Black Mountain Expansion Project

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Bienvenidos

(Hablamos español)

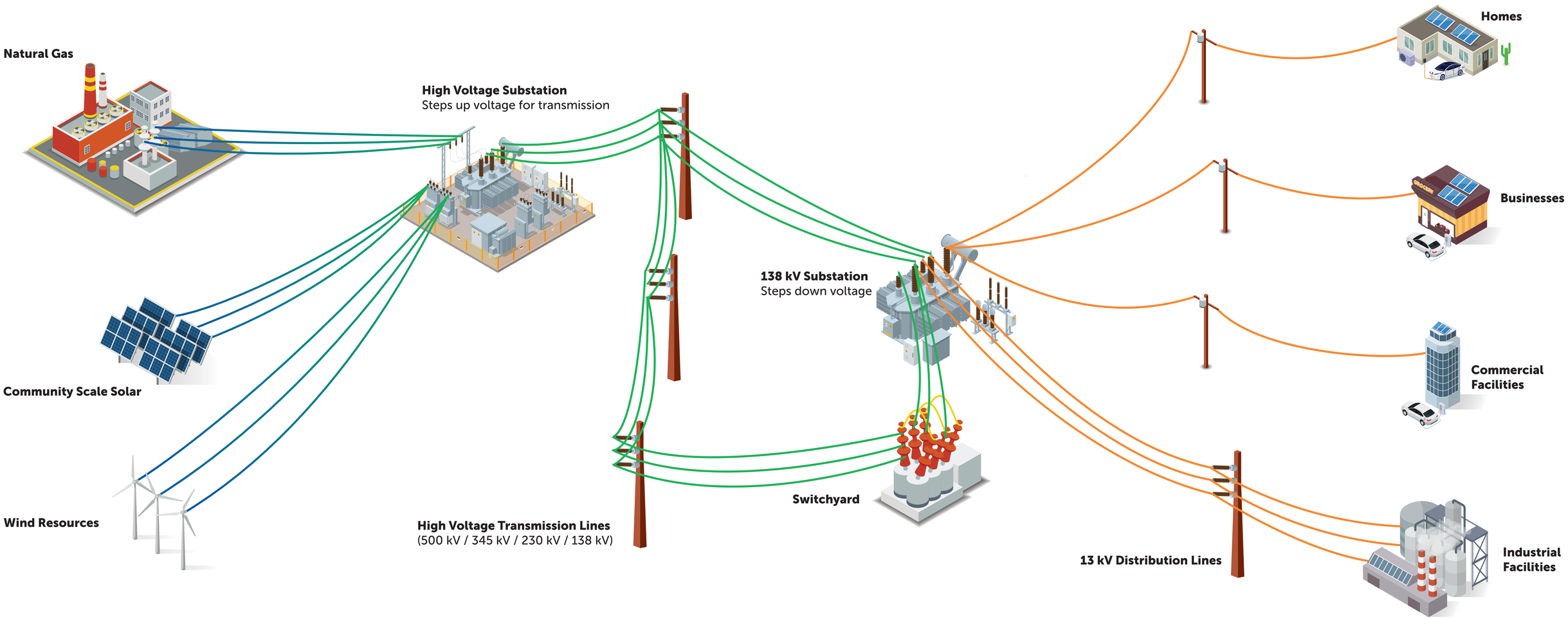
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uesaz.com/black-mountain

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Generation

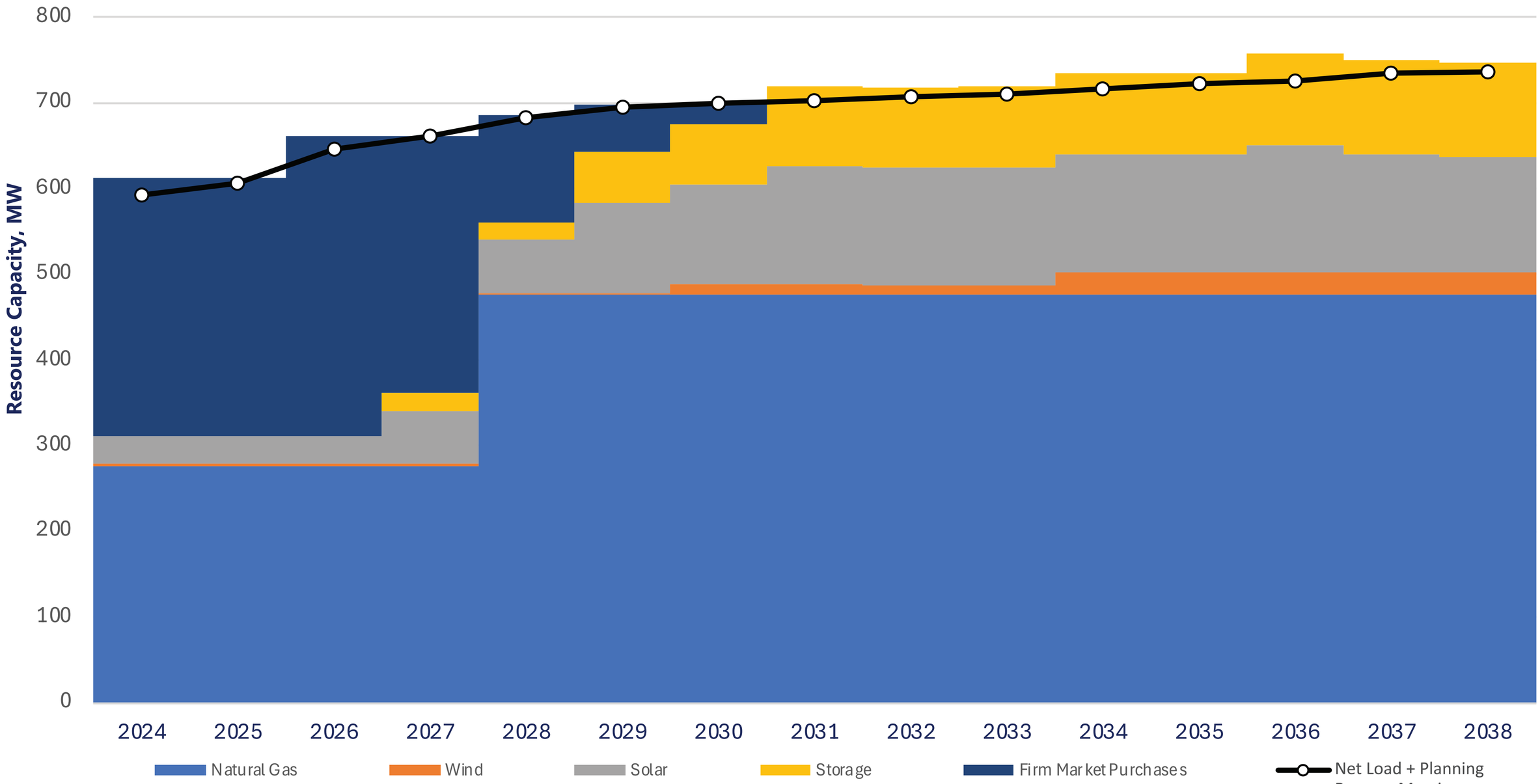
Transmission and Sub-Transmission

Distribution

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UNSE Balanced Portfolio - Loads and Resources



To preserve the reliability and affordability of our service in the face of growing demand and significantly reduced energy availability, UniSource Electric must invest in its own additional energy generation, otherwise we must purchase increased energy from outside entities with unknown pricing volatility.

2023 IRP UNSE Balanced Portfolio

2024-2038 Capacity Expansion Plan – 775 MW

2024-2038	Expansion Plan
Renewables	350
Storage	225
Natural Gas	200
Total Expansion Plan	775

2024

Energy Efficiency & Demand Response
3-Year Savings Goal of 4.6% of Annual Retail Sales
(2024-2026)

2027
50 MW - Storage
50 MW - Solar

2028
200 MW of Combustion Turbines

2029
75 MW - Storage
75 MW - Solar

2030
25 MW – Storage
25 MW – Solar
50 MW – Wind

Energy Efficiency & Demand Response
1% of Annual Retail Sales
(2027-2038)

2031 - 2036
75 MW – Wind
75 MW – Solar
75 MW – Storage

2038

Source: 2023 Integrated Resource Plan

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Project Overview

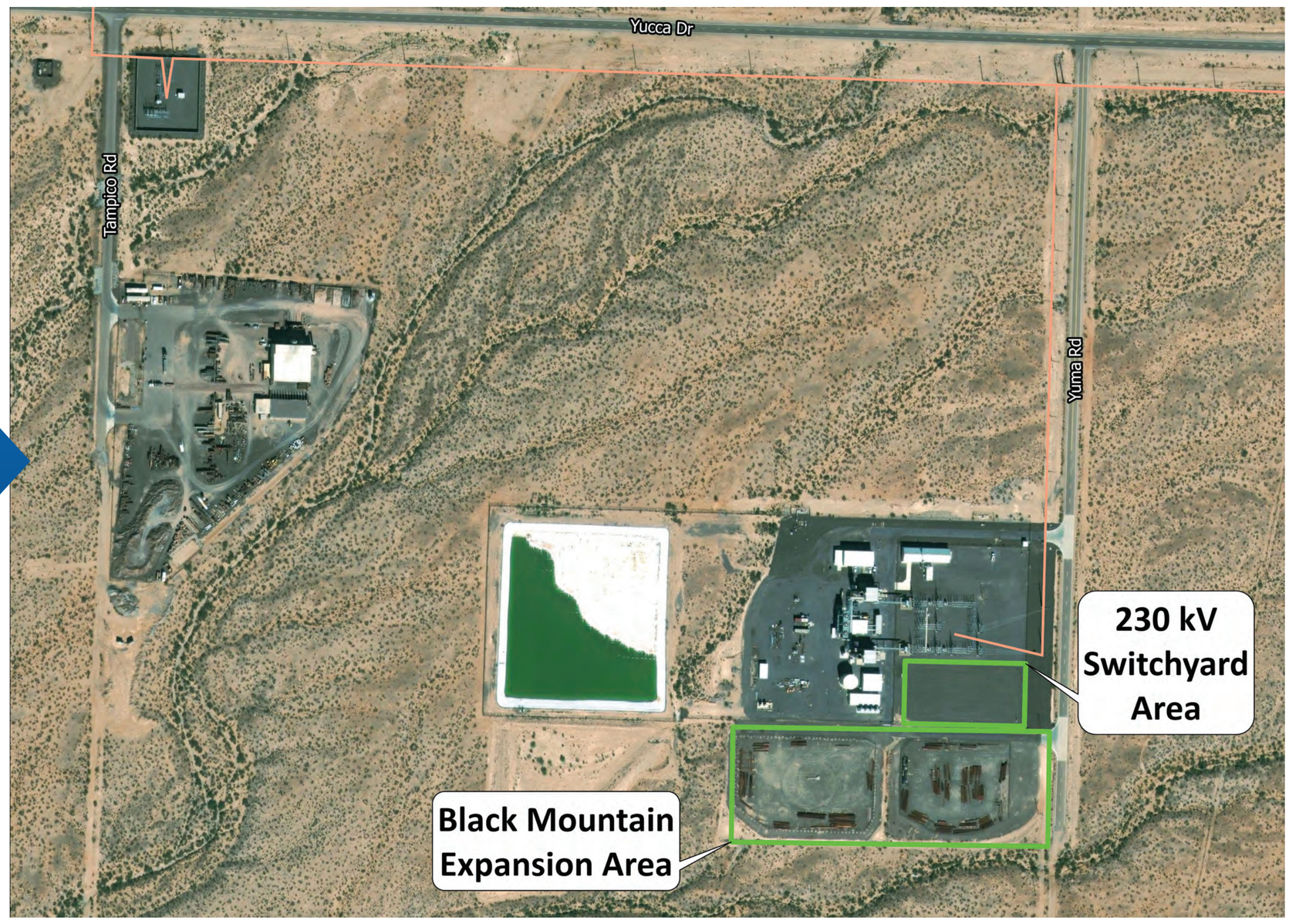
- Four 50 Megawatt GE LM6000 (or equivalent) natural gas-fired simple cycle combustion turbines
- About 2-mile-long 230 kilovolt Generation Tie Line
- 230 kilovolt switchyard at Black Mountain
- 230 kilovolt interconnection at Griffith Substation



Existing Black Mountain Generation Station Site

Two 50 MW GE LM6000 natural gas-fired simple cycle combustion turbines

Proposed Black Mountain Expansion and 230 kV Switchyard Area



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Pole Characteristics

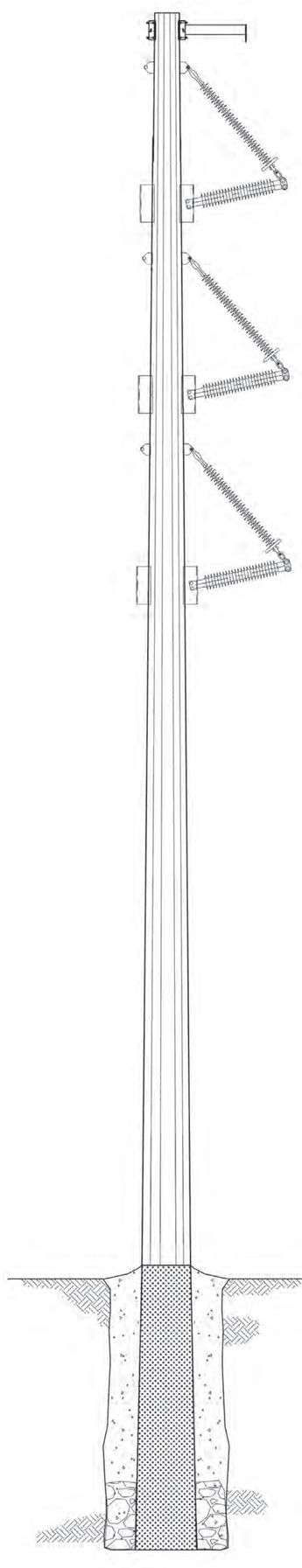
Type: Tubular weathering steel monopoles

Typical Height: 85-125 feet

Span length: 700-1,000 feet

Poles/mile: 6-8 structures

Right of way width: 125 feet





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Planning and Siting Process

Phase 1: Pre-Analysis

Conduct Field Visits | Develop Study Area | Identify Opportunities And Constraints | Conduct Public and Stakeholder Outreach | Develop Preliminary Segments

July- August 2024

Phase 2: Data Inventory

Conduct Research and Collect Data

August 2024

Phase 3: Suitability Assessment

Develop Suitability Models | Conduct Suitability Assessment | Field Review | Refined Segments

September 2024

Phase 4: Compatability Analysis

Conduct Compatability Analysis | Develop Route Alternatives

October 2024

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Phase 5: Concept Evaluation

Field Review | Conduct Public and Stakeholder Outreach | Identify Preferred Route | Submit CEC Application

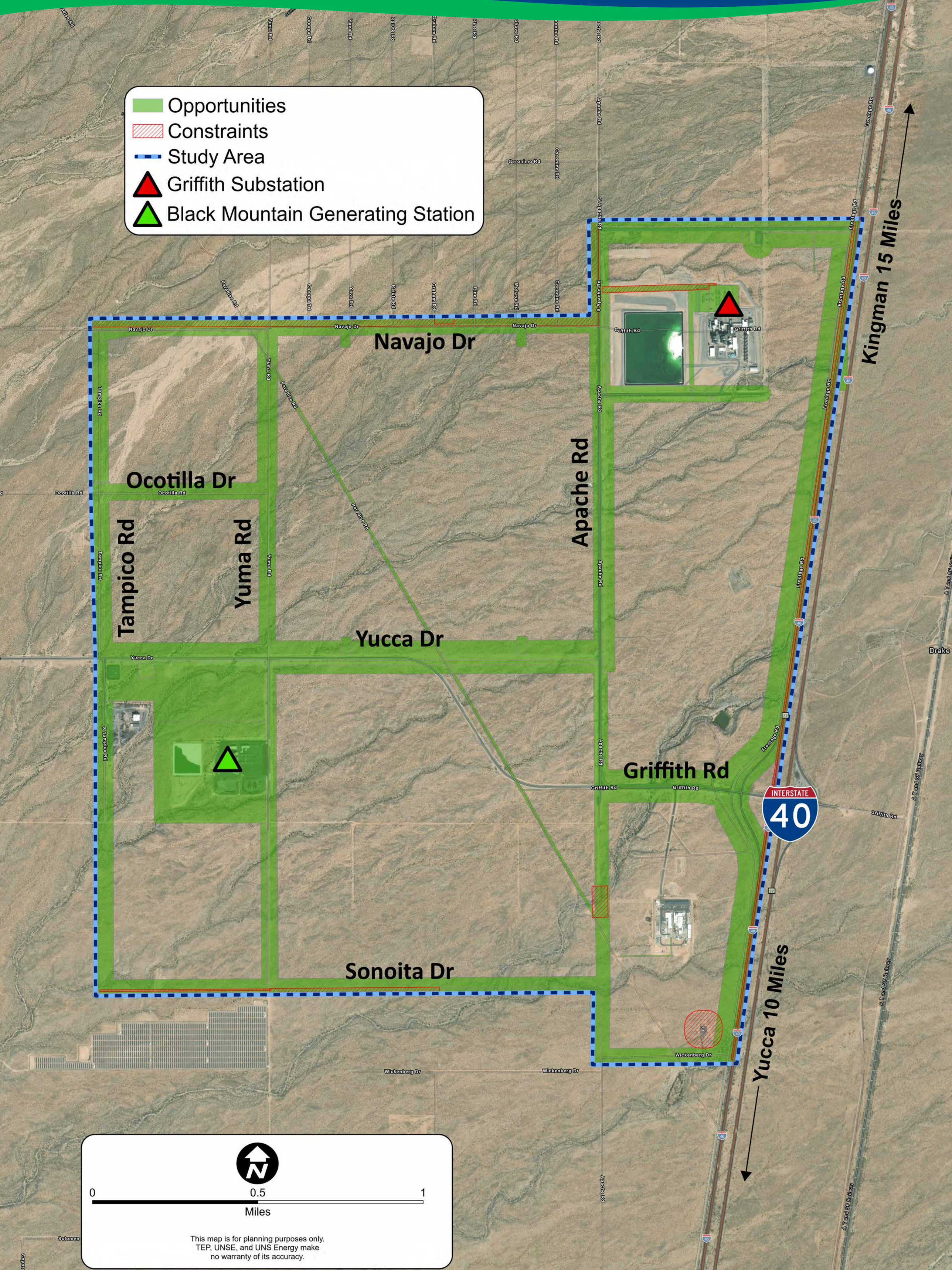
Nov. – Dec. 2024

Hearing – Arizona Power Plant and Transmission Line Siting Committee

Q1 2025

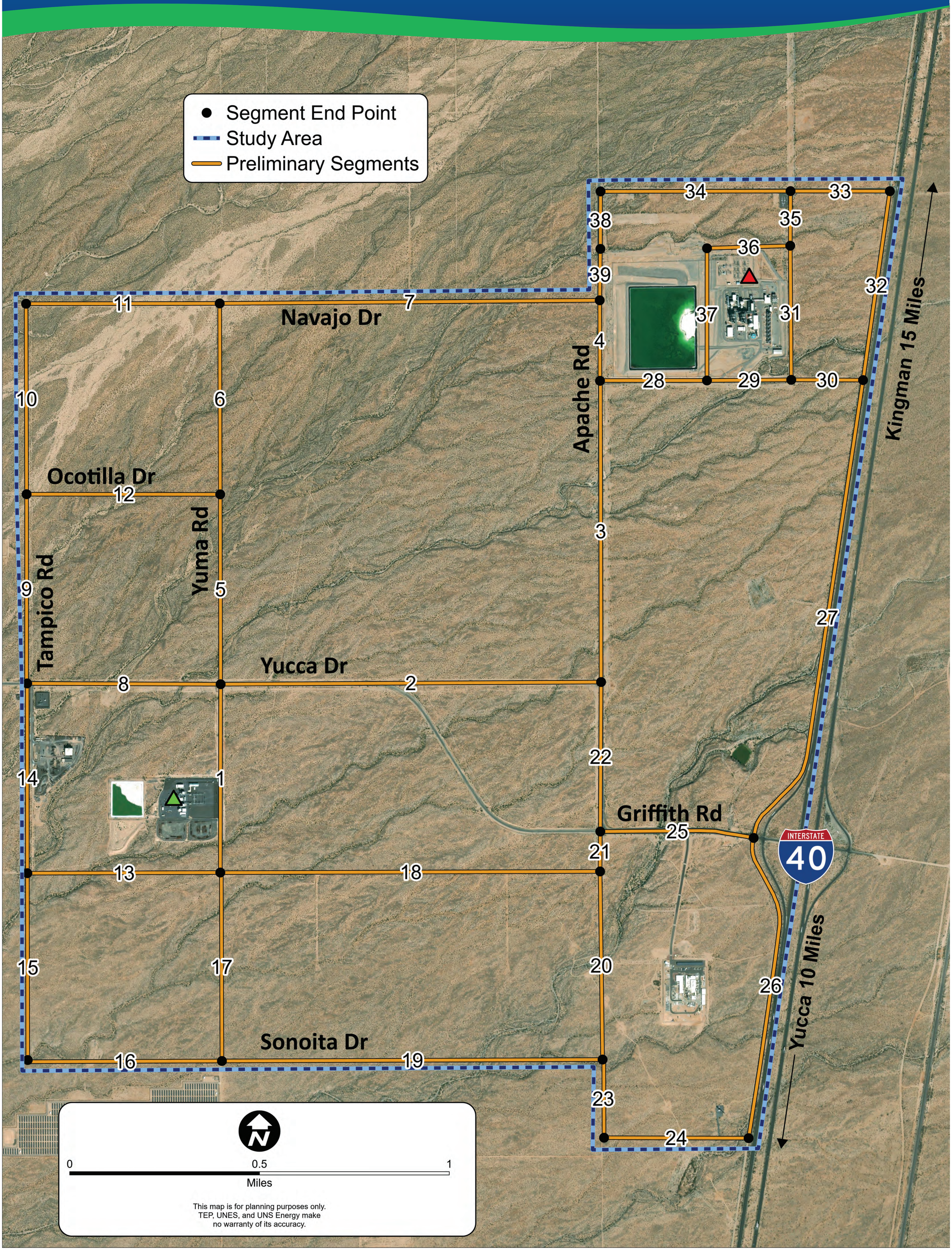
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Opportunities & Constraints

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Suitability Criteria Models

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LEGEND

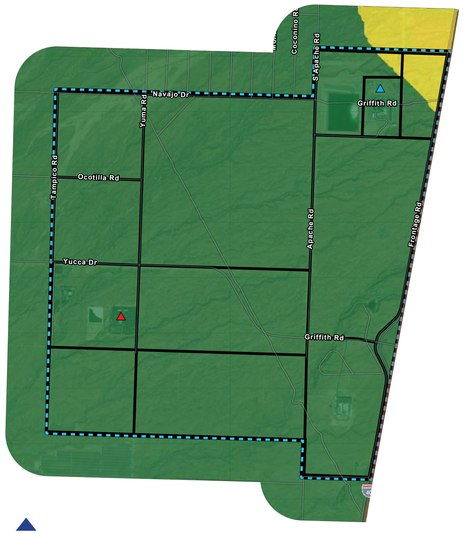
- Black Mountain Generating Station
- Griffith Substation
- Segments
- Study Area

BALANCED MODEL

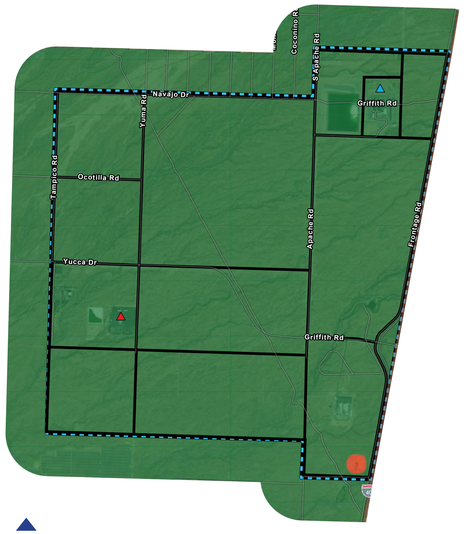
- Low Suitability
- High Suitability



Existing Plans
(Criteria #1)



Biological Resources
(Criteria #2)



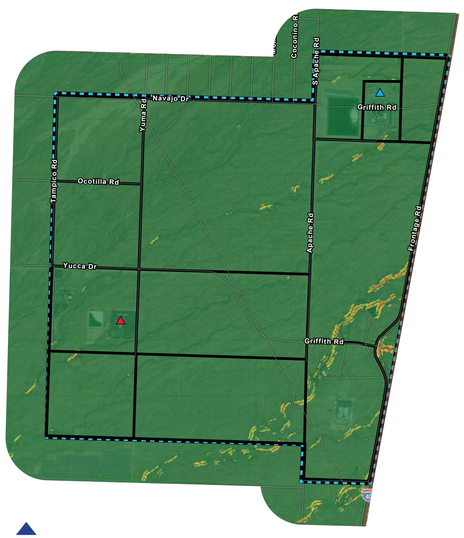
Noise & Communication
(Criteria #3)



Scenic & Cultural Resources
(Criteria #4)



Total Environment
(Criteria #5)



Construction & Maintenance
(Criteria #6)

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Composite Suitability Models

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LEGEND

- Black Mountain Generating Station
- Griffith Substation
- Segments
- Study Area

BALANCED MODEL

- Low Suitability
- High Suitability

Criteria #6 x Weight

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Criteria #5 x Weight

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Criteria #4 x Weight

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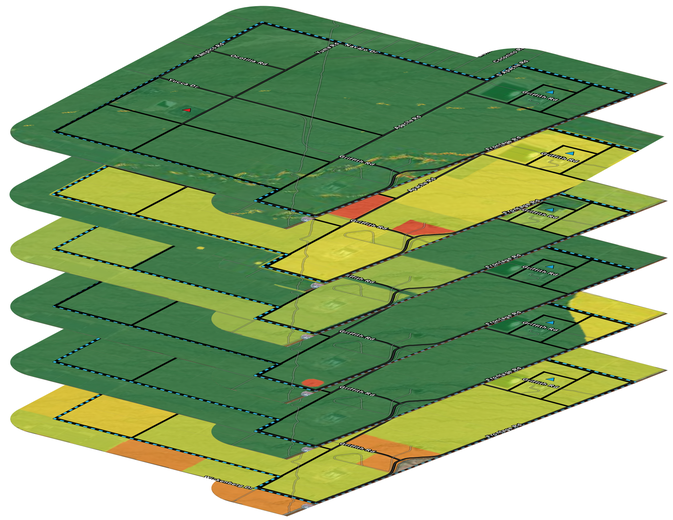
Criteria #3 x Weight

•

Criteria #2 x Weight

•

Criteria #1 x Weight



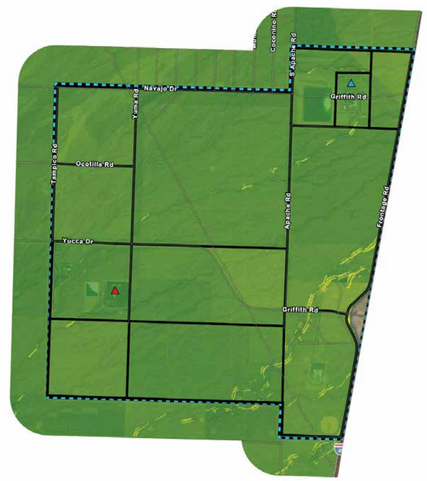
Suitability criteria models are weighted and added together to create composite models



Balanced Model



Environmental Model



Construction & Maintenance Model

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Refined Segments

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Retained Segments
Eliminated Segments
Study Area
Segment End Point
Griffith Substation
Black Mountain Generating Station

Navajo Dr
Ocotilla Dr
Tampico Rd
Yuma Rd
Yucca Dr
Apache Rd
Griffith Rd
Sonoita Dr
Kingman 15 Miles
Yucca 10 Miles
INTERSTATE 40

0 0.5 1
Miles

This map is for planning purposes only.
TEP, UNSE, and UNS Energy make
no warranty of its accuracy.

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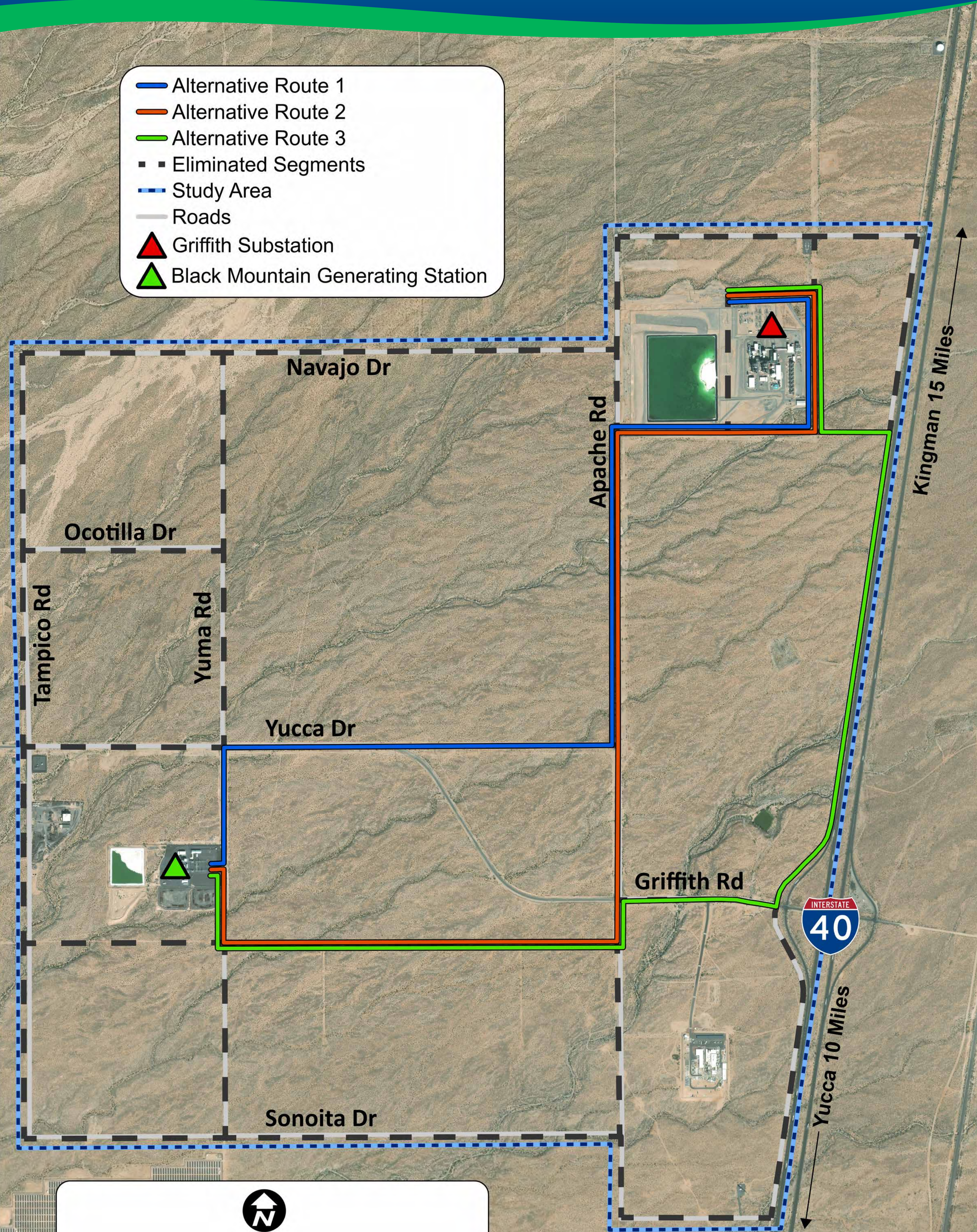
The Arizona Corporation Commission will consider several factors before approving a Certificate of Environmental Compatibility. These factors, used by UniSource to analyze potential line routes, include:

- Wildlife and plant life
- Scenic areas, historic sites and archaeological sites and structures
- Environment
- Noise emission levels and interference with communication signals
- Potential public recreational uses
- Existing development plans
- Engineering feasibility and challenges
- Project costs and potential impacts on customer rates
- Public input

In addition to the factors listed above, UniSource will consider additional criteria that reflect local community values when evaluating potential generation tie line routes. Please fill out a comment form and let us know what else should be considered by scanning the QR code or visiting the project webpage at uesaz.com/black-mountain/.

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Route Alternatives

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TITLE V AIR QUALITY PERMIT PROCESS

- State-of-the-Art emissions control technology to reduce emissions
- Pre-Application consultation with ADEQ

- Application includes technical data, emissions estimates, modeling results, and regulatory requirements

Submitted May 2024

- Draft permit and supportive materials posted for Public Notice
- Public Comment Period (at least 30-days)
- Public Hearing at the close of Public Comment Period
- ADEQ will respond to public comments

Pre-Application Project Planning → Permitting Applicability → Prepare & Submit Permit Application to ADEQ → ADEQ Review **WE ARE HERE** → Public Notice, Comment and Hearing → U.S. EPA Review → ADEQ Issues Final Permit

- Emissions analysis
- Significant Permit Revision to the existing Clean Air Act Title V Permit

- ADEQ deemed application package administratively complete
- ADEQ conducting a technical review & will develop a draft Permit and technical support

- U.S. EPA will conduct 45-day review following Public Comment Period

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Power Plant Environmental Information

AIR QUALITY

- Installation of state-of-the-art emissions controls
- Air quality modeling demonstrates that the Expansion Project will not cause or contribute to an exceedance of U.S. Environmental Protection Agency's national pollutant standards
- Black Mountain Expansion Project subject to stringent federal and state air quality requirements

WATER USE

- Expansion Project not located in an Active Management Area (AMA) or an Irrigation Non-Expansion Area (INA) where historical over pumping of groundwater requires regulation
- Turbines use less water per Megawatt than other generation technologies (i.e. coal, steam)
- Black Mountain currently uses an average of approximately 60 acre-feet of water per year
- Expansion Project is estimated to increase total use to approximately 200 acre-feet of water per year

WASTEWATER / STORMWATER

- Black Mountain does not and will not discharge industrial wastewater to the ground or a surface water
- Industrial wastewater is currently diverted to a permitted, lined evaporation pond
- Expansion Project construction activities will be covered under ADEQ's Construction General Permit (CGP) to minimize discharges of pollutants to stormwater

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Interactive Map Station



See where you live in relation to the project

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COMMENT HERE