitigate N-1 contingency conditions. As part of this conversion, the removal of the Cox 69 kV Substation is planned, and the portion of the line that formerly terminated at the Cox 69 kV bus will now be terminated at the Arroyo 115 kV bus (Talavera-Arroyo 115 kV Line).

Moongate-Arroyo 115 kV Line will help to meet load growth, provide a source into Moongate Substation, be part of the planned Las Cruces Loop Project, and will mitigate potential overload conditions under certain planning event contingencies.

**PLANNED PROJECTS
YEAR 2027**

Project Name: CE-2 Substation (New) and Related 115 kV West Loop Line Reconfiguration

Operating Voltage: 115 kV

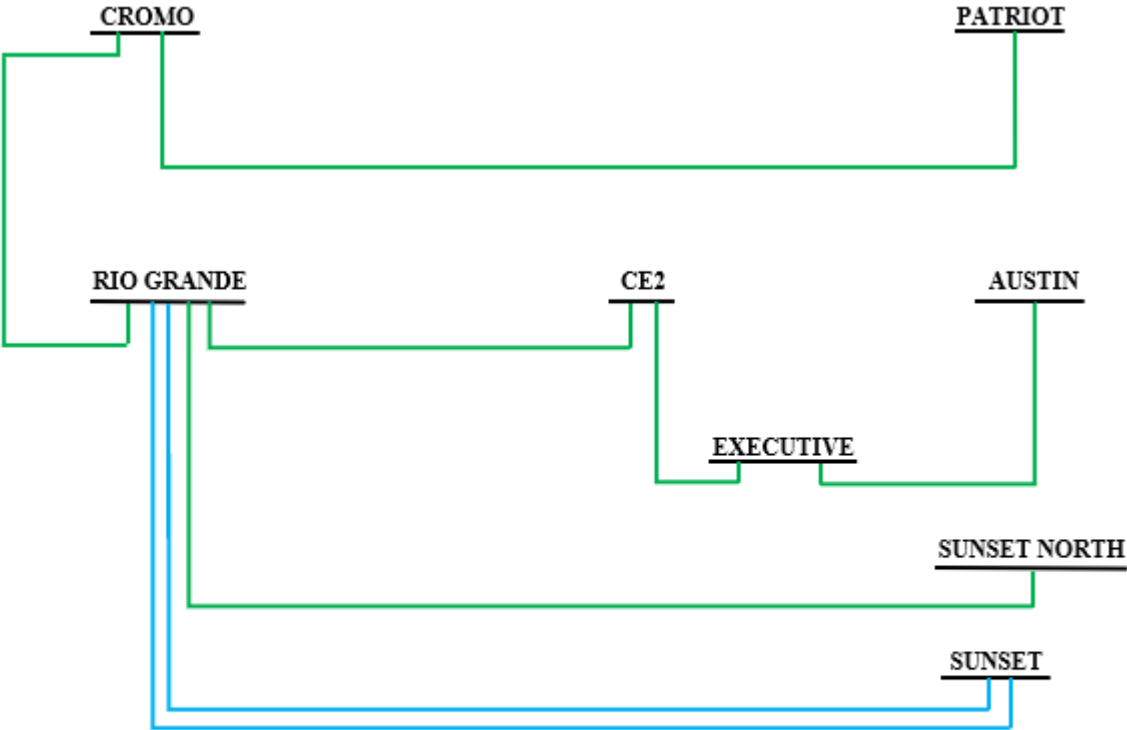
In Service Date: May 2027

Peak Modeling Year: 2027

Project Description: This project involves the addition of a new CE2 Substation with an in-and-out connection on the existing Rio Grande-Executive 115 kV Line resulting in the Rio Grande-CE2 115 kV Line and CE2-Executive 115 kV Line thereafter. With this CE2 Substation addition, Mesa Substation will be retired.

Project Justification: This is a new distribution planning project that results in an EPE transmission system reconfiguration. By May 2027, CE-2 will replace Mesa Substation. Also, the rebuilt/reconfigured Rio Grande-Sunset North 115 kV Line will be placed in service. These projects will result in the need to reconfigure 115 kV transmission lines to accommodate these changes.

**CE2 SUBSTATION (RECONFIGURED)
AND RELATED 115 kV WEST LOOP LINE RECONFIGURATION
YEAR 2027**



NOTE: FOR ILLUSTRATION PURPOSES ONLY.
FINAL DESIGN WILL BE COMPLETED
BY TRANSMISSION LINE DESIGN
AND SR ENGINEERING

**PLANNED PROJECTS
YEAR 2027**

Project Name: Jornada-Arroyo 115 kV Line (Rebuild, Reconductor)

Operating Voltage: 115 kV

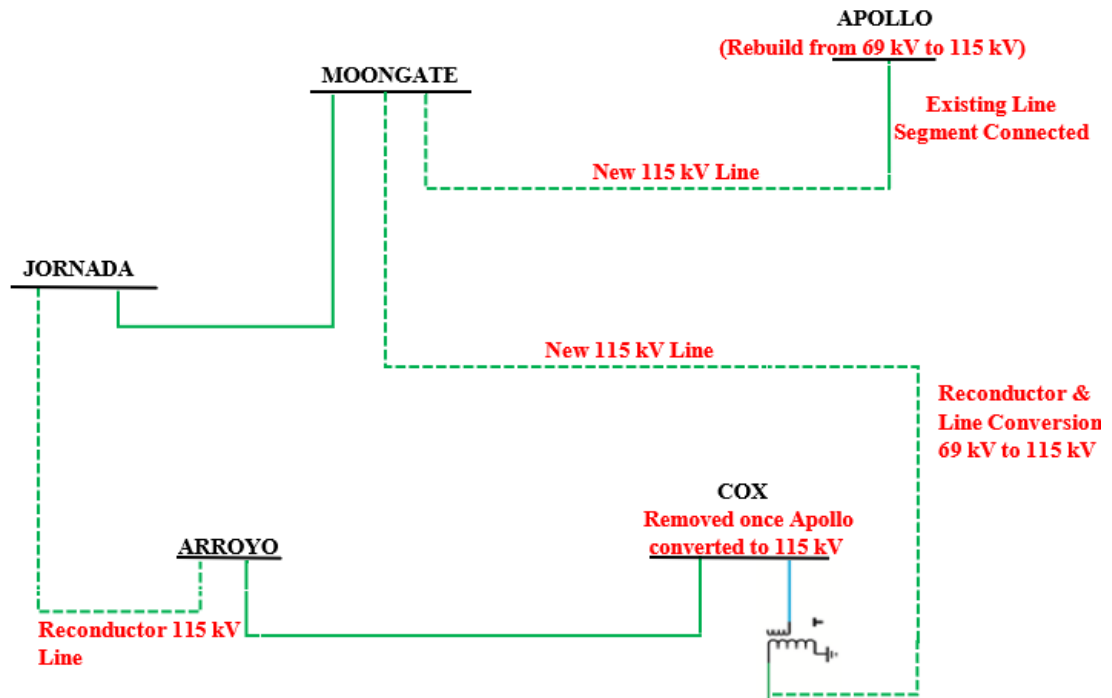
In Service Date: May 2027

Peak Modeling Year: 2027

Project Description: This project consists of rebuilding/reconductoring the Jornada to Arroyo 115 kV Line to increase the capacity of the line with at least a normal capacity rating of 185 MVA and emergency capacity rating of 246 MVA.

Project Justification: The line experiences an increase in loading under heavy summer conditions. The increase in line rating with at least a normal capacity rating of 185 MVA and emergency capacity rating of 246 MVA will relieve identified overloads under N-1 contingency conditions.

LAS CRUCES LOOP YEAR (2024-2027)



NOTE: FOR ILLUSTRATION PURPOSES ONLY.
FINAL DESIGN WILL BE COMPLETED
BY TRANSMISSION LINE DESIGN
AND SR ENGINEERING

*Please refer to above project descriptions for more information on loop configuration

**PLANNED PROJECTS
YEAR 2027**

Project Name: McCombs Substation (New) and Related 115 kV Line Reconfiguration

Operating Voltage: 115 kV

In Service Date: May 2027

Peak Modeling Year: 2027

Project Description: The new McCombs will be built to serve the load from Shearman and Shearman Temporary substations. In addition, there are several existing lines and line segments that will connect to McCombs Substation resulting in an EPE transmission system reconfiguration.

Project Justification: This is a new distribution planning project that results in an EPE transmission system reconfiguration. Shearman Substation and Shearman Temporary Substation are being replaced to improve capacity, address legacy equipment, and location issues impacting access and operation.

**PLANNED PROJECTS
YEAR 2027**

Project Name: McCombs Capacitor Bank Additions

Operating Voltage: 115 kV

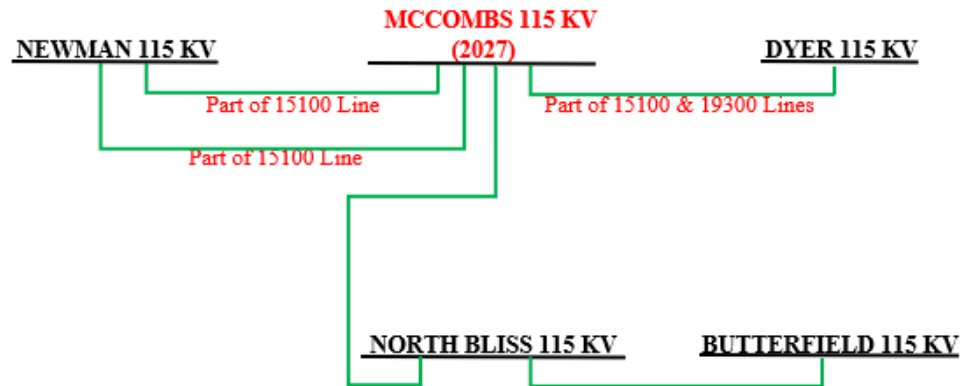
In Service Date: May 2027

Peak Modeling Year: 2027

Project Description: The project consists of the addition of two 15.9 MVAR bus shunt capacitor banks connected to the 115 kV bus.

Project Justification: This project has been identified to provide reactive and voltage support in the Northeast Area.

**MCCOMBS SUBSTATION (NEW)
AND RELATED 115 kV LINE RECONFIGURATION
YEAR 2027**



NOTE: FOR ILLUSTRATION PURPOSES ONLY.
FINAL DESIGN WILL BE COMPLETED
BY TRANSMISSION LINE DESIGN
AND SR ENGINEERING

**PLANNED PROJECTS
YEAR 2027**

Project Name: Pine Switching Station 115 kV (New)

Operating Voltage: 115 kV

In Service Date: May 2027

Peak Modeling Year: 2027

Project Description: This project involves the construction of a new Pine 115 kV Switching Station that will be part of the East Side Loop Expansion Project.

Project Justification: This project is a part of the East Side Loop Expansion Project and is needed to address and mitigate potential overload conditions under certain N-1 contingencies. Additionally, the project will enable EPE to address expected development and load growth in east El Paso County.

**PLANNED PROJECTS
YEAR 2027**

Project Name: Rio Grande-Sunset North 115 kV Double Bundled Line (Rebuild, Reconductor)

Operating Voltage: 115 kV

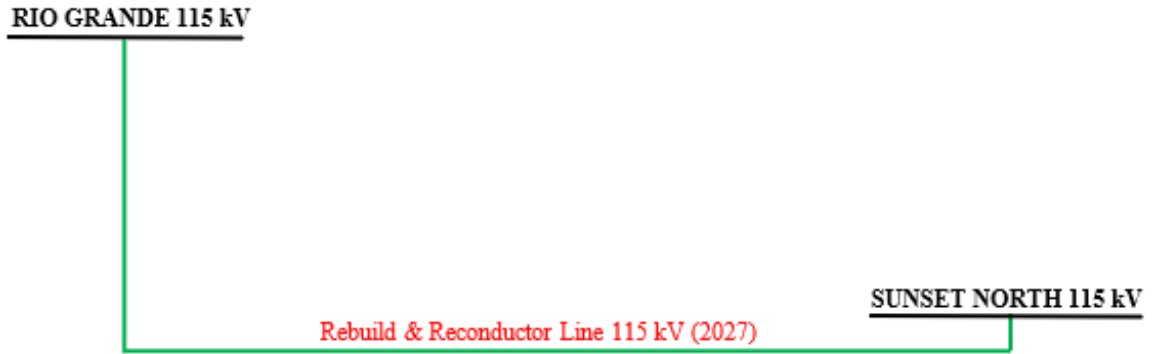
In Service Date: May 2027

Peak Modeling Year: 2027

Project Description: This project involves the reconductoring of one 115 kV line for a portion of each of this line, traverse mountainous terrain and extend through the UTEP campus area. The rebuilt and reconductoring capacity of the 115 kV Rio Grande- Sunset North line requires an upgrade with at least a normal capacity rating of 369.7 MVA and emergency capacity rating of 492.8 MVA.

Project Justification: This line experiences increased loading during the summer peak months, a condition that is difficult to mitigate. The increase in line capacity will relieve operational mitigation measures and mitigate potential overload conditions under certain planning event contingencies.

**RIO GRANDE-SUNSET NORTH 115 kV LINE
(REBUILD/RECONDUCTOR)
YEAR 2027**



NOTE: FOR ILLUSTRATION PURPOSES ONLY.
FINAL DESIGN WILL BE COMPLETED
BY TRANSMISSION LINE DESIGN
AND SR ENGINEERING

**PLANNED PROJECTS
YEAR 2027**

Project Name: Verde 115 kV Substation (Load Serving Station Portion Added)

Operating Voltage: 115 kV

In Service Date: May 2027

Peak Modeling Year: 2027

Project Description: The project involves the addition of a two new 50 MVA 115/23.9 kV transformers to the existing Verde Switching Station resulting in Verde Substation.

Project Justification: The addition of two new 50 MVA 115/23.9 kV transformers will help to serve distribution load.

**PLANNED PROJECTS
YEAR 2027**

Project Name: Wrangler-Eastlake 115 kV Line (Rebuild, Reconductor)

Operating Voltage: 115 kV

In Service Date: May 2027

Peak Modeling Year: 2027

Project Description: The project consists of reconductoring the Wrangler-Eastlake 115 kV transmission line with conductor that provides a minimum normal capacity rating of 232 MVA and a minimum emergency capacity rating of 246 MVA.

Project Justification: This project has been identified as part of a facilities upgrade required to address and mitigate potential overload conditions under certain planning event contingencies.

**PLANNED PROJECTS
YEAR 2027**

Project Name: Arroyo Variable Line Shunt Reactor (50-100 MVAR) on the Arroyo end of the West Mesa-Arroyo 345 kV Line

Operating Voltage: 345 kV

In Service Date: December 2027

Peak Modeling Year: 2028

Project Description: The project consists of a 50-100 MVAR Variable Line Shunt Reactor on the Arroyo end of the Arroyo-West Mesa 345 kV Line.

Project Justification: This line shunt reactor project is for the replacement of the existing line shunt reactor due to its condition.

**PLANNED PROJECTS
YEAR 2027**

Project Name: New Amrad SVC device connecting on high-voltage side to Amrad 345 kV side using its own dedicated step-up transformer to a dedicated bay, size assumed +/- 100 MVAR (symmetrical range)

Operating Voltage: 345 kV

In Service Date: December 2027

Peak Modeling Year: 2028

Project Description: The existing Static Var Compensator (SVC) is reaching the end of its expected service life. This device provides dynamic MVAR reactive support throughout the Amrad area and supports stabilization of voltage fluctuations in the area. Traditionally, this device has helped with changes in system voltage in the area as the Artesia HVDC terminal operates with a MW schedule on it. However, this device also supports voltage fluctuations under reactive and voltage varying operating conditions such as under contingencies of transmission elements in the general area.

Project Justification: Studies have indicated that the type of dynamic reactive and voltage support will continue to be needed at or near the Amrad area. Engineering studies through 2022 have indicated that a replacement SVC or STATCOM type of device sized +/- 100 MVAR suffices to stabilize the anticipated operating changes in the system in the Amrad area and provide the reliability needs for the area based on study criteria. Studies ongoing and details such as MVAR range sizing and other are subject to change.

Transmission Projects in 2028

**PLANNED PROJECTS
YEAR 2028**

Project Name: Afton-Afton North 345 kV Double Bundled Line (New)

Operating Voltage: 345 kV

In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: A new half a mile, 345 kV double bundled transmission line with at least a normal capacity rating of 1031 MVA and emergency capacity rating of 1390 MVA is planned to connect the Afton Substation to the new Afton North Substation in southern New Mexico. This project will enhance system reliability and will help EPE meet load growth needs.

Project Justification: This project is part of the Afton-Afton North-Vado projects, scheduled for completion by 2028, that will increase El Paso Import Capability (EPIC), improve reliability within the area, and will mitigate potential overload conditions under certain planning event contingencies.

**PLANNED PROJECTS
YEAR 2028**

Project Name: Afton North-Airport 345 kV Line

Operating Voltage: 345 kV

In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: A new 345 kV transmission line is planned to be built from Afton North Substation to Airport Substation with at least a normal capacity rating of 1031 MVA and emergency capacity rating of 1390 MVA. This transmission line in conjunction with a 345/115 kV autotransformer at Airport Substation will serve Airport Substation in Las Cruces, New Mexico.

Project Justification: The purpose of this transmission line is to improve reliability to Airport Substation. The Afton North to Airport 345 kV Line will become the source serving Airport. Presently, Airport Substation is being served via PNM's Mimbres-Picacho 115 kV transmission line through a radial connection from Airport Tap. This new 345 kV line into the Airport Substation will serve to improve reliability in the area and the new 345 kV line will increase line rating capacity into the Airport Substation versus the current 115 kV configuration that currently serves the Airport Substation.

**PLANNED PROJECTS
YEAR 2028**

Project Name: Afton North 345 kV Substation (New)

Operating Voltage: 345 kV

In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: A planned 345 kV substation in southern New Mexico will enhance system reliability. The Afton North 345 kV bus will be used to connect a 345 kV line from Afton North Substation into the proposed Vado Substation in 2028 as well as a 345 kV radial line from Afton North Substation to Airport Substation in 2028 (see diagram).

Project Justification: This project is part of the Afton-Afton North-Vado project that will increase El Paso Import Capability (EPIC).

**PLANNED PROJECTS
YEAR 2028**

Project Name: Afton-Newman 345kV Line Reconfiguration

Operating Voltage: 345 kV

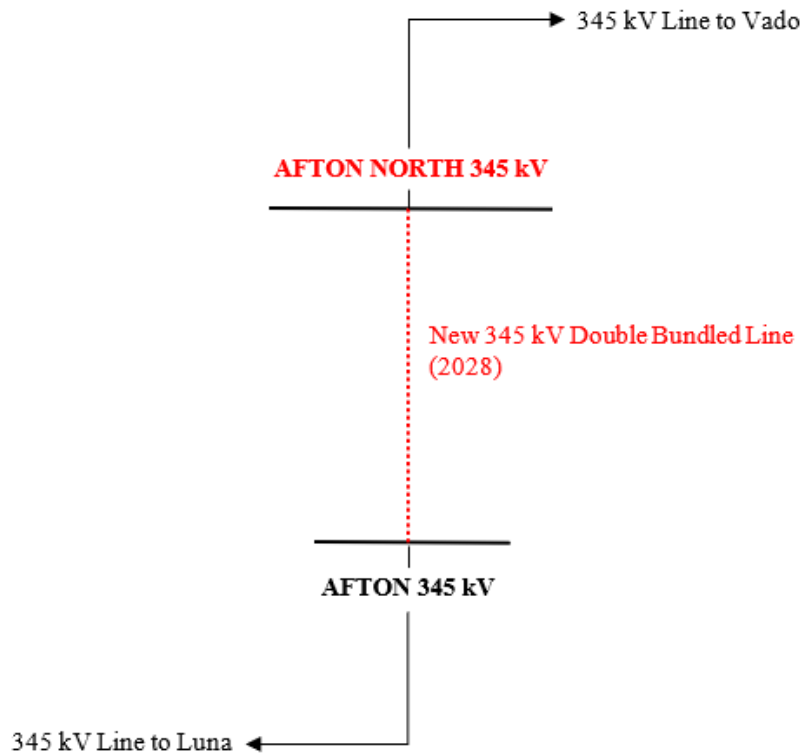
In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: A planned 345 kV substation in southern New Mexico will enhance system reliability. The Afton North 345 kV bus will be used to connect a 345 kV line from Afton North Substation into the proposed Vado Substation in 2028 as well as a 345 kV radial line from Afton North Substation to Airport Substation in 2028 (see diagram).

Project Justification: This project is part of the Afton-Afton North-Vado project that will increase El Paso Import Capability (EPIC).

**AFTON NORTH 345 kV SUBSTATION (NEW)
AND AFTON-NEWMAN 345 kV LINE RECONFIGURATION
YEAR 2028**



NOTE: FOR ILLUSTRATION PURPOSES ONLY.
FINAL DESIGN WILL BE COMPLETED
BY TRANSMISSION LINE DESIGN
AND SR ENGINEERING

**PLANNED PROJECTS
YEAR 2028**

<u>Project Name:</u>	Airport 345/115 kV Autotransformer (New)
<u>Operating Voltage:</u>	345/115 kV
<u>In Service Date:</u>	May 2028
<u>Peak Modeling Year:</u>	2028
<u>Project Description:</u>	A new Airport 345/115 kV autotransformer will enhance system reliability.
<u>Project Justification:</u>	This project has been identified to connect the Airport 115 kV system to the Airport 345 kV system to enhance system reliability and improve capacity at the Airport location.

**PLANNED PROJECTS
YEAR 2028**

Project Name: Airport 345/115/24 kV Substation

Operating Voltage: 345/115/24 kV

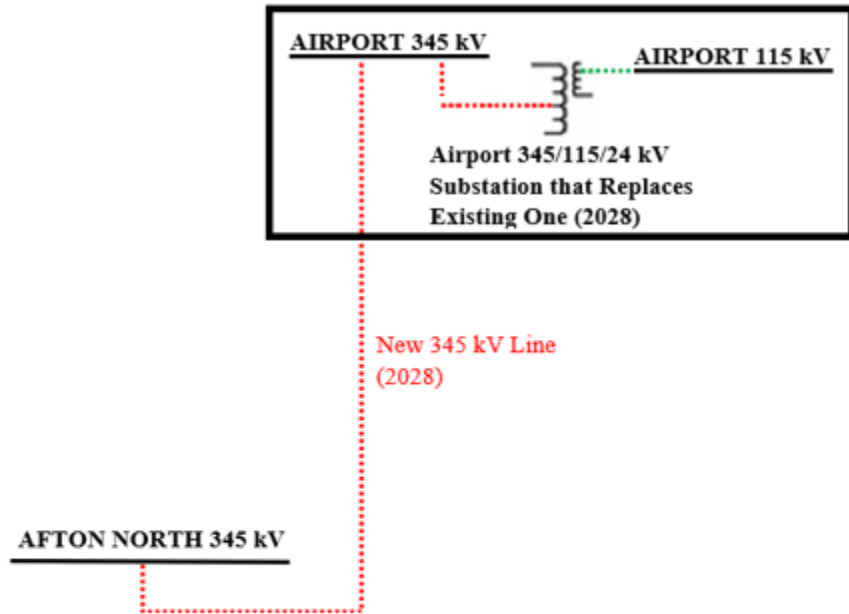
In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: A new Airport 345/115/24 kV Substation that will replace the existing Airport Substation.

Project Justification: This project has been identified to enhance system reliability and improve capacity at the Airport location.

**AIRPORT SUBSTATION, AIRPORT AUTOTRANSFORMER, & AFTON NORTH-AIRPORT 345 kV
TRANSMISSION LINE ADDITION
YEAR 2028**



NOTE: FOR ILLUSTRATION PURPOSES ONLY.
FINAL DESIGN WILL BE COMPLETED
BY TRANSMISSION LINE DESIGN
AND SR ENGINEERING

**PLANNED PROJECTS
YEAR 2028**

Project Name: Anthony-Vado 115 kV Line (Rebuild, Reconductor)

Operating Voltage: 115 kV

In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: With the addition of Vado Substation in 2028, there will be an in-and-out connection on the Anthony-Salopek 115 kV Line resulting in the Anthony-Vado 115 kV and Vado-Salopek 115 kV Lines thereafter. By this year with the addition of Vado Substation and these connections additional capacity will be needed on the 115 kV lines out of Vado Substation. The new capacity of the Anthony-Vado 115 kV Line must have a minimum of 369.7 MVA under normal conditions and emergency rating of 492.8 MVA.

Project Justification: The increased capacity of this line will allow EPE to serve west El Paso load from the Afton and Vado area increasing reliability and adding system flexibility under contingency and maintenance situations.

**PLANNED PROJECTS
YEAR 2028**

Project Name: Marvin (FE6) 115 kV New Full Substation

Operating Voltage: 115 kV

In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: This project involves the construction of a new full Marvin 115 kV Substation, which will be replacing Coyote Temp Substation, that will be part of the East Side Loop Expansion Project.

Project Justification: This project is a part of the East Side Loop Expansion Project and is needed to address and mitigate potential overload conditions under certain N-1 contingencies. Additionally, the project will enable EPE to address expected development and load growth in east El Paso County.

**PLANNED PROJECTS
YEAR 2028**

Project Name: Marvin-Pine 115 kV Line (Reconductor)

Operating Voltage: 115 kV

In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: This project consists of reconductoring the Marvin to Pine 115 kV transmission line with at least a normal capacity rating of 185 MVA and emergency capacity rating of 246 MVA.

Project Justification: This project is part of the East Side Loop Expansion Project and is needed to address potential overload conditions under certain N-1 contingencies. Additionally, the project will enable EPE to address expected development and load growth in east El Paso County.

**PLANNED PROJECTS
YEAR 2028**

Project Name: HVDC Tie Replacement (New)

Operating Voltage: 345 kV

In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: This project involves options for the replacement of the existing Eddy HVDC Tie.

Project Justification: The existing Eddy HVDC Tie may at times require legacy parts for maintenance. This existing HVDC Tie is at the end of its lifespan with limited to no availability of replacement of components and equipment. Because of this, options for a new Eddy HVDC Tie replacement are being considered. Actual replacement schedule will be dictated by lead times for equipment and facilities, including engineering integration efforts.

**PLANNED PROJECTS
YEAR 2028**

Project Name: Leasburg Substation 115 kV (New)

Operating Voltage: 115 kV

In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: With the addition of Leasburg 115 kV Substation in 2028, there will be an in-and-out connection on the Jornada-Hatch 115 kV Line resulting in the Jornada-Leasburg 115 kV and Leasburg-Hatch 115 kV Lines thereafter.

Project Justification: This is a new distribution planning project that results in an EPE transmission system reconfiguration. Leasburg 115 kV Substation will be located a few miles north of Jornada 115 kV Substation between Jornada Substation and Radium Springs exit, near and off of I-25. The addition of Leasburg 115 kV Substation will provide support to the existing feeders and load growth in the area.

**PLANNED PROJECTS
YEAR 2028**

Project Name: Two Vado 345/115 kV Autotransformers (New)

Operating Voltage: 345 kV and 115 kV

In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: It is planned to add two new Vado 345/115 kV Autotransformers to connect the Vado 115 kV/345 kV system.

Project Justification: This project has been identified as part of a facilities addition required to address and mitigate potential overload conditions under certain planning event contingencies and to enhance system reliability. The two autotransformers are approximately matched capacity-wise with the rating of the two 115 kV lines. In addition, each of these autotransformers will be a backup for each other under planned or unplanned out-of-service conditions of one of them.

**PLANNED PROJECTS
YEAR 2028**

Project Name: Vado-Salopek 115 kV Line (Rebuild, Reconductor)

Operating Voltage: 115 kV

In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: With the addition of Vado Substation in 2028, there will be an in-and-out connection on the Anthony-Salopek 115 kV Line resulting in the Anthony-Vado 115 kV and Vado-Salopek 115 kV Lines thereafter. By this year with the addition of Vado Substation and these connections, additional capacity will be needed on the 115 kV lines out of Vado Substation. The new capacity of the Vado-Salopek 115 kV Line must have a minimum of 369.7 MVA under normal conditions and emergency rating of 492.8 MVA.

Project Justification: The increased capacity of this line will allow EPE to serve the Las Cruces load from the Afton and Vado area which will increase reliability, system flexibility, and will mitigate potential overload conditions under certain planning event contingencies.

**PLANNED PROJECTS
YEAR 2028**

Project Name: Vado Substation 345/115 kV (New)

Operating Voltage: 345/115 kV

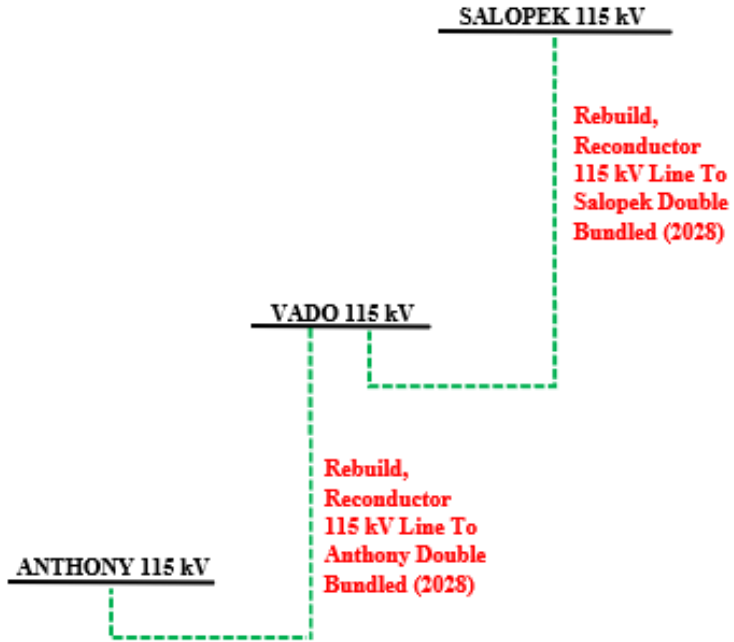
In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: The addition of Vado 345/115 kV Substation involves several elements. The project involves an in-and-out connection on the Afton North-Newman 345 kV transmission line with terminations into Vado 345 kV resulting in the Afton North-Vado 345 kV Line and the Vado-Newman 345 kV Line. It is also planned to add two new Vado 345/115 kV Autotransformers to connect the Vado 115 kV/345 kV system. With the addition of Vado Substation in 2028, there will also be an in-and-out connection on the Anthony-Salopek 115 kV Line resulting in the Anthony-Vado 115 kV and Vado-Salopek 115 kV Lines thereafter.

Project Justification: This project is part of the Afton-Afton North-Vado projects scheduled for completion by 2028, that will increase El Paso Import Capability (EPIC). The substation will also increase reliability in the Vado/Anthony area.

LINE FROM VADO 115 kV TO SALOPEK 115 kV (YEAR 2028)
LINE FROM VADO 115 kV TO ANTHONY 115 kV (YEAR 2028)



NOTE: FOR ILLUSTRATION PURPOSES ONLY.
FINAL DESIGN WILL BE COMPLETED
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AND SR ENGINEERING

**PLANNED PROJECTS
YEAR 2028**

Project Name: WS1 Substation (New) and Related 115 kV Line Reconfiguration

Operating Voltage: 115 kV

In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: This project involves the construction of the WS1 Substation with an in-and-out connection on the Nuway-Montoya 115 kV transmission line with terminations into WS1. The Nuway-Montoya 115 kV Line will then become the Nuway-WS1 115 kV Line and the WS1-Montoya 115 kV Line.

Project Justification: This is a new distribution planning project that results in an EPE transmission system reconfiguration. The addition of WS1 Substation will provide support to the expanding commercial load growth in the area.

**PLANNED PROJECTS
YEAR 2028**

Project Name: McNutt Substation (New) and Related 115 kV Line Reconfiguration

Operating Voltage: 115 kV

In Service Date: June 2028

Peak Modeling Year: 2028

Project Description: The new McNutt will be built to serve the load from Rio Grande and Ripley Substations and Rio Grande T12 will be removed sometime after McNutt Substation is in-service. In addition, there are several existing lines and line segments that will connect to McNutt Substation resulting in an EPE transmission system reconfiguration.

Project Justification: McNutt Substation will be adjacent to the existing Diablo substation. The addition of McNutt Substation will provide support to the existing Rio Grande and Ripley feeders, will help support load growth in the area, and can ultimately lead to the retirement of Rio Grande T12.

**CONCEPTUAL PROJECT
YEAR 2028**

Project Name: Near Macho 345 kV Substation, Airport to Near Macho Springs 345 kV line and Related 345 kV Line Reconfiguration

Operating Voltage: 345 kV

In Service Date: May 2028

Peak Modeling Year: 2028

Project Description: This **conceptual project** involves the construction of Near Macho 345 kV Substation with an in-and-out connection on the Macho Springs-Luna 345 kV transmission line with terminations into the Near Macho 345 kV Substation. The Macho Springs-Luna 345 kV Line will then become the Macho Springs-Near Macho 345 kV Line and the Near Macho-Luna 345 kV Line.

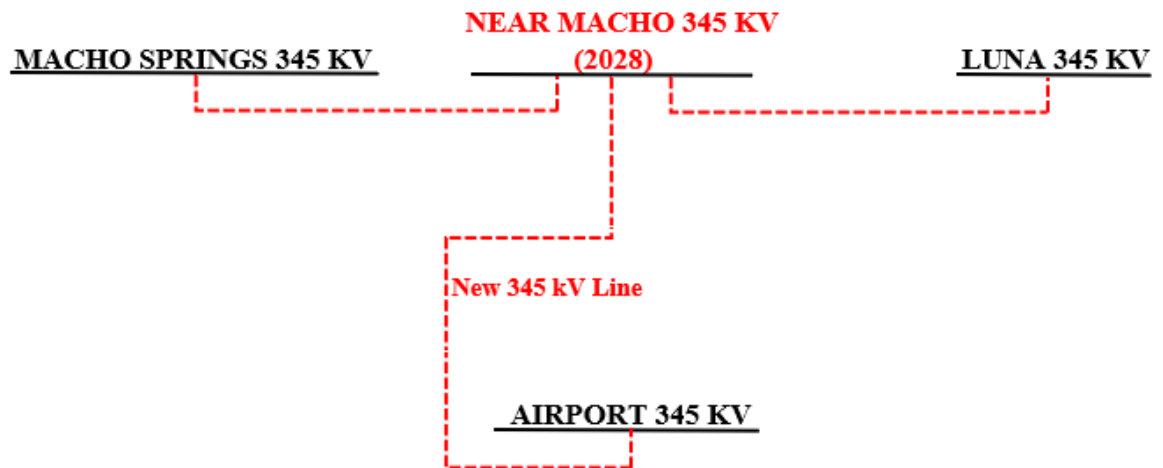
Along with this reconfiguration, a new Near Macho to Airport 345 kV Line is being conceptually planned.

Project Justification: This conceptually planned Near Macho Substation will be located in Luna County, New Mexico and will intercept the Macho Springs to Luna 345 kV Line, as mentioned above.

The addition of the conceptually planned line, Near Macho to Airport 345 kV Line, is planned to exist between Near Macho 345 kV Substation and Airport 345 kV Substation located in Dona Ana County, New Mexico.

The addition of Near Macho Substation and the new Near Macho-Airport 345 kV transmission line will provide supported reliability, system flexibility, and will reduce potential overload conditions under certain planning event contingencies. This project will also help reliability during planned maintenance outages of 345 kV lines in the western part of EPE's service territory.

**NEAR MACHO 345 KV SUBSTATION, AIRPORT TO NEAR MACHO SPRINGS 345 KV LINE AND
RELATED 345 KV LINE RECONFIGURATION (CONCEPTUAL PROJECT)
YEAR 2028**



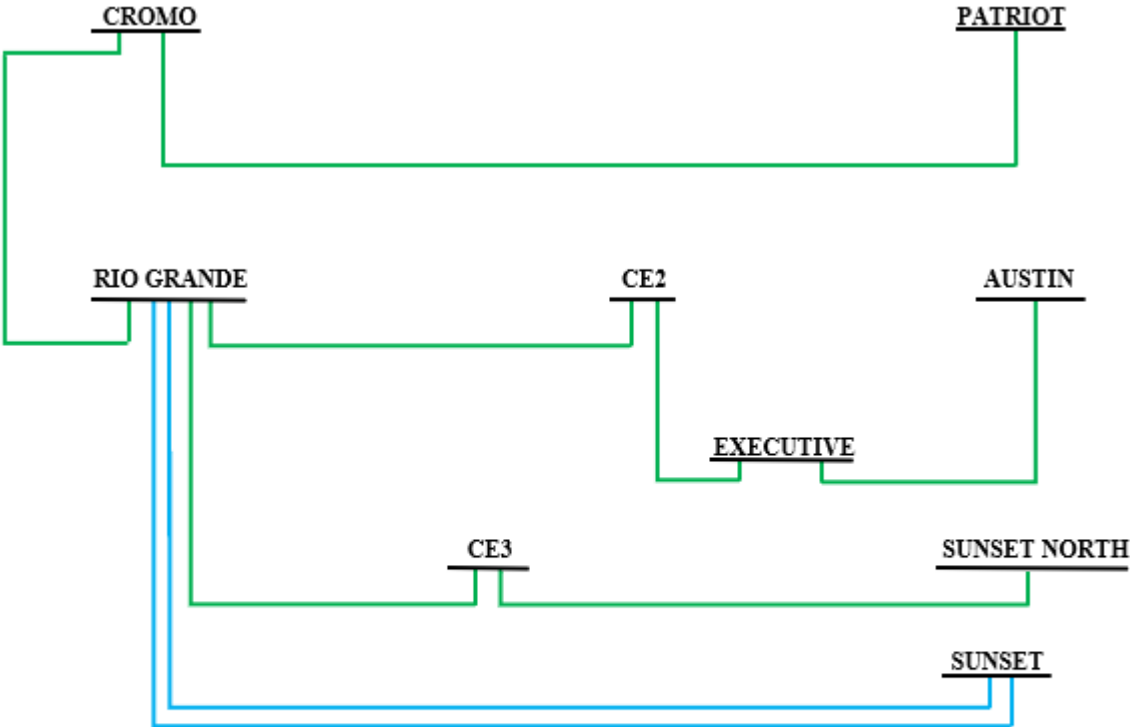
NOTE: FOR ILLUSTRATION PURPOSES ONLY.
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AND SR ENGINEERING

Transmission Projects in 2029

**PLANNED PROJECTS
YEAR 2029**

<u>Project Name:</u>	CE3 Substation (New) and Related 115 kV West Loop Line Reconfiguration
<u>Operating Voltage:</u>	115 kV
<u>In Service Date:</u>	May 2029
<u>Peak Modeling Year:</u>	2029
<u>Project Description:</u>	This project involves the construction of the CE3 Substation with an in-and-out connection on the rebuilt Rio Grande-Sunset North 115 kV Line.
<u>Project Justification:</u>	This is a new distribution planning project that results in an EPE transmission system reconfiguration. CE3 Substation will be north of the water treatment plant near Executive Blvd. The addition of CE3 Substation will provide support to the existing feeders and load growth in the area.

**CE3 SUBSTATION (RECONFIGURED)
AND RELATED 115 kV WEST LOOP LINE RECONFIGURATION
YEAR 2029**



NOTE: FOR ILLUSTRATION PURPOSES ONLY.
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**PLANNED PROJECTS
YEAR 2029**

Project Name: EA1 Substation (New) and Related 115 kV Line Reconfiguration

Operating Voltage: 115 kV

In Service Date: May 2029

Peak Modeling Year: 2029

Project Description: This project involves the construction of the EA1 Substation with an in-and-out connection on the Scotsdale-Vista 115 kV transmission line with terminations into EA1. The Scotsdale-Vista 115 kV Line will then become the Scotsdale-EA1 115 kV Line and the EA1-Vista 115 kV Line.

Project Justification: This is a new distribution planning project that results in an EPE transmission system reconfiguration. The addition of EA1 Substation will provide support to the load growth in the Scotsdale and Vista areas of east El Paso.

**PLANNED PROJECTS
YEAR 2029**

Project Name: Pine-Seabeck 115 kV Line (New)

Operating Voltage: 115 kV

In Service Date: May 2029

Peak Modeling Year: 2029

Project Description: This project consists of constructing a new 115 kV transmission line from Pine to Seabeck with at least a normal capacity rating of 185 MVA and emergency capacity rating of 246 MVA.

Project Justification: This project is part of the East Side Loop Expansion Project and is needed to address potential overload conditions under certain N-1 contingencies. Additionally, the project will enable EPE to address expected development and load growth in east El Paso County.

**PLANNED PROJECTS
YEAR 2029**

Project Name: Seabeck-Horizon 115 kV Line (Rebuild, Upgrade)

Operating Voltage: 115 kV

In Service Date: May 2029

Peak Modeling Year: 2029

Project Description: This project will involve the rebuilding of a 115 kV transmission line from Seabeck to Horizon with at least a normal capacity rating of 185 MVA and emergency capacity rating of 246 MVA.

Project Justification: This project is part of the East Side Loop Expansion Project and is needed to address potential overload conditions under certain contingencies. Additionally, the project will enable EPE to address expected development and load growth in east El Paso County.

**PLANNED PROJECTS
YEAR 2029**

Project Name: Seabeck-San Felipe 115 kV Line (New)

Operating Voltage: 115 kV

In Service Date: May 2029

Peak Modeling Year: 2029

Project Description: This project consists of constructing a new 115 kV transmission line from Seabeck Substation to San Felipe 115 kV Substation. The conductor will have at least a normal capacity rating of 185 MVA and emergency capacity rating of 246 MVA.

Project Justification: This project is part of the East Side Loop Expansion Project and will address projected overload conditions on the EPE system under certain N-1 contingencies. This project will also enable EPE to address anticipated development and load growth in east El Paso County.

**PLANNED PROJECTS
YEAR 2029**

Project Name: Seabeck Switching Station 115 kV (New)

Operating Voltage: 115 kV

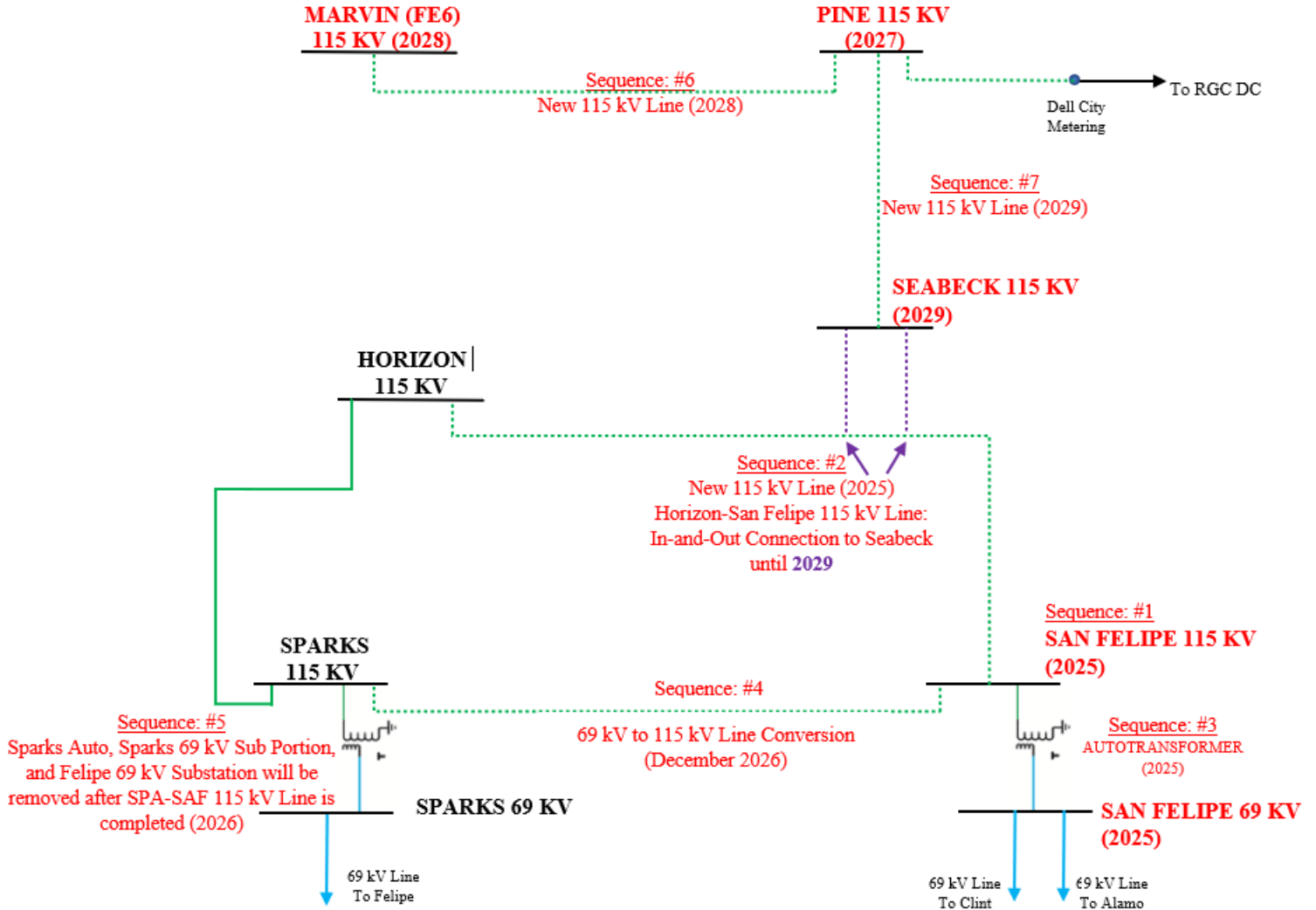
In Service Date: May 2029

Peak Modeling Year: 2029

Project Description: This project involves the construction of a new Seabeck 115 kV Switching Station that will be part of the East Side Loop Expansion Project

Project Justification: This project is part of the East Side Loop Expansion Project and is needed to address and mitigate potential overload conditions under certain contingencies. Additionally, the project will allow EPE to address expected development and load growth in east El Paso County.

EASTSIDE LOOP YEAR 2025-2029



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**PLANNED PROJECTS
YEAR 2029**

Project Name: FE7 115 kV Substation (New) and Related 115 kV Line Reconfiguration

Operating Voltage: 115 kV

In Service Date: May 2029

Peak Modeling Year: 2029

Project Description: The project involves the construction of a new FE7 Substation. The project includes splitting EPE's existing Triumph-Montwood 115 kV transmission line with terminations into FE7 115 kV. The Triumph-Montwood 115 kV Line will then become the Triumph-FE7 115 kV Line and the FE7-Montwood 115 kV Line.

Project Justification: This is a new distribution planning project that results in an EPE transmission system reconfiguration. The addition of FE7 Substation will provide support to the expanding load growth in the area.

Transmission Projects in 2030

**PLANNED PROJECTS
YEAR 2030**

Project Name: Caliente 345/115 kV Autotransformer T3 (New)

Operating Voltage: 345 kV and 115 kV

In Service Date: May 2030

Peak Modeling Year: 2030

Project Description: A new additional third Caliente 345/115 kV autotransformer will enhance system reliability.

Project Justification: This project has been identified as part of a facilities addition required to address and mitigate potential overload conditions under certain planning event contingencies and to enhance system reliability.

**PLANNED PROJECTS
YEAR 2030**

<u>Project Name:</u>	CE4 Substation (New) and Related 115 kV West Loop Line Reconfiguration
<u>Operating Voltage:</u>	115 kV
<u>In Service Date:</u>	May 2030
<u>Peak Modeling Year:</u>	2030
<u>Project Description:</u>	This project involves the addition of a CE4 Substation connected to a total of two 115 kV transmission lines. The addition of CE4 Substation will reconfigure the West Loop to CE4-Executive 115 kV Line and CE4-Austin 115 kV Line.
<u>Project Justification:</u>	This is a new planning project that results in an EPE transmission system reconfiguration. CE4 Substation will be located near the I-10 and Executive area. The addition of CE4 Substation will provide support to the existing feeders and load growth in the area.

**PLANNED PROJECTS
YEAR 2030**

Project Name: CE4-Executive 115 kV Line (New)

Operating Voltage: 115 kV

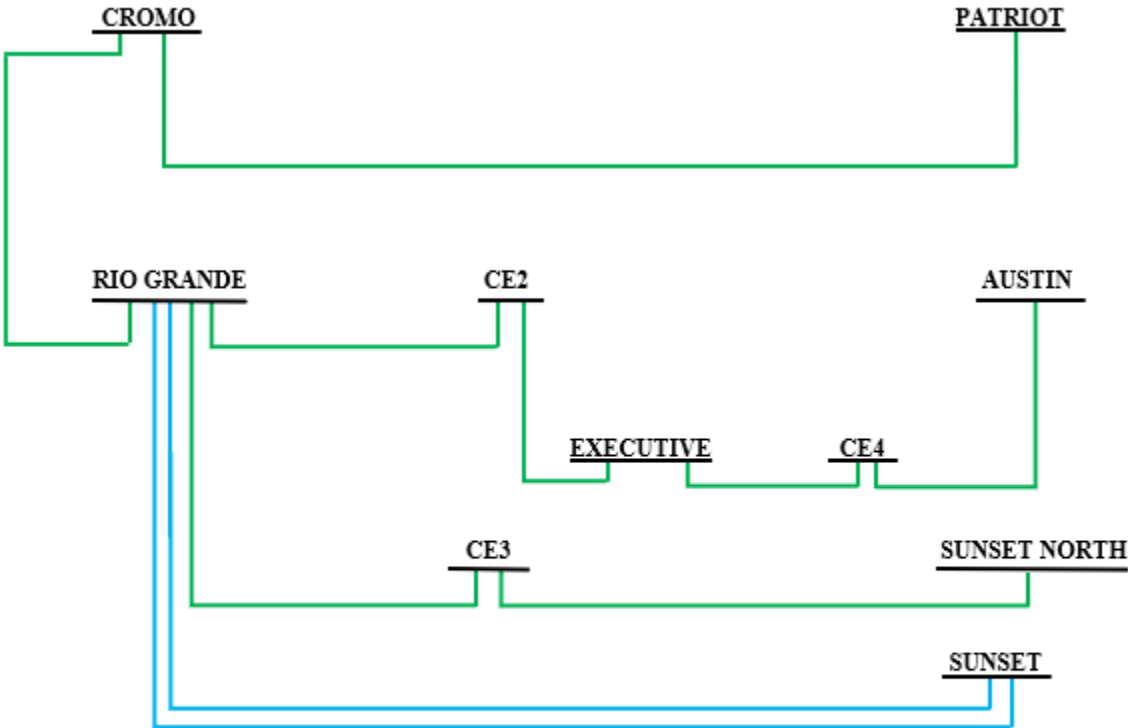
In Service Date: May 2030

Peak Modeling Year: 2030

Project Description: With the addition of CE4 in 2030, a new CE4-Executive 115 kV Line is planned. The capacity of the new CE4-Executive 115 kV Line must have a minimum of 165 MVA under normal conditions and emergency rating of 220 MVA.

Project Justification: The CE4-Executive 115 kV Line is one of two sources into CE4 Substation. This project will help mitigate potential overload conditions under certain planning event contingencies.

**CE4 SUBSTATION (RECONFIGURED)
AND RELATED 115 kV WEST LOOP LINE RECONFIGURATION
YEAR 2030**



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AND SR ENGINEERING

**PLANNED PROJECTS
YEAR 2030**

Project Name: Marlow-Trowbridge 115 kV Line (Rebuild, Reconductor)

Operating Voltage: 115 kV

In Service Date: May 2030

Peak Modeling Year: 2030

Project Description: The project consists of reconductoring the Marlow-Trowbridge 115 kV transmission line with conductor that provides a minimum normal capacity rating of 269 MVA and a minimum emergency capacity rating of 269 MVA.

Project Justification: This project has been identified as part of a facilities upgrade required to address and mitigate potential overload conditions under certain planning event contingencies.

**PLANNED PROJECTS
YEAR 2030**

<u>Project Name:</u>	Newman-McCombs 115 kV Line Circuit 1 (Reconductor)
<u>Operating Voltage:</u>	115 kV
<u>In Service Date:</u>	May 2030
<u>Peak Modeling Year:</u>	2030
<u>Project Description:</u>	This project consists of reconductoring the Newman-McCombs 115 kV Line Circuit 1 to increase the capacity of the line with at least a normal capacity rating of 176 MVA and emergency capacity rating of 179.5 MVA.
<u>Project Justification:</u>	The line experiences an increase in loading under heavy summer conditions. The increase in line ratings with at least a normal capacity rating of 176 MVA and emergency capacity rating of 179.5 MVA will mitigate potential overload conditions under certain planning event contingencies.

**PLANNED PROJECTS
YEAR 2030**

<u>Project Name:</u>	Newman-McCombs 115 kV Line Circuit 2 (Reconductor)
<u>Operating Voltage:</u>	115 kV
<u>In Service Date:</u>	May 2030
<u>Peak Modeling Year:</u>	2030
<u>Project Description:</u>	This project consists of reconductoring the Newman-McCombs 115 kV Line Circuit 2 to increase the capacity of the line with at least a normal capacity rating of 176 MVA and emergency capacity rating of 179.5 MVA.
<u>Project Justification:</u>	The line experiences an increase in loading under heavy summer conditions. The increase in line ratings with at least a normal capacity rating of 176 MVA and emergency capacity rating of 179.5 MVA will mitigate potential overload conditions under certain planning event contingencies.

Transmission Projects in 2031

**PLANNED PROJECTS
YEAR 2031**

Project Name: NE3 Substation (New) and Related 115 kV Line Reconfiguration

Operating Voltage: 115 kV

In Service Date: May 2031

Peak Modeling Year: 2031

Project Description: This project involves the construction of the NE3 Substation with an in-and-out connection on the Roberts-Pipeline 115 kV transmission line with terminations into NE3. The Roberts-Pipeline 115 kV Line will then become the Roberts-NE3 115 kV Line and the NE3-Pipeline 115 kV Line.

Project Justification: This is a new distribution planning project that results in an EPE transmission system reconfiguration. The addition of NE3 Substation will provide support to the area addressing steady load growth on Patriot, Milagro, McCombs, and Chaparral Substations.

Transmission Projects in 2032

**PLANNED PROJECTS
YEAR 2032**

Project Name: Dyer 115/69 kV Autotransformer T1 (Upgrade)

Operating Voltage: 115 kV and 69 kV

In Service Date: May 2032

Peak Modeling Year: 2032

Project Description: An upgrade to the existing Dyer 115/69 kV autotransformer will enhance system reliability, with an increase of the capacity of the transformer with at least a normal capacity rating of 112 MVA and emergency capacity rating of 134 MVA.

Project Justification: This project has been identified as part of a facilities addition required to address and mitigate potential overload conditions under certain planning event contingencies and to enhance system reliability.

**PLANNED PROJECTS
YEAR 2032**

Project Name: Newman-Roberts 115 kV Line Circuit 1 (Reconductor)

Operating Voltage: 115 kV

In Service Date: May 2032

Peak Modeling Year: 2032

Project Description: The project consists of reconductoring the Newman-Roberts 115 kV Line Circuit 1 with conductor that provides a minimum normal capacity rating of 184.8 MVA and a minimum emergency capacity rating of 208 MVA.

Project Justification: This project has been identified as part of a facilities upgrade required to address and mitigate potential overload conditions under certain planning event contingencies.

Transmission Projects in 2033

**PLANNED PROJECTS
YEAR 2033**

Project Name: CE2-Rio Grande 115 kV Line (Rebuild)

Operating Voltage: 115 kV

In Service Date: May 2033

Peak Modeling Year: 2033

Project Description: The project consists of reconductoring the CE2-Rio Grande 115 kV transmission line with conductor that provides a minimum normal capacity rating of 268.3 MVA and a minimum emergency capacity rating of 270 MVA.

Project Justification: This project has been identified as part of a facilities upgrade required to address and mitigate potential overload conditions under certain planning event contingencies.