Environmental Assessment

Apache GT5 & GT6 Generation Project
Cochise, Arizona

U.S Department of Agriculture Rural Utilities Service
EA-2238

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List of Abbreviations

Abbreviation	Term/Phrase/Name
AAC	Arizona Administrative Code
ACHP	Advisory Council on Historic Preservation
ADEQ	Arizona Department of Environmental Quality
AGS	Apache Generating Station
AEPCO	Arizona Electric Power Cooperative
AGFD	Arizona Game and Fish Department
amsl	above mean sea level
APE	area of potential effect
AZDOT	Arizona Department of Transportation
AZGFD	Arizona Game and Fish Department
AZNRCS	Arizona National Historic Resources Conservation Service
AZPDES	Arizona Pollutant Discharge Elimination System
AZSHPO	Arizona State Historic Preservation Office
BACT	Best Available Control Technology
BE	Biological Evaluation
BGEPA	Bald and Golden Eagle Protection Act
bls	below land surface
BMP	best management practices
BOP	balance of plant
CAA	Clean Air Act
CAISO	California Independent System Operator
CatEx	Categorical Exclusion
CEMS	continuous emissions monitoring system
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COD	commercial operating date

CTG	combustion turbine generator
dBA	A weighted decibel
EA	Environmental Assessment
EIM	Energy Imbalance Market
EIS	Environmental Impact Statement
EMF	electromagnetic field
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPNG	El Paso Natural Gas
ER	Environmental Review
ESA	Endangered Species Act
°F	degrees Fahrenheit
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FR	Federal Register
ft	feet
GE	General Electric
GHG	greenhouse gas
GIS	geospatial information system
GSU	generator step-up
GWP	global warming potential
GWSI	Groundwater Site Inventory
ha	hectare
HAP	hazardous air pollutant
HDMS	Heritage Data Management System
HV	high voltage
IEC	International Electrotechnical Commission
in	inch
IPAC	Information for Planning and Consultation
IRP	Integrated Resources Plan
IWG	U.S. Interagency Working Group
kV	kilovolt
lb/MMBtu	pound per million British thermal units
LNG	liquefied natural gas

MACT	Maximum Available Control Technology
m	meter
MMcf	million cubic feet
µg/m^3	micrograms per cubic meter
MMBtu	million British thermal units
MMBtu/yr	million British thermal units per year
MW	megawatt
MWdc	megawatt of direct current
MWh	megawatt-hour
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
N_2O	nitrous oxide
NRHP	National Register of Historic Places
OSHA	Occupational Health and Safety Administration
Pb	lead
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
PM_{10}	particulate matter 10 microns or less in diameter
PPA	power purchase agreement
ppbvd	parts per billion dry volume
Proposed Action	RUS funding the Apache GT5&6 addition and associated equipment
PSD	Prevention of Significant Deterioration
REA	Rural Electrification Act
RFP	Request for Proposals
ROW	right of way
RUS	Rural Utilities Service
SCGT	simple-cycle natural gas-fired turbine
SCR	selective catalytic reduction
SER	Significant Emission Rate
SF_6	sulfur hexafluoride
SFHA	Special Flood Hazard Area
SIL	Significant Impact Level
SO_2	sulfur dioxide

THPO	Tribal Historic Preservation Officer
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WAPA	Western Area Power Administration
WECC	Western Electricity Coordinating Council
yd^3	cubic yard

1.0 Purpose and Need for the Project

1.1 Project Description

1.1.1 Proposed Action

Arizona Electric Power Cooperative, Inc. (AEPCO) is requesting a loan from the U.S. Department of Agriculture (USDA), Rural Utilities Service (RUS) to procure and construct two 42-megawatt (MW) simple-cycle gas turbines (SCGT) (i.e., 84 MW of additional capacity) at the existing Apache Generating Station (AGS) (see Figure 1-1). The AGS is a power plant owned by AEPCO located in an unincorporated area of Cochise County, Arizona (Figure 1-2). The AGS began operation in 1963 and currently operates three steam and four gas turbine units. The Apache Solar Project also generates 20 MW of renewable energy. A combined 625 MWs of power are generated at AGS. AEPCO is a rural, member-owned generation and transmission electric cooperative formed in 1961 to provide electric generation service to member-owned rural electric distribution cooperatives in Arizona, western New Mexico, and California.

The Proposed Action would be to fund the installation of two refurbished aero-derivative General Electric (GE) ProEnergy Services LM6000 simple-cycle gas turbines at the AGS to provide additional capacity to the existing power plant. The turbines and associated equipment would be installed on an approximately 2-acre area of the existing AGS property and on approximately 2 acres of land owned by Western Area Power Administration (WAPA), with a total disturbed footprint of approximately 7.65 acres (Project Site). WAPA is a federal power-marketing agency within the U.S Department of Energy. The Proposed Action would include construction of the power plant and associated equipment.

1.1.2 Agency and Program Objectives

RUS's action is the decision to provide financing assistance for the Proposed Action through the Electric Infrastructure Loan & Loan Guarantee Program. Under the Rural Electrification Act (REA) of 1936, as amended, the Secretary of Agriculture is authorized and empowered to make loans to nonprofit cooperatives and others for rural electrification for the purpose of financing the construction and operation of generating plants, electric transmission and distribution lines, or systems for the furnishing and improving of electric service to persons in rural areas (7 U.S. Code [USC] § 904). A primary function or mission of RUS is to carry out the electric loan program (7 USC § 6942).

USDA, Rural Development is a mission area that includes three federal agencies – Rural Business-Cooperative Service, Rural Housing Service, and RUS. The agencies have more than 50 programs that provide financial assistance and a variety of technical and educational assistance to eligible rural and tribal populations, eligible communities, individuals, cooperatives, and other entities with a goal of improving the quality of life, sustainability, infrastructure, economic opportunity, development, and security in rural America. Financial assistance can include direct loans, guaranteed loans, and grants to accomplish program objectives.

This Environmental Assessment (EA) was prepared in accordance with Title 7 of the Code of Federal Regulations (CFR) Part 3100 (7 CFR 3100), which prescribes the policies and procedures of the USDA for implementing the National Environmental Policy Act (NEPA) of 1969, as amended, Title 7 CFR 1970 which provides environmental policies and procedures for the RUS, the regulations of the Council on Environmental Quality (CEQ), and the USDA Rural Development guidance document 1970-C which serves as a guide for preparing EAs under NEPA.

1.1.3 Cooperating Agency

WAPA is a federal agency that owns, operates and maintains electric transmission lines and associated facilities in accordance with its statutory authorities, regulations and good utility practices to market and transmit electricity.

The Proposed Action would require moving three existing electric transmission structures owned by WAPA located on AEPCO and WAPA property and require an update to an existing license outgrant provided by WAPA to AEPCO. The three structures would be moved to accommodate the location of the additional gas turbines as shown in Figure 1-1. The existing transmission structures would be removed, and new structures would be placed in the new alignment. The new alignment would be relocated entirely on AEPCO property. The update to the license outgrant for the Proposed Action would allow for the construction of an electrical ring bus to tie the new SCGTs into the existing switchyard on WAPA land adjacent to the AGS as shown in Figure 1-1.

WAPA was originally invited by RUS to be a Cooperating Agency in the development of this EA. However, based on timing of this EA and when the line relocation would occur, WAPA prepared a Categorical Exclusion (CatEx) under NEPA for relocating the three WAPA transmission structures and the associated approximately 0.25-mile segment of the transmission line. WAPA also updated AEPCO's existing license outgrant to allow the expansion of the AGS supporting infrastructure on WAPA-owned property {this action was not part of the CatEx since it was just an easement}. Because WAPA's involvement in the Project was complete as of November 21, 2024, for the CatEx and the outgrant was updated as of March 5, 2025, WAPA is no longer considered to be cooperating in this EA.

1.2 Purpose and Need

RUS's purpose is to evaluate this proposed generation project for financing through the Electric Infrastructure Loan & Loan Guarantee Program to serve nonprofit utility cooperatives in rural areas as authorized by the REA.

The purpose of the Proposed Action is to meet projected load growth requirements and capacity shortfalls identified in the public version of AEPCOs 2020 Integrated Resources Plan (IRP) dated August 26, 2020 (Appendix A). AEPCO is required to develop and submit an IRP to the Arizona Corporation Commission every two years, or as determined by Commission order, in accordance with the Arizona Administrative Code (R14-2-703.C-F, H). The Commission acknowledges receipt but does not approve or deny the IRP. The 2020 IRP provided a 15-year forecast of projected electric load growth through 2035 and identified sources to meet growing demand needs and/or provide economic value to AEPCO's members. As summarized on page 131 of 151 of the public 2020 IRP (Appendix A), AEPCO demonstrated a need for new generation sources that:

1) Meet future requirements for additional peaking resources (50-120 MW);
2) Support integration of further intermittent/renewable generation in the planning period; and
3) Modernize AEPCO's generating mixture.

AEPCO's members need new, reliable, and cost-effective sources of capacity to serve its members in rural areas as the demand for power grows over the next 15 years. But for illiquid and high-priced market purchases, AEPCO would have a shortfall in available power capacity in comparison to the peak demand on its system as early as 2025. AEPCO and their member's yearly peak demand and available capacity for the 15-year period between 2020 and 2035 are shown in Figure 1-3.

Figure 1-1: Proposed Layout of New Equipment

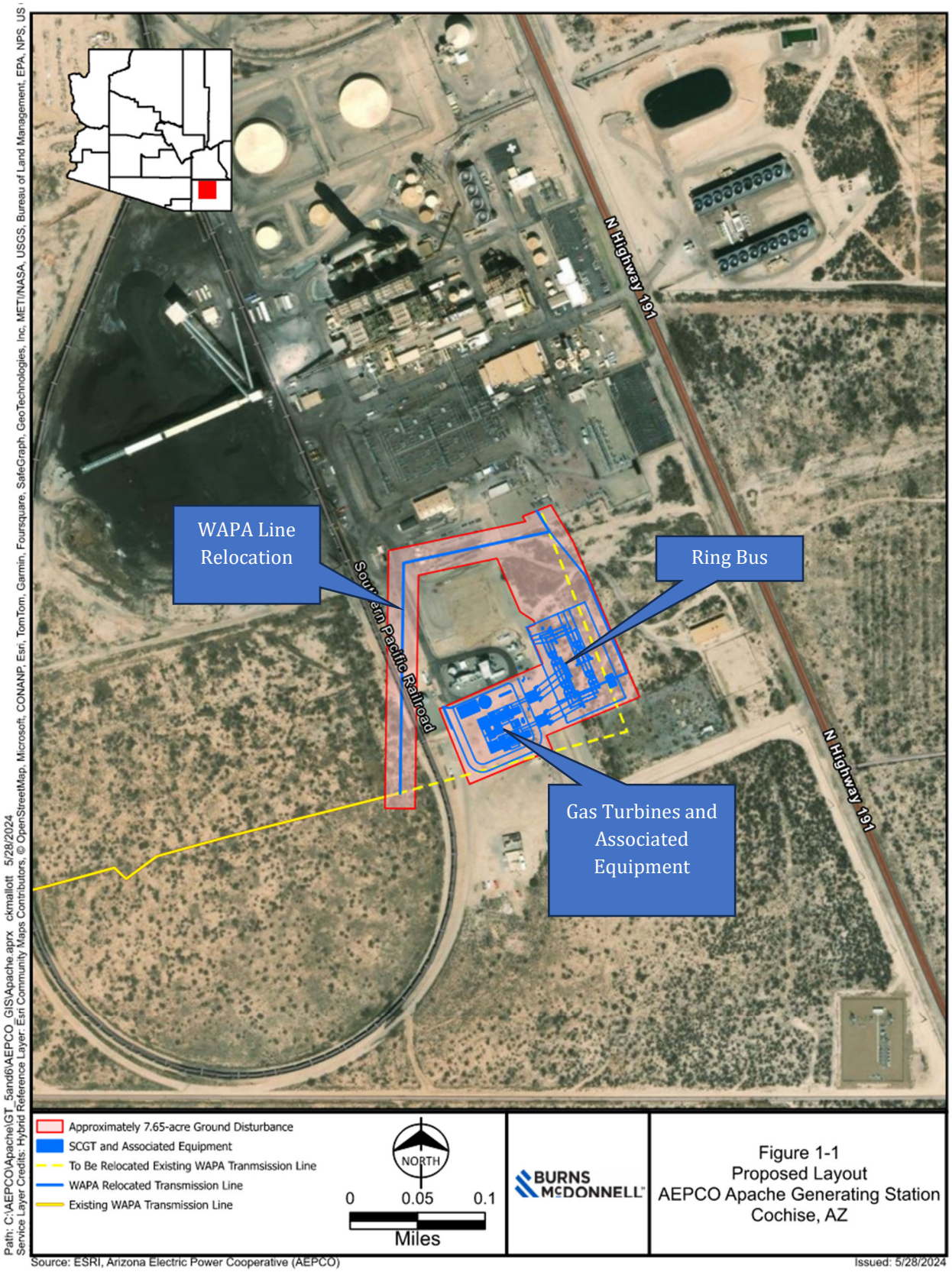


Figure 1-2: Apache Generating Station Location

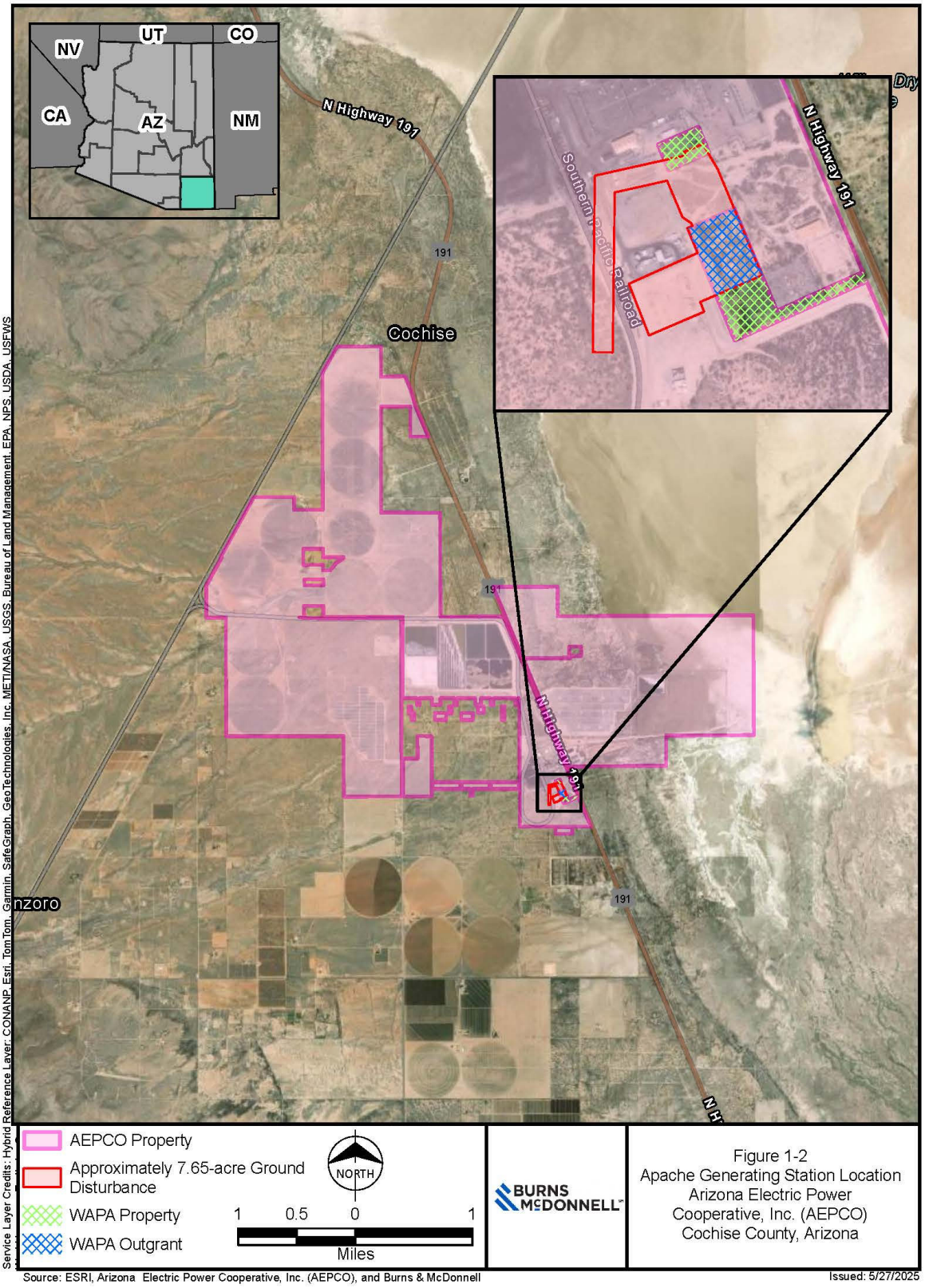
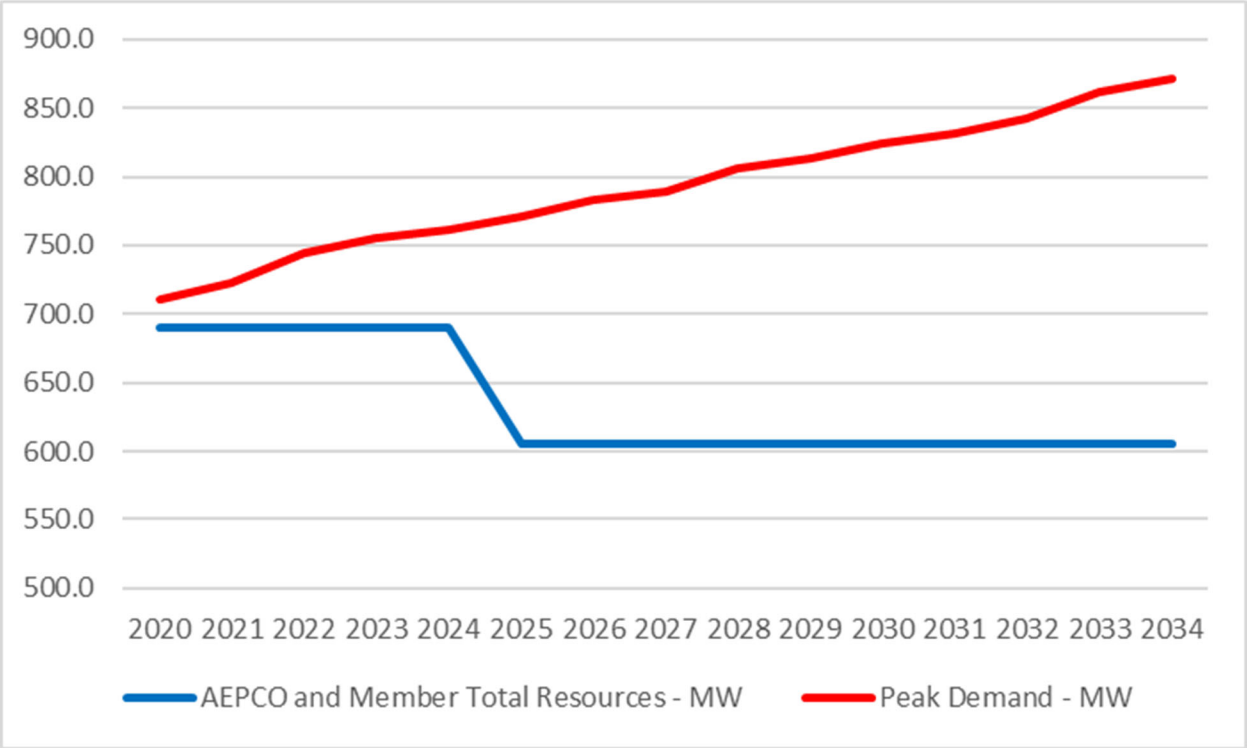


Figure 1-3: AEPCO Anticipated Yearly Peak Demand and Available Capacity



2.0 Alternatives

To meet projected near-term load growth requirements and capacity shortfalls identified in AEPCO's 2020 IRP (Appendix A), AEPCO is proposing to install replacement power at the AGS. Goals and objectives of the Proposed Action include the installation of reliable, fast-start, and dispatchable power to provide capacity and support the increasing use of intermittent renewable resources.

AEPCO's 2020 IRP identified a list of capacity needs that should occur over the next three years. RUS considered several alternatives to meet AEPCO's identified capacity needs. The alternatives reviewed, as well as the preferred alternative (i.e., Proposed Action), are discussed in more detail below.

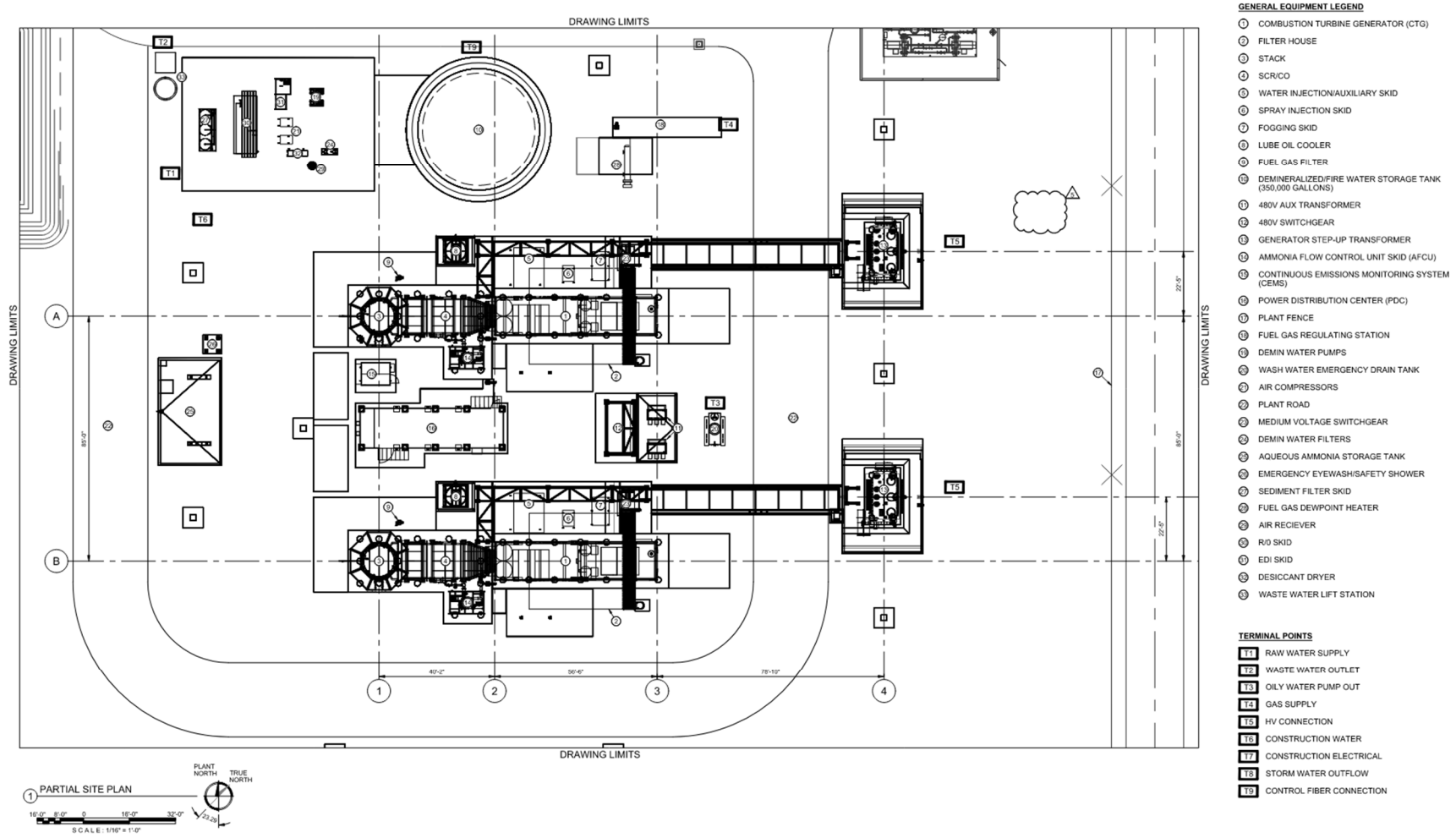
2.1 Description of the Proposed Action

Based on a review of available alternatives, RUS's and WAPA's Proposed Action is to provides funds and approval for AEPCO to construct two SCGT units (approximately 84-MW total) within the existing AGS property boundaries. The AEPCO project would be situated at the existing AGS and on a WAPA-owned property with an amended license outgrant to AEPCO. The IRP identified that the development of flexible natural gas capacity in the mid-2020s was the least-cost option for meeting capacity needs between 50 MW and 120 MW. By installing two new SCGT units at the existing Project Site, with only minimal onsite upgrades to include the construction of an associated switchyard, AEPCO will benefit from eliminating the additional costs and environmental impacts associated with developing a new site. Overall, approximately 7.65 acres of land may be disturbed for construction of the Proposed Action, including installation of the combustion turbines, ancillary equipment, and transmission line, as well as equipment laydown areas and construction parking. Existing infrastructure that will be reused includes natural gas lines, water lines, roadways, administrative buildings, warehouses, and other components as appropriate.

A general arrangement figure for the power generation is included (Figure 2-1), detailing the main equipment additions for the Proposed Action. The Proposed Action will include installation of the SCGTs, emissions control equipment, 85-foot stacks, ring bus, connections to the existing gas line via a gas metering station, and a demineralized water tank. The lines required to transmit electricity across AEPCO's transmission system are already in place. New electrical equipment within the Project Site boundary will be required to connect the new units' switchyard to the existing AGS substation. A substantial amount of existing infrastructure (e.g., roads, transmission interconnection, gas pipeline, water lines, etc.) will be used for the Proposed Action. Therefore, impacts associated with building this infrastructure will be avoided, and the Proposed Action will have an inherently lesser environmental impact than developing a greenfield site.

Site prep for construction will take approximately 73 days. Work on the foundations will follow and is expected to take approximately 140 days. The excavation areas for each SCGT will be 50 foot wide by 20 foot in length and 5 foot deep. The excavation for the water treatment tank will be 45 foot wide by 67 foot in length and 5 foot deep. Work associated with underground utilities is expected to take approximately 74 days with the balance of plant construction and installations taking approximately 144 days. Finally, SCGT installation is predicted to take 225 days with set-up and testing lasting approximately 30 days. Most construction related traffic will access the Project Site via Interstate 10 and Arizona State Highway 191.

Figure 2-1: Preliminary General Arrangement



2.1.1 Project Location

AEPCO's Proposed Action will be located on approximately 7.65 acres of the much larger existing AGS in southern Arizona (Figure 1-1). The Project Site is located in Cochise County near the unincorporated community of Cochise, AZ. Situated on the northeast side directly adjacent to the Project Site lies the Willcox Playa. The Willcox Playa is an approximately 40 square mile dry lakebed. The city of Willcox, Arizona lies directly north of the Willcox Playa. The Project Site includes AEPCO's only power generation facility.

2.1.2 Existing AGS Facility

The existing AGS facility was first constructed with the installation of Steam Unit 1 (ST1), a gas-fired steam unit that went online in 1963. In 1964, a simple cycle gas turbine, Gas Turbine 1 (GT1), was added to the site. In 1978-1979, AEPCO added Steam Units 2 and 3 (ST2 and ST3), almost identical Riley Stoker turbo furnace coal-fired boiler units with a 175 net MW capacity each. Several other simple cycle combustion turbines (GT2 through GT4) were added later. GT2 and GT3 are essentially peaking and reserve units; GT4 provides both peaking and some load service when ST2 or ST3 is down. In late 2017, AEPCO began the process of converting ST2 to a natural gas-fired only unit as required by the regional haze State Implementation Plan. Collectively, Apache has approximately 625 MW of combined gross capacity (including 20 MW of renewable energy generation at Apache Solar Project). The addition of the Proposed Action will help AEPCO modernize its power generation resources and help integrate new renewable resources.

The existing AGS facility already provides associated equipment typical of other power plant facilities like water intake facilities, natural gas lines, transmission lines and substation infrastructure. As shown on Figure 1-2, the new SCGT units will be located on a previously disturbed vacant lot of the existing AGS facility. Additional onsite impacts include limited relocation of existing equipment and transmission structures, and the development of a construction laydown area.

2.1.3 Connected Actions

There are no Connected Actions associated with the Proposed Action.

2.2 Alternatives Analysis

Several alternatives were considered to provide additional fast-ramping, regulation-capable firm generation to integrate AEPCO's planned solar and battery storage projects and its members' solar projects. Additional capacity of 50-120 MW was identified in the IRP (Appendix A) and was discussed in the purpose and need section above. The alternatives are discussed below, including the Proposed Action, and the No Action Alternative.

2.2.1 Load Management

AEPCO supplies no power at retail, and therefore, has no demand management programs. However, even though AEPCO is a supply-side only entity, it recognizes the value that demand response tools can provide to curb the load of its members. Accordingly, in keeping with the concept of "all-source" planning – where multiple types of generation, reductions in demand, and/or a combination are considered – and to provide additional options to its members, AEPCO completed implementation of a software solution to enable members to offer a smart thermostat demand response program in 2023. One distribution cooperative began a pilot of the program in summer 2023. AEPCO is also working with its members to evaluate the potential of this distributed energy software solution to enable members to develop new demand response programs with different device types in the future. However, load management does not provide sufficient reduction in

power usage to offset the identified need. Load management was therefore considered but not carried forward as an alternative.

2.2.2 Renewable Generation

Renewable energy sources play a large role in the changing power generation landscape. Solar generation plays an important role in AEPCO's future generation mix. As such, AEPCO is considering ways to further incorporate solar into its system. However, solar capacity is subject to the variability inherent in solar power production, and increased solar penetration will continue to push AEPCO's coincident peak further into the evening hours until solar has virtually no impact on the net system peak.

Therefore, the amount of solar-based generation that will contribute firm capacity to AEPCO's system is limited due to existing and under development renewable and battery installations. Consequently, two to three times more renewable and storage nameplate capacity would need to be installed to contribute the same firm capacity as traditional generation to AEPCO's system making this alternative more costly than the Proposed Action.

Additionally, the purpose of the Proposed Action is to support the integration of increased intermittent renewable assets like solar, wind energy, and battery storage, and meet the requirements of the evolving energy markets. Renewable generation was therefore considered but not carried forward as an alternative.

2.2.3 Distributed Generation

AEPCO members have several existing and under development utility-grade distributed generation projects. Additional distributed generation was considered as an alternative. However, this alternative faces the same challenges as utility scale generation with declining firm capacity contribution of solar and storage projects with each subsequent installation, as discussed above in Section 2.2.2. Generally smaller projects are also more costly per megawatt installed. This alternative was not carried forward due to not meeting the additional installed capacity need, the lack of economy of scale, and members already developing beneficial distributed locations.

Residential and commercial distributed generation projects were not considered as AEPCO supplies no power to retail consumers.

2.2.4 Traditional Generation

Traditional generation assets can supply the necessary capacity. Different combustion technologies were considered. See below for a brief description of the alternatives considered for traditional generation:

- Additional coal capacity - not feasible under current construction timeframe. Coal generation was therefore not carried forward.
- Combined-cycle generation, additional natural gas/oil capacity – is technically feasible. Combined-cycle generation is most typically used for baseload operation, not for covering intermittent loads. Costs for combined-cycle are high due to needing a steam turbine, cooling towers, etc. Maintenance costs are typically higher than other generation types. Combined-cycle generation was therefore considered but not carried forward.
- Simple-cycle generation, additional natural gas/oil capacity – feasible. Simple-cycle generation can supply the capacity needed, achieve fast-starts, and reliably dispatch to follow load if renewables are not available.

- Alternative fuels:

Several alternative fuels could be used.

  - Oil – No oil pipeline makes continuous oil-firing an infeasible alternative.
  - Biomass – No viable supply of fuel makes biomass an infeasible alternative.
  - Hydrogen – No viable supply of hydrogen fuel, whether transported or generated onsite, make hydrogen an infeasible alternative.

Alternative fuels, while considered, and not considered feasible to meet the purpose and need and are therefore not carried forward as alternatives.

2.2.5 Nuclear

Nuclear generation in the form of small modular reactors (SMR) is a potential alternative. SMR would likely require joint participation with another utility to obtain the necessary scale, and SMR is still a developing technology with a history of cost and schedule overruns. SMR currently requires lengthy lead times given the current uncertainty in supply chain as well as observed delays in permitting, siting, and regulatory approvals.

Nuclear generation, while potentially feasible for a need further into the future, was considered but not carried forward as an alternative due to duration of permitting and licensing, high installation costs, and regulatory uncertainty.

2.2.6 Location Options

AEPCO building new peaking capacity could go at the existing AGS or at a greenfield site. A new greenfield site would require the construction of new infrastructure (e.g., roads, transmission, water intake, etc.) that currently exists at the AGS. Construction at an undeveloped site will inherently have more environmental impacts due to building the unit(s) and the associated transmission lines to deliver the electricity to the grid. A substantial amount of existing infrastructure is available for use at the existing AGS site. Any future generation project at AGS will avoid impacts associated with building this infrastructure. Such projects will inherently have fewer environmental impacts than building on a greenfield site. Due to the inherently low impacts of building at an existing site, the AGS location is a desirable location for new generation capacity.

2.3 No Action Alternative

Under the No Action Alternative, RUS will not provide financial assistance to AEPCO to build the Proposed Action. Under the No Action Alternative, the Proposed Action would not be built. As a result, the identified generation capacity shortfall will not be addressed and will leave AEPCO's members unable to serve load. AEPCO would be forced to rely on uncertain spot market purchases during peak demand times, which are subject to extreme scarcity pricing and possible curtailment on heavily loaded transmission paths. Under this scenario, there is no RUS-driven federal action requirement.

3.0 Affected Environment/Consequences

This section provides a description of the existing natural and human resources present in the vicinity of the Project Site, and the potential impacts to them from Proposed Action's construction and operation. Chapter 4.0, Cumulative Impacts, discusses the potential cumulative environmental impacts resulting from implementation of the Proposed Action. There are no coastal resources near the Proposed Action and impacts on such are therefore not addressed.

3.1 Land Use, Formally Classified Lands, Geology, Soils, and Farmland

3.1.1 Affected Environment

Land Use

Cochise County is responsible for land use planning and zoning on the AEPCO property. The WAPA property is federal land and is exempt from Cochise County planning and zoning ordinances. AEPCO property is zoned as "Heavy Industry" so is consistent with local county planning and zoning regulation. The Project Site is a highly disturbed landscape at the existing AGS and Mesquite Substation and is adjacent to existing transmission infrastructure. Although the Proposed Action will technically occur on prime farmland, most of the area being disturbed is an existing gravel parking lot. Land use in the immediate vicinity to the Project Site includes dispersed rural residential development and agriculture, and an existing, approximately 120-acre solar generating facility directly northeast of the Project Site owned and operated by Sierra Southwest Cooperative Services, Inc. on AEPCO property.

Formally Classified Lands

Formally Classified Lands are any lands that have been accorded special protection through formal legislative designations and are either administered by federal, state, or local agencies, tribes, or private parties. The Proposed Action is not located on or adjacent to any formally classified lands.

Geology

Arizona geologic map data from the U.S. Geological Survey (USGS) was used to determine the geology of the site. According to the map and accompanying data, Holocene Surficial Deposits make up the area. These deposits are unconsolidated deposits associated with modern fluvial systems. This unit consists primarily of fine-grained, well-sorted sediment on alluvial plains, but also includes gravelly channel, terrace, and alluvial-fan deposits on middle and upper piedmonts.

Soils

The USDA's Natural Resources Conservation Service website (USDA, 2019) was referenced for soil data for the Project Site, as well as the previous soil surveys performed for the original AGS construction. A Web Soil Survey reveals the Project Site has three possible classifications: 1) CmA – Comoro sandy loam, 0 to 2 percent slopes, well drained. 2) Gr – Grabe sandy loam, 0-1 percent slopes, well drained. 3) Gs – Grabe loam, 0-1 percent slopes and well drained.

Soils present in the proposed Project Site are classified as low risk of corrosion to concrete for CmA soils, and a higher classification for risk of concrete corrosion for Gr and Gs soils. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. All soils present on the Site were classified as higher risk to corrosion of uncoated steel. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. There is also evidence of soil subsidence around the Project Site.

Farmland

The Farmland Protection Policy Act is intended to minimize the impact federal programs have on unnecessary and irreversible conversion of farmland to non-agricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of governments, and private programs and policies to protect farmland. The existing Project Site and surrounding areas consist of disturbed soils from urbanization and construction related to the existing facilities. The USDA's Web Soil Survey lists the present soils as prime farmland that could yield high crop production if flooded, however this is assumed only with a high level of management regarding irrigation and tillage kept to a minimum. Although the Proposed Action will technically occur on prime farmland, most of the area being disturbed is an existing gravel parking lot. Existing agriculture, using center pivot irrigation, is in the area located to the east, south, and northwest of the Proposed Action.

3.1.2 Environmental Consequences

3.1.2.1 Proposed Action Alternative

Prior to the development of the existing Project Site, the surrounding area consisted of wildlife habitat and did support large-scale agricultural activities. Construction of the existing Site caused impacts to the native land use, geology, and soils. Construction of the Proposed Action will take place within the existing site on previously disturbed land. Since electric generation units are existing within the area surrounding the Proposed Action, there will be no changes to the existing land use, geology, or soils (including no change to soil erosion) will occur as a part of the Proposed Action. The Proposed Action will not have any impact to formally classified lands.

The project team consulted the Natural Resource Conservation Service (NRCS) regarding prime farmland (see Section 6.1). A USDA AD-1006 Form was completed for the Proposed Action and is attached in Appendix D with correspondence from the agency. The total conversion score for the Proposed Action is 24.18 points, which is below the 160-point threshold identified in 7 CFR 658.4(c)(2).

3.1.2.2 No Action Alternative

The No Action Alternative would have no short or long-term impacts to land use, formally classified lands, geology, soils, and farmland at or in the vicinity of the Proposed Action because no construction or operation would occur.

3.1.3 Mitigation

As construction and operation of the Proposed Action will have no impacts on current land use, formally classified lands, prime farmlands, geology, or soils, no mitigation measures are necessary.

3.2 Floodplains

3.2.1 Affected Environment

In A.R.S. § 48-3601 through 48-3628, the Arizona State Legislature has delegated the responsibility to each county flood control district to adopt floodplain management regulations designed to promote the public health, safety, and general welfare of its citizenry. The Special Flood Hazard Areas (SFHA) or flood prone areas of Cochise County are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare. According to the Federal Emergency Management Agency's (FEMA) National Flood Hazard Layer (FEMA, 2021) the Project Site does not lie within any SFHA. Floodplains

adjacent to the Project Site are associated with the Willcox Playa and do not extend on to the Project Site or its surrounding areas (FEMA, 2021).

3.2.2 Environmental Consequences

The following sections summarize potential environmental consequences of the Proposed Action Alternative and No Action Alternative related to floodplains.

3.2.2.1 Proposed Action Alternative

The Proposed Action would have no impact on floodplains. All construction will take place within the existing Project Site and will not result in any impacts to any surrounding floodplains. No future impacts to surrounding floodplains are anticipated during operation of the Proposed Action. The Proposed Action will not result in any additional runoff or impedance of flood flows. The new metering station will not result in any additional runoff or impedance of flood flows. El Paso Natural Gas (EPNG), a Kinder Morgan Company, will obtain the necessary permits to construct, own, and operate the metering station.

3.2.2.2 No Action Alternative

The No Action Alternative would have no short - or long-term impacts to floodplains at or in the vicinity of the Proposed Action because no construction or operation would occur.

3.2.3 Mitigation

As construction and operation of the Proposed Action will have no impacts on floodplains, no mitigation measures are required.

3.3 Wetlands and Water Bodies

3.3.1 Affected Environment

The Clean Water Act of 1977 establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. and regulating quality standards for surface waters. The Clean Water Act made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained.

The Project Site is largely surrounded by arid, rugged terrain, ranging from 3,000-7,000 feet above sea level. There are few wetlands in this area (NWI, 2023). Most are dry lakebeds of various sizes, surrounded by mostly riparian vegetation. The largest wetland nearest the Project Site is the Willcox Playa located offsite, directly to the northeast. The Willcox Playa is a non-jurisdictional wetland and is classified as L2USA for lacustrine system, littoral subsystem, with unconsolidated shore, and a temporarily flooded water regime (NWI, 2023). An approved jurisdictional determination was provided by the USACE on February 24, 2021, and determined the aquatic resource identified as “an ephemeral interior draining basin” (i.e., the Willcox Playa) was not jurisdictional.

The Lacustrine System includes wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergent, and emergent mosses or lichens with 30 percent or greater areal coverage; and (3) total area of at least 8 hectares (ha) (20 acres). Similar wetlands and deepwater habitats totaling less than 8 ha are also included in the Lacustrine System if an active wave-formed or bedrock shoreline feature makes up all or part of the boundary, or if the water depth in the deepest part of the basin equals or exceeds 2.5 m (8.2 ft) at low water. Lacustrine waters may be tidal or nontidal, but ocean-derived salinity is always less than 0.5 parts per trillion.

The Littoral Subsystem includes all wetland habitats in the Lacustrine System. It extends from the shoreward boundary of the System to a depth of 2.5 m (8.2 ft) below low water, or to the maximum extent of nonpersistent emergents if these grow at depths greater than 2.5 m.

The Unconsolidated Shore Class includes all wetland habitats having two characteristics: (1) unconsolidated substrates with less than 75 percent areal cover of stones, boulders or bedrock; and (2) less than 30 percent areal cover of vegetation. Landforms such as beaches, bars, and flats are included in the Unconsolidated Shore class.

The Temporary Flooded Regime means that surface water is present for brief periods (from a few days to a few weeks) during the growing season, but the water table usually lies well below the ground surface for most of the season.

Because no wetlands were identified, no field surveys were conducted. The U.S. Army Corps of Engineers (USACE) was invited to comment on the Proposed Action during the scoping period in February 2023. USACE acknowledged receipt of letter and advised of the possible need for a permit if discharge of dredged or fill material may reach a Water of the US. As all Waters of the US will be avoided, no permit is required.

3.3.2 Environmental Consequences

3.3.2.1 Proposed Action Alternative

AEPCO has selected suitable locations for laydown staging that will be necessary for construction of this Proposed Action that avoids any wetlands impacts. The Proposed Action location will not impact any wetlands. Thus, construction and operation of the Proposed Action will have no effects on wetlands.

No impacts on wetlands or jurisdictional waters of the US or waters of the State of Arizona are anticipated for construction or operation of the Proposed Action.

3.3.2.2 No Action Alternative

The No Action Alternative would have no short- or long-term impacts to wetlands and water bodies at or in the vicinity of the Proposed Action because no construction or operation would occur.

3.3.3 Mitigation

As construction and operation of the Proposed Action will have no impacts on wetlands, no mitigation measures are required.

3.4 Water Resources

3.4.1 Affected Environment

As mentioned in Section 3.3, The Clean Water Act of 1977 establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. and regulating quality standards for surface waters. Additional water resource rules and regulations considered include:

- Title 18 of the Arizona Administrative Code under Chapter 11, Department of Environmental Quality – Water Quality Standards expands upon the Clean Water Act.
- Title 18 of the Arizona Administrative Code under Chapter 4, Department of Environmental Quality – Safe Drinking Water.
- The Sole Source Aquifer program is authorized by Section 1424(e) of the Safe Drinking Water Act of 1974 (Public Law 93-523, 42 U.S.C. 300 et. seq) provides protection in areas that obtain at least 50 percent of their drinking water from the nearest aquifer.

Surface Waters, Water Supply, and Discharge

Given the Project Site's arid location, there is no permanent surface water resource for use in the immediate area. Water supply for the operations of the AGS utilizes its own dedicated wells regulated by the Arizona Department of Water Resources. Water usage at the Project Site includes existing generation (e.g., once-through cooling, cooling tower makeup, boiler make-up, and other service-water needs around the Project Site). Wastewater streams include cooling tower blowdown, demineralizer wash-water, wastewater from plant drains, boiler blowdown, and stormwater. These wastewater streams are directed to various permitted surface impoundments on the site. Facility waste streams (i.e., toilets, sinks, etc.), are directed to onsite septic systems.

Groundwater

AEPCO maintains a well system supplying groundwater for the AGS. The Project Site overlies the Basin and Range basin-fill aquifers which underly 148,000 square miles in Nevada, California, Arizona, Utah, and adjacent States (USGS, 2016). Basin-fill deposits range from about 1,000 to 5,000 feet thick and are recharged primarily from infiltration of mountain streams and inflow from fractured bedrock along mountain fronts (USGS, 2016). Given the arid region and little precipitation, most precipitation that occurs is lost to evaporation and is not considered a viable contributor to aquifer recharge. Irrigation and seepage from rivers provide recharge in some basins.

Moreover, a review of groundwater information from the Arizona Groundwater Site Inventory (GWSI), water levels in wells near the Project Site range from just under 30 feet below land surface (bls) to approximately 300 feet bls, indicating no groundwater connectivity to the playa surface.

The Project Site is classified as a non-transient, non-community water system that uses ground water as its source of potable water supply. The system does not draw from a federally designated sole source aquifer.

Water Quality

The Project Site's water supply is sourced from existing wells drilled into the water table and the existing generating station is permitted through the Arizona Aquifer Protection Program, operating under a permit, to discharge industrial wastewater to onsite ditches that can only flow to the onsite impoundments. There is no discharge of industrial wastewater into the environment. None of the existing water permits will need to be revised to accommodate the operation of GT5&GT6.

3.4.2 Environmental Consequences

3.4.2.1 Proposed Action Alternative

Construction

There are no permanent surface water resources near the Project Site. No construction activity will directly impact water resources. As such, no impacts to the nearby aquifer will occur.

Construction activities from the Proposed Action will not impact the groundwater at the existing Project Site. Accordingly, no lowering of the groundwater level will be required during construction. Best management practices (BMP, Table 5-1) and specific construction techniques can mitigate the impacts to water resources from construction.

Operation

The Proposed Action is expected to use approximately 220 gallons of water per minute at maximum operation. The expected minimal increase of water withdrawal is not anticipated to cause or exacerbate any existing groundwater quality or quantity issues. The Proposed Action will not result in any discharged liquids other than to the already permitted surface impoundments. A drainage study in support of the County

permitting process will be completed to maintain no offsite discharges. There will be no well permit modifications or need for additional wells to support the Project's water usage or discharge. Thus, the Proposed Action will have no effect on the water quality or the impairment status of the surrounding area.

3.4.2.2 No Action Alternative

The No Action Alternative would have no short- or long-term impacts to water resources at or in the vicinity of the Proposed Action because no construction or operation would occur. AEPCO would be forced to rely on uncertain spot market purchases during peak demand times which are subject to extreme scarcity pricing and possible curtailment on heavily loaded transmission paths.

3.4.3 Mitigation

AEPCO's EPC contractor will follow BMPs during construction. BMPs may include silt fence, inlet protection, straw wattle barriers, riprap, erosion control blankets, and other erosion and sediment control measures as necessary. Appropriate sediment and erosion control BMP will be installed prior to initiating soil-disturbing activities, such as installation of new foundations and concrete pads. All BMP will be maintained by the EPC contractor as necessary throughout the Proposed Action construction.

Because there are no potential discharges to either waters of the US (WOTUS) under the federal Clean Water Act or listed non-WOTUS protected surface waters under Arizona's separate permit program, there won't be a need for an Arizona Pollutant Discharge Elimination System Construction Stormwater permit and/or erosion and sediment control permit. AEPCO's EPC contractor will follow standard BMPs to be implemented during construction.

3.5 Biological Resources

This section evaluates vegetation and wildlife that could be present within the Project Site and vicinity including special status species that are protected by the Endangered Species Act of 1973 (ESA), Bald and Golden Eagle Protection Act (BGEPA), and Migratory Bird Treaty Act (MBTA). Special status species include species designated by the US Fish and Wildlife Service (USFWS) as endangered, threatened, proposed for listing, or a candidate for listing under the ESA. Section 7(a)(2) of the ESA requires Federal agencies to consult with the USFWS to ensure that actions they fund, authorize, permit, or otherwise carry out will not jeopardize the continued existence of any listed species or adversely modify designated critical habitats.

A biological evaluation (BE) was prepared to evaluate the potential for special status species to occur within the Project Site and vicinity and to determine the presence or absence of designated or proposed critical habitat (see Appendix B). These determinations were based on review of:

- The natural history and known geographical and elevation range of the special-status species.
- Results of an Arizona Game and Fish Department (AGFD) Heritage Data Management System (HDMS) online environmental review tool query that provided records in published or gray literature, including citizen science data.
- Observations recorded by WestLand Resources (WestLand) during field reconnaissance on April 13, 2022, of the habitats adjacent to the Project Site area
- USFWS Information and Planning and Consultation (IPaC) database

3.5.1 Affected Environment

3.5.1.1 Vegetation

Federally listed threatened and endangered plant species identified by IPaC which may occur in the area are summarized in Table 3-1. The Project Site lacks suitable habitat for the species.

Table 3-1: Cochise County Federally Threatened and Endangered Vegetation Species

Common Name (Scientific Name)	Federal Status (USFWS)	Known Suitable Habitat	Potential to Occur
Wright's marsh thistle (*Cirsium wrightii*)	Threatened	This species is a wetland obligate which grows in saturated, often alkaline soils along streams, springs, seeps, and marshes (Keil 2006, Lichvar et al. 2016, USFWS 2010). Elevation: 3,450–7,850 feet (USFWS, 2010).	**None.** The Project Site lacks the appropriate wetland habitat. There are no AGFD HDMS occurrence records within 3 miles of the Project Site.
Arizona Eryngo *(Eryngium sparganophyllum)*	Endangered	An herbaceous flowering plant. This perennial occurs only in spring-fed aridland cienegas, or wetlands of the International Four Corners Region.	**None.** No aquatic habitat present

Source: U.S. Fish and Wildlife Service, IPAC report dated May 13, 2025(Appendix B)

Vegetation in the area of the Project Site is mapped as Semidesert Grassland subdivision (The Nature Conservancy, 2012). This subdivision consists of some shrubs and sometimes dense herbaceous layers, but typically bare ground or rock is visible. Common grass species include black grama (*Bouteloua eriopoda*), tobosa (*Pleuraphis mutica*), and curly mesquite (*Hilaria belangeri*). Prevalent shrub species include creosote bush (*Larrea tridentata*), velvet mesquite (*Prosopis velutina*), western honey mesquite (*Prosopis glandulosa var. torreyana*), tarbush (*Flourensia cernua*), turpentine bush (*Ericameria larcifolia*), desert ceanothus (*Ceanothus greggii*), and soaptree yucca (*Yucca elata*). The dominant vegetation observed during the site visit included soaptree yucca, velvet mesquite, burroweed (*Isocoma tenuisecta*), and black grama. Non-native flora observed during the site visit included salt cedar (*Tamarix species*), Lehmann's lovegrass (*Eragrostis lehmanniana*), and stinkgrass (*Eragrostis cilianensis*). According to the Arizona Department of Agriculture, none of these species are listed as noxious weeds.

3.5.1.2 Wildlife

In total, IPaC identified eight candidate, threatened, or endangered wildlife species that have the potential to occur in the area which are summarized in Table 3-2. IPaC and AGFD data also indicate that bald eagles (*Haliaeetus Leucocephalus)* and golden eagles (*Aquila Chrysaetos*) have the potential to occur in the general area. There is no designated critical habitat for any threatened or endangered species within or in the vicinity of the Project Site. No threatened or endangered wildlife species were observed during the site visit conducted in 2022.

Table 3-2: Cochise County Federal Status of Wildlife Species

Common Name (Scientific Name)	Federal Status (USFWS)	Known Suitable Habitat	Potential to Occur
Amphibians			
Chiricahua Leopard Frog *(Lithobates chiricahuensis)*	Threatened * Designated critical habitat	Breeds in perennial to semipermanent montane aquatic environments including cattle tanks, creeks, cienegas, pools, rivers, springs, lakes and reservoirs (USFWS, 2011). Larvae are obligate on aquatic habitats whereas adults are primarily aquatic but also utilize terrestrial habitats (USFWS 2012). May disperse from occupied habitat one mile overland, three miles along intermittent drainages, and five miles along permanent water courses, or some combination thereof (USFWS, 2012). Elevation: 3,200–8,890 feet (USFWS, 2012).	**None.** There is an AGFD HDMS occurrence record within 3 miles of the Project Site. However, the Project Site lacks appropriate aquatic habitat.
Birds			
Yellow-billed cuckoo *(Coccyzus americanus)* * Western Distinct Population Segment	Threatened * Designated critical habitat	In Arizona, most commonly found in lowland riparian woodlands where Fremont cottonwood, willow, velvet ash, Arizona walnut, mesquite, and tamarisk are dominant (USFWS, 2013b). Also utilizes drier woodlands including mesquite bosques, drainages in desert scrub and desert grassland with a tree component, and Madrean evergreen woodlands in perennial, intermittent or ephemeral drainages (USFWS, 2020b). This species typically occurs at elevations less than 6,600 feet amsl (AGFD 2011b). Western yellow-billed cuckoos may migrate along riparian corridors and surrounding upland vegetation (Hughes, 2020). Elevation: Typically, below 6,600 feet (AGFD, 2011b).	**None.** The Project Site lacks the appropriate lowland riparian woodlands, xeroriparian habitat, and Madrean evergreen woodlands and is outside designated critical habitat for this species. There are no AGFD HDMS occurrence records within 3 miles of the Project Site.
Northern aplomado falcon (*Falco femoralis septentrionalis*)	*Endangered* ** No critical habitat; nonessential experimental population*	Within the U.S., this species uses coastal prairies, desert grasslands, oak woodlands, and riparian gallery forest (Keddy-Hector, Pyle, and Pattern 2017). This species has historically occurred in relatively flat and open habitats (USFWS 2014e). Builds nests in large trees, cliffs, utility poles, artificial platforms or on the ground when elevated nest sites are not available (Keddy-Hector, Pyle, and Pattern 2017). This species is expected to use similar habitat year-round (Keddy-Hector, Pyle, and Pattern 2017). Elevation: In southwestern U.S., most common from	**None.** The Project Site is outside the known geographic range of this species. There are no AGFD HDMS occurrence records within 3 miles of the Project Site.

Common Name (Scientific Name)	Federal Status (USFWS)	Known Suitable Habitat	Potential to Occur
Bald Eagle[1] (*Haliaeetus Leucocephalus*)	Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c)	Breeding is concentrated in coastal areas, along rivers, lakes or reservoirs. Typically breeds in forested areas with edge habitat within 1.3 miles of aquatic habitats suitable for foraging. Prefers areas of shallow water and shorelines for fishing and hunting wide variety of waterfowl, and small aquatic and terrestrial mammals. Fish are preferred prey, but carrion is used extensively whenever encountered. Nests away from human disturbance in large trees and rarely on cliff ledges or on the ground when trees are absent. Winters primarily in coastal areas or along major river systems with adequate prey availability and large trees for perching (Buehler 2020). Elevation: In Arizona, 460–7,930 feet (AGFD 2011a)	**None.** The Project Site lacks appropriate aquatic habitats within 1.3 miles and there are no AGFD HDMS occurrence records in the vicinity. There are no AGFD HDMS occurrence records within 3 miles of the Project Site.
Golden Eagle[1] (*Aquila Chrysaetos*)	Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c)	Range-wide, breeds in a wide variety of open habitats, with nests typically on cliffs, and avoids heavily forested areas (Katzner et al. 2020). In Arizona, prefers pinyon-juniper woodlands and Sonoran desertscrub (Driscoll 2005). Constructs large nests on cliff ledges, rock outcrops, tall trees or, rarely, transmission towers (Driscoll 2005). Golden eagles are known to forage within 4.4 miles of the nest (Tesky 1994), generally in open habitats where prey is available (Katzner et al. 2020). Primarily feeds on small mammals (greater than 80% of prey items) but also consumes birds, reptiles and fish (Katzner et al. 2020). In the western U.S. average territory size ranges from 22 to 55 square miles (AGFD 2002). Elevation: In Arizona, typically breeds between 1,300–9,000 feet (Driscoll 2005).	**Unlikely.** The Project Site lacks preferred nesting habitat but may be used infrequently as foraging habitat. There are no AGFD HDMS occurrence records within 3 miles of the Project Site.
Insects			
Monarch butterfly (*Danaus plexippus*)	Candidate Positive 90-day finding[2] (USFWS 2014a).	Monarch caterpillars feed exclusively on plants in the subfamily Asclepiadoideae (milkweed) and adults forage for nectar on a wide variety of flowers. This species can be found wherever milkweed occurs. Overwintering populations use the leaves, branches, and trunks of large trees within forested groves. In California, both native tree species and eucalyptus trees are utilized (Jepsen et al. 2015). Elevation: In Arizona, found at all elevations (Morris, Kline, and Morris 2015).	**Unlikely.** The Project Site lacks appropriate milkweed habitat typically associated with breeding but supports some foraging resources that may be used during migration. There are no AGFD HDMS occurrence records within 3 miles of the Project Site Area.
Mammals			

Common Name (Scientific Name)	Federal Status (USFWS)	Known Suitable Habitat	Potential to Occur
Jaguar (*Panthera onca*)	Threatened * Designated critical habitat	Range wide this species uses wide variety of habitat types. Jaguars use lowland wet vegetative communities, including marshy savanna and tropical rainforest. This species is also found in arid regions where it is found in tropical dry forest, thornscrub, desertscrub, chaparral, semi-desert grassland, Madrean evergreen woodland, deciduous forest, and conifer forest (USFWS, 2018). Elevation: This species has been recorded from as high as 9,186 feet in the northern extent of its range (USFWS, 2018).	**None.** The Project Site is outside the known geographic range of this species and outside designated critical habitat. There are no AGFD HDMS occurrence records within 3 miles of the Project Site.
Fish			
Gila Topminnow (incl. Yaqui) (*Poeciliopsis occidentalis*)	Endangered	Topminnow prefer shallow, warm, fairly quiet waters in ponds, cienegas, tanks, pools, springs, small streams and the margins of larger streams. Dense mats of algae and debris along the margins of the habitats are an important component for cover and foraging.	**None.** No aquatic habitat present.
Plants			
Arizona Eryngo *(Eryngium sparganophyllum)*	Endangered	An herbaceous flowering plant. This perennial occurs only in spring-fed aridland cienegas, or wetlands of the International Four Corners Region.	**None.** No aquatic habitat present
Wright's Marsh Thistle *(Cirsium wrightii)*	Threatened	A member of the sunflower family, produces a 3 to 8 foot single stalk covered with succulent leaves. Depending on environmental conditions, it can exhibit life history characteristics of a biennial plant or a weak monocarpic perennial. This plant can be found in AZ, NM, TX, and Mexico in wet alkaline soils in the spring.	No aquatic habitat present

Source: U.S. Fish and Wildlife Service, IPAC report dated May 13, 2025 (Appendix B)
[1] BGEPA Listed Species.
[2] A positive 90-day finding indicates that the USFWS has found that a petition for listing presents substantial scientific or commercial information indicating that the petitioned action may be warranted. The agency then begins an in-depth review to determine if a certain status is warranted.

Other wildlife observed during the site visit included whiptail lizard (*Aspidoscelis species*), black-tailed jackrabbit (*Lepus californicus*), white-throated woodrat (*Neotoma albigula*), and desert cottontail (*Sylvilagus audubonii*). Avian species observed included cactus wren (*Campylorhynchus brunneicapillus*), verdin (*Auriparus flaviceps*), house finch (*Haemorhous mexicanus*), and mourning dove (*Zenaida macroura*).

3.5.2 Environmental Consequences

3.5.2.1 Proposed Action Alternative

3.5.2.1.1 Vegetation

Since the Proposed Action is located on a site that has been previously cleared and disturbed with ongoing industrial power activities, it is not a suitable habitat for vegetation to grow and flourish. It is anticipated that minimal on-site vegetation clearing will be undertaken. Therefore, the amount or type of vegetation onsite is not expected to change due to the Proposed Action. It is expected that construction-related disturbances from the Proposed Action will not provide an opportunity for the establishment of invasive species as the area will not be conducive to the growth of vegetation.

3.5.2.1.2 Wildlife

The BE did not identify suitable habitat for any listed species on the Project Site. Therefore, the Proposed Action is anticipated to have no effect on ESA-listed wildlife species. The BE also determined that the bald eagle has no potential to occur on the Project Site and golden eagle is unlikely to occur. Therefore, the Proposed Action is anticipated to have no effect on bald or golden eagles.

The Proposed Action would have no short- or long-term impacts to migratory birds as there is no suitable habitat on the Project Site. Noise and human activity that are associated with construction may result in short-term, temporary displacement impacts to wildlife species foraging in the area. Ongoing operations will likely not have greater impacts to surrounding species as compared to the operations of the existing Project Site.

Construction of this Proposed Action will follow standard BMPs.

3.5.2.2 No Action Alternative

The No Action Alternative would have no short- or long-term impacts to biological resources at or in the vicinity of the Project Site because no construction or operation would occur.

3.5.3 Mitigation

3.5.3.1 Vegetation

As mentioned previously, the Project Site is a highly disturbed are and is not conducive for any plant growth. Construction and operation of the Proposed Action will have minimal impacts to on-site vegetation and will not lead to the introduction of invasive species, no mitigation measures will be necessary.

3.5.3.2 Wildlife

Construction and operation of the Proposed Action will have no impacts on listed threatened or endangered species, migratory birds or eagles. AEPCO has an avian protection plan in addition to state and federal permits for wildlife that will be followed during construction and operation of the Facility to minimize impacts to threatened or endangered species. No onsite impacts are anticipated. Therefore, no specific mitigation measures are necessary.

3.6 Historic and Cultural Resources

3.6.1 Affected Environment

In accordance with Section 106 of the National Historic Preservation Act (54 USC 306108) federal agencies are required to consider the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings. If there is more than one federal agency, a lead federal agency may be designated to act on behalf of the federal agencies. The federal agency or lead federal agency is responsible for coordination with consulting parties which may include the Arizona State Historic Preservation Office (AZSHPO), Tribal Historic Preservation Officers (THPO), Indian Tribes, the public, the ACHP, local governments, and applicants.

RUS defined the area of potential effect (APE) for the Proposed Action as an area that includes all Project Site construction and excavation activity required to construct, modify, improve, or maintain any facilities; any right-of-way or easement areas necessary for the construction, operation, and maintenance of the Proposed Action; all areas used for excavation of borrow material and habitat creation; and all construction staging areas, access routes, utilities, spoils areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered "direct" regardless of its specific type (e.g., whether it is visual, physical, auditory, etc.). "Indirect" effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

Based on this definition, the APE for the Proposed Action consists of the 7.65-acre ground disturbance footprint for the two proposed gas turbines and associated equipment plus a 2-mile buffer. The 7.65 acres are the portion of the APE within which physical impacts are possible. The entire APE is defined as these 7.65-acres plus a 2-mile buffer within which other direct impacts (such as visual impacts) may be possible to historic properties. The 2-mile buffer was added to the APE based on a geographic information system (GIS) viewshed analysis which demonstrated that changes to the facility may be visible to the human eye from much of the surrounding landscape. Beyond 2 miles, the changes are unlikely to be discernible from the existing facility infrastructure. Auditory and other environmental impacts to historic properties are also not likely beyond this distance. This definition was submitted to the AZSHPO and Indian tribes in the agency coordination letters sent July 7, 2023.

Cultural resources surveys were conducted in July 2022 and January 2023 covering a total of 49 acres including the 7.65-acre ground disturbance footprint.

The survey area is located within the Basin and Range physiographic province in southeastern Arizona within the Sulphur Springs Valley. The valley trends north and south and is framed by the Winchester, Dragoon, Little Dragoon, and Mule mountains to the west and the Chiricahua, Dos Cabeza, and Pinaleño mountains to the east. The Willcox Playa, a mostly dry alkali lakebed and the former location of paleo-Lake Cochise is located in the north-central portion of the valley. The survey area is situated in the western portion of the valley on the distal bajada emanating northeastward from the Dragoon Mountains, about 0.65 miles east of the southwestern shore of the Playa. Big Draw flows northeastward towards the Willcox Playa about 1 mile north of the survey area. Average elevation in the Project Site area is 4,195 feet above mean sea level (amsl).

The northwestern portion of the survey area has been cleared and mechanically graded and is currently in use as a materials storage and staging area for the AGS. While generally undeveloped, the remainder of the survey area has been affected by some modern impacts. Access roads and fences ring the survey area parcel, and a transmission line and associated dirt access road cross through the eastern portion of the parcel. The Mesquite Substation is located just southeast of the survey area. Modern food and beverage trash and industrial trash is scattered throughout the area.

3.6.2 Environmental Consequences

The following sections summarize potential environmental consequences of the proposed Action Alternatives and No Action Alternative related to historic and cultural resources.

3.6.2.1 Proposed Action Alternative

In accordance with Section 106 of the National Historic Preservation Act (54 USC 306108), tribal consultation letters were sent on July 7, 2023, to the Indian tribes listed below in order to solicit feedback on the Proposed Action (Appendix D). The AZSHPO concurred with the RUS's finding of no adverse effect. Per the reports, and as summarized by the AZSHPO, there were 15 cultural resources identified within the APE, including two sites that intersect the construction footprint for the Project Site. These two sites were recommended eligible for inclusion in the NRHP under Criterion (d) according to WestLand. Additionally, the two sites will be avoided as they are outside of the Proposed Action APE. Additionally, all Section 106 reports and correspondence are on file at RUS.

The reports and findings were presented to the following tribes for concurrence:

- Fort Sill Apache Tribe of Oklahoma
- Hopi Tribe of Arizona
- Mescalero Apache Tribe of the Mescalero Reservation, New Mexico
- San Carlos Apache Tribe of the San Carlos Reservation, Arizona
- Tohono O'odham Nation of Arizona
- White Mountain Apache Tribe of the Fort Apache Reservation, Arizona
- Ak-Chin Indian Community of the Maricopa Indian Reservation, Arizona
- Gila River Indian River Community of the Gila River Indian Reservation, Arizona
- Pascua Yaqui Tribe of Arizona
- Salt River Pima-Maricopa Indian Community of the Salt River Reservation, Arizona
- Tonto Apache Tribe, Arizona
- Yavapai-Apache Nation, Arizona
- Pueblo of Zuni, New Mexico

The tribes that confirmed receipt of Section 106 consultation requests included: Fort Sill Apache Tribe of Oklahoma; Mescalero Apache Tribe of the Mescalero Reservation, New Mexico; San Carlos Apache Tribe of the San Carlos Reservation, Arizona; Tohono O'odham Nation of Arizona; White Mountain Apache Tribe of the Fort Apache Reservation, Arizona; Ak-Chin Indian Community of the Maricopa Indian Reservation, Arizona; Gila River Indian Community of the Gila River Indian Reservation, Arizona; Pascua Yaqui Tribe of Arizona; Salt River Pima-Maricopa Indian Community of the Salt River Reservation, Arizona; Tonto Apache Tribe, Arizona; Yavapai-Apache Tribe, Arizona; and the AZSHPO. The responding Indian tribes concurred that the Proposed Action did not pose any adverse effects to known cultural resources. The two remaining Tribes did not respond within the 30-day comment period. Therefore, RUS has determined construction and operation of the Proposed Action are expected to have no adverse effect on any historic or cultural properties. See Chapter 6 and Appendix D for correspondence with the tribes and AZSHPO.

Construction and operation of the Proposed Action will have no impact on any historic or cultural properties.

3.6.2.2 No Action Alternative

The No Action Alternative would have no short- or long-term impacts to historic and cultural resources at or in the vicinity of the Project Site because no construction or operation would occur.

3.6.3 Mitigation

All ground-disturbing activities have the potential to unearth human remains. On private lands in the State of Arizona, such discoveries must be treated in accordance with Arizona Revised Statute §41-865. In the event of post-review discovery of cultural material during construction, RUS will conduct further consultation with the AZSHPO and interested Indian tribes.

As construction and operation of the Proposed Action will have no impacts on historic or cultural properties, no mitigation measures are necessary.

3.7 Aesthetics

3.7.1 Affected Environment

The existing Project Site is an operating electric generation plant located in the Sulphur Springs Valley and is surrounded by desert shrubland. There is sparsely located farmland to the south and west, and the Willcox Playa to the northeast across U.S. Highway 191. An AEPCO-established wildlife viewing area, which is flooded annually, lies to the east and northeast. The topography is relatively flat, and predominantly covered in desert shrubs. Man-made features that exist in the area include the existing AGS, isolated residential areas, agricultural land, roadways, and overhead transmission lines. No designated scenic overlooks or areas occur within the Proposed Action immediate vicinity.

3.7.2 Environmental Consequences

3.7.2.1 Proposed Action Alternative

The local environment will not be altered beyond the previous disturbances by the construction and operation of the Proposed Action. Construction of the Proposed Action will change the visual characteristics of the Project Site to include the addition of GT5&GT6 facility/building, two 85-foot stacks, a 355,000-gallon water tank, and three new transmission structures and associated transmission line. During construction, temporary visual features will likely include cranes and other heavy equipment and activity consistent with building a major industrial facility. While there will be additional visual contrast from the new Facility, the overall nature of the Proposed Action will remain consistent with the existing views in the area.

3.7.2.2 No Action Alternative

The No Action Alternative would have no short- or long-term impacts to aesthetics at or in the vicinity of the Project Site because no construction would occur.

3.7.3 Mitigation

While construction will have temporary visual impacts, no long-term aesthetic changes will occur as a result of operations. Therefore, no mitigation is planned.

3.8 Air Quality

The Clean Air Act (CAA) and its amendments mandate requirements for managing air quality across the nation. The CAA established the National Ambient Air Quality Standards (NAAQS) and designates areas based on achievement of these standards. The CAA also established National Emissions Standards for Hazardous Air Pollutants (NESHAP) for hazardous metals like mercury (Hg) or cadmium (Cd) and organic compounds like formaldehyde. These pollutants are referred to as hazardous air pollutants (HAPs). Under Section 176(c) of the CAA, federal agencies must demonstrate that their actions conform to a State Implementation Plan for Air

Quality (SIP) (or the Tribal or Federal equivalent of a SIP). The CAA also requires emission limits to be controlled and regulated through permit requirements set by states or Tribes.

CAA permitting in Arizona is the shared responsibility of the state, three county agencies, and EPA Region 9 (USEPA, 2024). The Arizona Department of Environmental Quality (ADEQ) Air Quality Division is responsible for enforcing the NAAQS for criteria pollutants, the NESHAP for HAPs, and permitting stationary sources of air pollution at the state level. Title 18 Chapter 2 of the Arizona Administrative Code (A.A.C.) provides the official rules for air permits in the State of Arizona. Stationary sources that meet certain conditions require a permit before constructing, changing, replacing or operating any equipment or process that may cause air pollution. This includes equipment designed to reduce air pollution. A "major source" of air pollution is defined in the A.A.C Title 18, Chapter 2, Article 101(64) as any source that has the potential to emit 100 tons per year of any criteria air pollution. A source is also considered major if it has the potential to emit 10 tons per year of any single HAP or 25 tons per year of any combination of HAPs. Major sources require a Class I permit under the A.A.C.

The federal government established the NAAQS to protect public health (including the sensitive populations such as asthmatics and the elderly), safety, and welfare from known or anticipated effects of eight air pollutants: sulfur dioxide (SO_2), particulate matter 10 microns or less in diameter (PM_{10}), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), ozone, lead (Pb) and carbon dioxide ("CO_2"). The Significant Impact Level (SIL) and NAAQS thresholds are listed in Table 3-3, below.

Table 3-3: NAAQS and SIL Thresholds

Pollutant[a]	Averaging Period	NAAQS[b] ($\mu g/m^3$)[c]	SIL[d,e] ($\mu g/m^3$)
SO_2	3-hour	1,300	25
	1-hour	196.5	7.8
PM_{10}	24-hour	150	5
$PM_{2.5}$	Annual	12	0.2
	24-hour	35	1.2
CO	8-hour	10,000	500
	1-hour	40,000	2,000
NO_2	Annual	100	1
	1-hour	188	7.5
Lead	Rolling 3-month average	0.15	--

Source: ecfr.gov (40 CFR Part 51.165) (b)(2)
(a) SO_2 = sulfur dioxide, PM_{10} = particulate matter 10 microns or less in diameter, $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter, CO = carbon monoxide, NO_2 = nitrogen dioxide
(b) NAAQS = National Ambient Air Quality Standards
(c) $\mu g/m^3$ = micrograms per cubic meter
(d) SIL = Significant Impact Level
(e) SIL values listed are for Class II areas

The NESHAP are contained in 40 CFR Part 63. NESHAP are emissions standards set by the EPA for specific source categories. The NESHAP requires the maximum degree of emission reduction of certain HAP emissions that the EPA determines to be achievable, which is known as the maximum achievable control technology (MACT) standards.

3.8.1 Affected Environment

The Project Site is in the Northern Hemisphere's desert climate zone. Features of this zone include long hot summers and relatively mild winters. Winters are relatively mild with low temperatures typically around freezing with occasional, brief very cold temperatures and a few wintry precipitation events. Average annual rainfall for the Project Site is 13.2 in. Rainfall events are dominated by afternoon and evening thunderstorms in summer, rain associated with cold fronts in winter, and rainfall associated with tropical storms in the fall. ADEQ maintains air quality monitoring stations in Cochise County: 1) ozone at the entrance of the Chiricahua National Monument, 2) PM_{10} in Douglas, and 3) PM_{10} in Paul Spur.

Cochise County Attainment Status

The Project Site is in an area of Cochise County Arizona that is in attainment for criteria pollutants regulated by the CAA, meaning that the area meets federal clean air standards.

Existing AGS Operation

The existing AGS consists of multiple generation units. The AGS operates under Class I Permit Number 69734. Currently, the facility is a major source of HAPs (more than 25 tons per year of total HAPs and less than 10 tons per year of any single HAP) and will remain a major source after the Proposed Action. Therefore, the facility is subject to maximum achievable control technology (MACT) standard Subpart YYYY: National Emission Standards for HAPS for Stationary Combustion Turbines.

The existing air permit contains emissions limits, recordkeeping, and reporting criteria for current equipment on site. AGS is annually inspected by the ADEQ to determine compliance with all conditions of the permit. AEPCO operates within the permit limitations and was recognized by ADEQ in 2023 under the Voluntary Environmental Stewardship Program for demonstrating strong environmental compliance for the past three years at Apache Generating Station.

3.8.2 Environmental Consequences

The following sections summarize potential environmental consequences of the proposed Action Alternatives and No Action Alternative related to air quality. The following estimates are a worst-case scenario and likely extremely high in comparison to what actual emissions will be.

3.8.2.1 Proposed Action Alternative

The following sections provide potential environmental consequences of construction and operation of the Proposed Action related to air quality.

Construction

Air emissions from the construction of the Proposed Action will occur due to 1) vehicular emissions from increased traffic from the construction work force and construction deliveries, 2) internal combustion engine emissions from construction equipment, and 3) fugitive dust (PM_{10} and $PM_{2.5}$) emissions from excavating, site preparation, and storage piles. These emissions from construction activities can be difficult to quantify, as they are dependent on the number and type of construction vehicles in operation at any given point during construction, the number of construction workers driving to and from the Project Site, and the number and type of construction activities occurring.

Generally, air emissions from construction are low and temporary in nature, fall off rapidly with distance from the Project Site, and will not result in any long-term impacts.

Operation

Two refurbished GE ProEnergy Services LM6000PC SCGTs with a maximum heat input of 418.5 million British thermal units per hour each, higher heating value will be installed as part of the Proposed Action. The SCGTs will be fired solely on natural gas and operation will be restricted to complying with the New Source Performance Standard (NSPS) Subpart TTTT capacity limitations. Additionally, it is expected that the turbines will have approximately 730 total combined startup/shutdown events per year. The combustion turbines will install Continuous Emission Monitoring Systems (CEMS) to monitor emissions of NO_x. In addition, air impacts from an operating pipeline may occur in the form of fugitive emissions from pipe connections.

The combustion turbines will each have a selective catalytic reduction (SCR) system to control emissions of NO_x and an oxidation catalyst to control emissions of CO and VOC emissions. To minimize the emissions of SO_2 and $PM/PM_{10}/PM_{2.5}$, the SCCT emissions will be controlled through the use of pipeline quality natural gas and good combustion practices as specified by the manufacturer such as maintaining proper temperature and pressure, fuel to air ratios, excess oxygen, etc. to avoid incomplete combustion byproducts. CO_2 from GT5&GT6 will be minimized in comparison to other fuel types and less efficient technologies by using natural gas as the only fuel in combination with good combustion practices.

The potential emissions from the SCGTs were analyzed at 100%, 80% and 50% load. The overall emissions were compared to the Prevention of Significant Deterioration (PSD) Significant Emission Rate Thresholds (SER). If a pollutant exceeds the SER, then that pollutant will trigger the need for PSD review for that pollutant, which includes air dispersion modeling, Best Available Control Technology (BACT) analysis, and other permitting tasks.

The worst-case future emissions of each pollutant for the Proposed Action are listed Table 3-4. Because the potential emissions of criteria pollutants are below the respective SER for PSD, the Proposed Action does not trigger the PSD permitting process. Accordingly, no BACT analysis was required. However, as the potential emissions for $PM/PM_{10}/PM_{2.5}$ are above the permitting exemption threshold and the turbines are being installed at an existing site, the Proposed Action does require a permit revision of the Facility's Class I permit, as required by A.A.C. R18-2-304 and R18-2-334(B), prior to commencing construction of the Proposed Action. AEPCO has elected to meet the requirement of R18-2-334(C) with an ambient air quality assessment of $PM_{2.5}$ emissions. Air emissions modeling was submitted with the air permit application in summer 2023 to demonstrate compliance with the PM_{10} and $PM_{2.5}$ NAAQS. AEPCO received a completeness determination of its application from ADEQ on July 26, 2023 (Appendix C). A draft air permit was issued for public comment on February 21, 2024 with a virtual hearing held on March 21, 2024. The final draft permit was issued by ADEQ on June 5, 2024. No construction can or will occur until the construction air permit is received.

Table 3-4: Total Proposed Action Emission Summary

Pollutant[a]	Potential Proposed Action Emissions (Tons per Year [TPY])[b]	PSD Significant Emission Rate Thresholds (TPY)	PSD Review Applicable (Yes, No)	Permitting Exemption Threshold (TPY)	Minor New Source Review Analysis Applicable (Yes, No)
NO_X	19.9	40	No	20	No
CO	18.2	100	No	50	No
SO_2	1.8	40	No	20	No
VOC	4.1	40	No	20	No
$PM/PM_{10}{}^c/PM_{2.5}{}^c$	9.9	25/15/10	No	NA/7.5/5	NA/Yes/Yes

(a) NOx = nitrogen oxides; CO = carbon monoxide; SO2 = sulfur dioxide; VOC = volatile organic compounds; PM= total particulate matter; PM_{10} = particulate matter less than 10 microns in diameter, $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; CO_2e = carbon dioxide equivalent
(b) Numbers in bold indicate the Significant Emission Rate significance level is exceeded.
(c) Filterable plus condensable
(d) The Proposed Action does not trigger PSD for any other pollutant; therefore, the CO_2e PSD threshold does not apply per Utility Air Regulatory Group vs EPA (Case#12-1146, June 23, 2014, before the Supreme Court of the United States Court).

Located at a major source of HAPs and as new lean premix gas-fired combustion turbines, the turbines would be required to limit the concentration of formaldehyde to 91 parts per billion, dry volume (ppbvd) or less at 15% O_2 except during turbine startup (Table 1 to Subpart YYYY of Part 63). Per § 63.6100 and Table 2 to Subpart YYYY of Part 63, since the combustion turbines would utilize an oxidation catalyst to meet the formaldehyde limit, they would need to maintain the 4-hour rolling average of the catalyst inlet temperature within the range suggested by the catalyst manufacturer and are not required to use the inlet temperature data during engine startup in the calculation if subject to the NESHAP. Additionally, initial and annual performance tests would be required to confirm formaldehyde emissions from the turbines (§ 63.6120 and Table 3).

The acid rain provisions of the CAA Amendments are specified in 40 CFR Part 72 through 78. The requirements are applicable to utilities and other facilities that combust fossil fuel (mainly coal) and generate electricity for wholesale or retail sale. Often referred to as the Acid Rain Program, the program establishes the reduction of emissions of acid rain forming pollutants, specifically, SO_2 and NO_x emissions. AEPCO is currently subject to the Acid Rain Program for the natural gas-fired combustion turbines located at the facility.

The Proposed Action will be subject to the Acid Rain Program because the combustion turbines are considered a utility unit under the program definition and do not meet the exemptions listed in 40 CFR 72.6(b). The Acid Rain Program requires that the Proposed Action hold allowances for SO2 per 40 CFR 72.9(c)(1) and conduct recordkeeping and reporting per 72.9(f). The continuous emission monitoring requirements of 40 CFR Part 75 establish requirements for the monitoring, recordkeeping, and reporting of SO_2, NO_x, and CO_2 per 40 CFR Part 75.1(a).

3.8.2.2 No Action Alternative

The No Action Alternative would have no short- or long-term impacts to air quality at or in the vicinity of the Project Site because no construction or operation would occur.

3.8.3 Mitigation

The air emissions from construction activities are expected to mainly impact the Project Site, be minimal outside of the property line, and temporary in nature. The majority of the construction emissions will be from fugitive sources and construction equipment. Fugitive dust control measures will include, but are not limited to, the following:

- Applications of water;
- Paving or watering of roadways after completion of grading;
- Reduction in speed on unpaved roadways to 15 miles per hour or less;

For operations, the air emission calculations have determined that the Proposed Action will not be a major PSD source but will require a permit revision of the Facility's Class I permit. All equipment will meet all applicable NSPS and NESHAP limits. The Proposed Action will include an SCR system to control NO_x emissions, and an oxidation catalyst to control emissions of CO and VOCs. Good combustion practices as specified by the manufacturer such as maintaining proper temperature and pressure, fuel to air ratios, excess oxygen, etc. to avoid incomplete combustion byproducts and the use of pipeline quality natural gas will mitigate emissions of SO_2, PM_{10} and $PM_{2.5}$.

3.9 Socioeconomic and Community Resources

3.9.1 Affected Environment

To identify general socioeconomic patterns in the Proposed Action area, various socioeconomic characteristics have been reviewed, including population growth trends, employment data, and economic indicators.

3.9.1.1 Population Growth Trends

The Project Site is in Cochise County, Arizona, a predominantly rural county. According to the U.S. Census Bureau (USCB) 2010 and 2020 Census data (USCB, 2019 and USCB, 2021) that has experienced a slow decline in population since 2010. The surrounding counties have also experienced a similar decline in populations. Table 3-5 presents the population trends near the Project Site.

Table 3-5: Population Trends

	Arizona	Cochise County
2010 Census (population)	6,392,017	131,346
2020 Census (population)	7,151,502	125,447
% Change 2020-2021	1.7%	0.5%
2021 Estimate (population)	7,276,316	126,050

Source: U.S. Census Bureau 2010 Census and 2020 Census (USCB, 2019 and USCB, 2021)

3.9.1.2 Employment and Income

In 2020, Cochise County's resident labor force, defined as the population aged 16 and over, was 101,974 individuals, or 82 percent of the total population (125,447); 44,219 of these workers were employed, resulting in an annual unemployment rate of (for the civilian labor force) of 6.8 percent (USCB, 2020b). Major industries in Cochise County include educational service, health care, and social services. Table 3-6 provides the employment characteristics for the state, county, and local community.

Table 3-6: 2020 Employment Data

	Arizona	Cochise County	Census Tract 2.03	Census Block Group 1
Population 16 years and over	5,720,956	101,974	2,365	N/A
In labor force	3,436,482	51,319	1,018	N/A
Employed (civilian labor force)	3,215,843	44,219	949	N/A
Unemployed (civilian labor force)	199,358	3,211	69	N/A
Armed forces	21,281	3,889	0	N/A
Not in labor force	2,284,474	50,655	1,347	N/A
Percent unemployed (civilian labor force)	5.8%	6.8%	6.8%	N/A
Top occupation	Management, Business, Science, and Arts	Management, Business, Science, and Arts	Management, Business, Science, and Arts	N/A
Top industry	Educational Services, Healthcare, and Social Assistance	Educational Services, Healthcare, and Social Assistance	Agriculture, Forestry, Fishing and Hunting, and Mining	N/A

Source: U.S. Census Bureau (USCB, 2020b)

The unemployment rate and poverty rate in Cochise County and the census tract are slightly higher than that of Arizona as a whole.

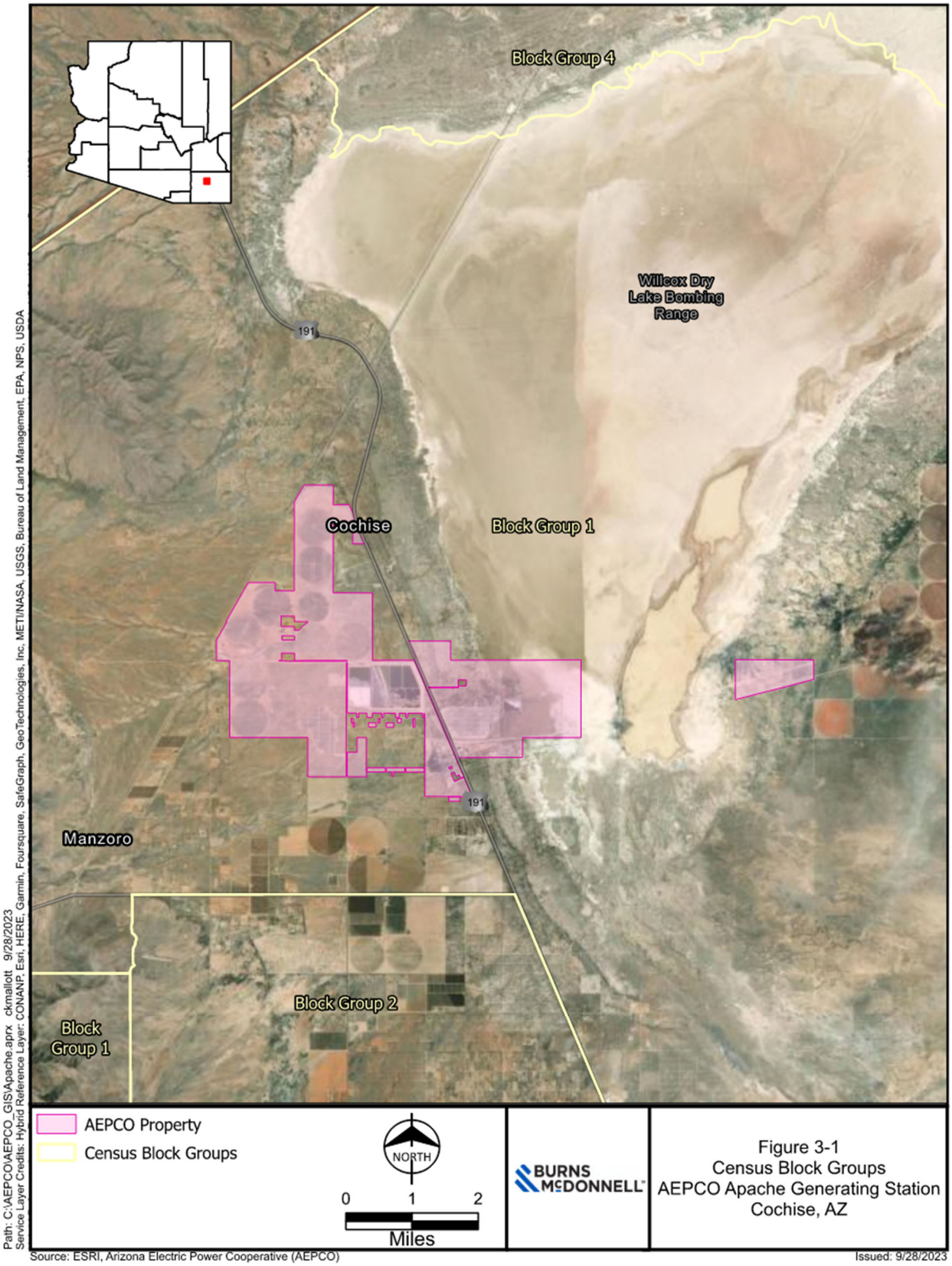
Block Group 1 of Census Tract 2.03 in eastern central Cochise County has 738 residents that live within the Block Group (Figure 3-1). Census Tract 2.03 has higher unemployment rates and poverty rates than the state; however, it has the same unemployment rates as Cochise County. No income or employment data exists for Block Group 1. Table 3-7 shows income and poverty data for the state, county, and local community.

Table 3-7: 2020 Income and Poverty

	Arizona	Cochise County	Census Tract 2.03	Census Block Group 1
Median household income in 2020 dollars	$61,529	$51,505	$46,335	N/A
Families and people whose income in the past 12 months is below the poverty level	10.1%	10.9%	6.1%	N/A

Source: U.S. Census Bureau (USCB, 2020c and USCB, 2020d)

Figure 3-1: Census Block Groups



3.9.1.3 Housing

Cochise County has 61,380 housings units with 50,917 occupied housing units and 10,463 vacant housing units. Sixty-nine percent of the occupied housing units are owner-occupied. The median value of owner-occupied housing in Cochise County was $150,100, versus the state-wide median value of owner-occupied housing of $242,000.

3.9.1.4 Area Public Service and Utilities

Educational Facilities

The closest school to the Project Site is Cochise Elementary located approximately 4.1 miles north-northwest of the Project Site within the unincorporated community of Cochise. The next closest schools are Pearce Elementary approximately 11.4 miles to the southeast, and the schools of Willcox Elementary, Willcox Middle, and Willcox High School approximately 14 miles to the northeast of the Project Site.

Medical Facilities

The closest hospital to the Project Site is Northern Cochise Community Hospital in Willcox, Arizona, about 14.6 miles from the Project Site. Northern Cochise Community Hospital has a state-certified Level IV trauma emergency room operating 24 hours a day. The hospital is also a stroke ready center and Pediatric Prepared Emergency Care Certified facility.

Fire Protection

The closest fire department to the Project Site is located approximately 5.5 miles south of the Project Site located in Sunsites/Pearce and is made up of 29 mostly volunteers split between two fire stations: one in Pearce and one in Cochise. Willcox Fire Department is the next closest fire department located approximately 18 miles to the northeast of the Project Site and is served by 16 firefighters. In addition, AEPCO maintains its own certified fire brigade and fire truck at the Project Site.

Police Protection

Because the Project Site lies within a rural area, it is served by the Cochise County Sheriff's Department, located in Bisbee, Arizona, approximately 60 miles to the south of the Project Site. The City of Willcox does have a full-time police department.

The existing Project Site has contract security officers and controlled access points into and out of the Project Site. The Facility will continue to maintain these secure access points during and after construction of the Proposed Action.

Potable Water, Sanitary Sewer, Electricity, Gas, and Solid Waste

The Project Site is in a rural area located outside of any incorporated community. Because of this, AGS has its own dedicated wells for water and waste system (i.e., septic). Electricity to the Project Site is supplied by the electrical grid and member cooperative, Sulphur Springs Valley Electric Cooperative. Gas is supplied to the Project Site by EPNG.

Recreation and Open Space

Public recreational land does exist close to the Project Site. The Willcox Playa, which is located approximately one mile to the northeast, includes camping, hunting, hiking, and wildlife viewing opportunities.

3.9.2 Environmental Consequences

The following sections summarize potential environmental consequences of the Proposed Action Alternatives and No Action Alternative related to the local population.

3.9.2.1 Proposed Action Alternative

The current capital cost estimate for construction of the improvements is approximately $77 million. Some of this cost could be distributed locally due to construction activities temporarily stimulating the local community. Additional jobs in the construction trades such as pipefitters, electricians, insulators, construction management personnel, laborers, and carpenters may be available. Peak construction labor force for the Proposed Action is expected to be approximately 60 personnel. The length of employment will range from a few weeks to several months, depending on skill or specialty.

A small labor force of 20-50 people will live in RV parks or hotels nearby for up to a 13-month construction period as the construction of the Proposed Action will require specialized expertise and workforce. A small number of local construction workers may be utilized for more general activities. Gas stations, convenience stores, and restaurants in communities such as Willcox could experience increases in business during the construction period in response to activity from construction workers.

The construction workforce required for the Proposed Action may have an impact on the availability of temporary housing. Construction workers may seek temporary housing for varying time periods based on their individual roles in the Proposed Action. Cochise County has a very limited supply of temporary housing units available for use by construction workers relocating to the area on a temporary basis. Short-term housing is likely to experience the largest increase in demand due to the transient nature of construction workers and their limited duration in the Proposed Action area. Generally, housing options for construction crews will consist of area hotels or RV parks.

The Project Site will be located in a rural area with no nearby neighborhoods and relatively few homes and businesses within close proximity to the Project Site. Adverse human impacts as a result of the Proposed Action will include temporary additional noise and traffic impacts during construction, temporary visual impacts during construction, and minor changes in long-term visual impacts during operation.

As this is an existing facility and no substantial changes in impacts to the community are anticipated as a result of the Proposed Action. A small number of local construction workers may be utilized for more general activities. Gas stations, convenience stores, and restaurants in communities such as Willcox could experience increases in business during the construction period in response to activity from construction workers.

No short-term or long-term impacts are expected as the workforce will be small and temporary.

3.9.2.2 No Action Alternative

The No Action Alternative would have no short- or long-term impacts on the local population at or in the vicinity of the Project Site because no construction or operation would occur.

3.9.3 Mitigation

As this is an existing facility and no substantial changes in impacts to the community are anticipated as a result of the Proposed Action. Therefore, no mitigation measures are required for socioeconomic impacts.

3.10 Noise

3.10.1 Affected Environment

The Project Site is in a rural area south of the unincorporated community of Cochise, Arizona. Surrounding the Project Site is predominantly desert shrubland and intermittent agricultural fields. There are three residences within 0.5 mile of the proposed construction activity and Project Site. Primary noise sources in the area include the existing facility, nearby roads, and wildlife.

Noise Regulations

The land use immediately surrounding the proposed generating station locations is mostly vacant agricultural with sparse residential. There are residential properties to the north and south of the Project Site and center pivot agricultural fields to the northwest and south. Noise is primarily generated by activities associated with the AGS, traffic on existing area roads, and rail traffic along area railroads.

Applicable Federal, state, county, and municipal noise ordinances were reviewed for the Study Area. The Proposed Action would be located in an unincorporated area of Cochise County. The State of Arizona and Cochise County do not have noise ordinances with applicable numerical sound level limits for the Proposed Action.

3.10.2 Environmental Consequences

The following sections summarize potential environmental consequences of the Proposed Action Alternatives and No Action Alternative related to noise.

3.10.2.1 Proposed Action Alternative

Construction

Project Site construction would result in temporary and minor noise impacts in the surrounding area. Construction-related sounds would vary in intensity and duration depending on specific stages and activities of construction but would not be permanent. Nearby residences may temporarily experience increased noise during construction. Minor temporary disturbances to wildlife could occur.

Construction of the Proposed Action is expected to last approximately 13 months and will involve Project Site preparation, excavation, placement of concrete and other typical industrial construction practices. Construction schedules are anticipated to be able to construct on a 5-7 days per week, 10-12 hours per day schedule in order to minimize the length of calendar time that temporary construction impacts affect the area. There are certain operations that, due to their nature or scope, must be accomplished in part outside typical working hours. Such work generally consists of activities that must occur continuously, once begun (such as pouring concrete foundations).

The impacts that various construction-related activities will vary considerably based on the proximity to the property line. Generic sound data ranges are available for various types of equipment at certain distances. Table 3-8 lists generic activities and their minimum and maximum instantaneous sound levels at 50 feet.

Table 3-8: Range of Typical Construction Equipment Noise Levels

Generic Construction Equipment	Minimum Noise at 50 feet (dBA)	Maximum Noise at 50 feet (dBA)
Backhoes	74	92
Compressors	73	86
Concrete Mixers	76	88
Cranes (movable)	70	94
Dozers	65	95
Front Loaders	77	96
Generators	71	83
Graders	72	91
Jack Hammers and Rock Drills	80	98
Pumps	69	71
Scrapers	76	95
Trucks	83	96

Source: Federal Highway Administration Construction Noise (2018)

The types of equipment listed in the table above may be used at various times and for various amounts of time. Construction of the Proposed Action may involve driving piles. Equipment noise will be addressed during construction, and sound dampening material may be used if necessary. Most activities will not occur at the same time. Sound levels are expected to be quieter for areas where activities are occurring at distances greater than 50 feet from the property line.

Noise from construction is expected to be localized and temporary. The actual noise levels generated by construction will vary on a daily and hourly basis, depending on the activity that is occurring, and the types and number of pieces of equipment that are operating. Noise resulting from construction will vary with equipment type and age, type of work being done, distance from receptor, and meteorological conditions. It is expected that most construction will be done during the daytime when receptors are less sensitive to noise and that the noise will be intermittent. Any excessive construction noise should be of short duration and have minimal adverse long-term effects on land uses or activities associated with the Proposed Action area.

Operation

Net changes in sound levels resulting from the Proposed Action are expected to be minimal except in very localized areas next to the new equipment. Because the Proposed Action will occur within a much larger property with existing sources of noise and will be located between an existing highway and a railroad, the new equipment is not expected to appreciably change the sound levels experienced offsite. There are no major operational noise impacts expected from the operation of the metering station itself.

3.10.2.2 No Action Alternative

The No Action Alternative would have no short- or long-term impacts to noise at or in the vicinity of the Project Site because no construction or operation would occur.

3.10.3 Mitigation

Sound mitigation measures will not be required for the Project Site. Details of any optional mitigation measures will be determined as the Proposed Action proceeds.

3.11 Transportation

3.11.1 Affected Environment

The Proposed Project Site is served by an existing network of paved and gravel roads and is located adjacent to U.S. Highway 191 and just north of West Sandal Road. U.S. Highway 191 runs north to south and serves as a major traffic artery through the middle of Cochise County. A Union Pacific railroad located to the west side of the Project Site runs southwest to northeast crossing U.S. 191 north of Cochise, Arizona. This railroad has a branch rail line that breaks off on the east side of Union Pacific's railroad for delivering coal to the AGS.

3.11.2 Environmental Consequences

The following sections summarize potential environmental consequences of the Proposed Action Alternatives and No Action Alternative related to transportation.

3.11.2.1 Proposed Action Alternative

Existing highways and county roads will be used to provide access to the Project Site during construction. Within the AGS property boundary, the existing access road will be used as the primary construction access road. Traffic will include equipment and material deliveries and the construction labor force. The frequency of Project Site vehicular traffic will be proportionate to the Project Site construction labor projections.

The peak construction labor force for construction of the Proposed Action is anticipated to be approximately 60 personnel. This labor, along with equipment and material deliveries in support of the Proposed Action, is expected to increase daily vehicle and truck traffic (above current operation) by approximately 450 round trips per day during peak construction periods. Construction material deliveries may occur during the day during off-peak travel times and will typically not interfere with worker shift changes and commuter traffic.

Although additional vehicular traffic will result from the construction of the Proposed Action, the impacts will be temporary. Traffic impacts will be greatest along Route 191 and vary according to construction delivery and construction labor shift changes. The roadway capacity of any route and level of service to the traveling public will not be substantially impacted in all other areas.

Truck access to the existing Project Site is served by U.S. Highway 191. Operating permits will be issued by the state or county for oversized truck movements, as required. Based on current projections, the roads, bridges, and crossings in the area are sufficient for the Proposed Action's delivery and transportation needs.

Once construction is complete, vehicular traffic will return to typical levels for the area. Therefore, there are no long-term impacts expected for transportation resources due to the Proposed Action.

3.11.2.2 No Action Alternative

The No Action Alternative would have no short- or long-term impacts to transportation at or in the vicinity of the Proposed Action because no construction or operation would occur.

3.11.3 Mitigation

As construction and operation of the Proposed Action will have only temporary impacts on transportation, no mitigation measures are planned. Existing roads damaged by construction traffic will be repaired once construction is complete.

3.12 Human Health and Safety

3.12.1 Affected Environment

Two potential human health and safety concerns associated with the Proposed Action are to be considered: electromagnetic fields (EMF) and risk management associated with hazardous materials.

EMF are associated with high-voltage electric transmission lines and substations. All of the offsite high-voltage transmission lines and substations necessary for the Proposed Action are in place. The Proposed Action will require some minor Project Site transmission line re-routing and a new switchyard to accommodate the new SCGT's and connect the new Proposed Action to AEPCO's grid. The Facility's access is generally restricted to AEPCO employees and contractors, and substations are surrounded by security fencing to limit access to the area.

3.12.2 Environmental Consequences

The following sections summarize potential environmental consequences of the proposed Action Alternatives and No Action Alternative related to transportation.

3.12.2.1 Proposed Action Alternative

A core value of AEPCO is the safety of its employees and contractors. As such, AEPCO has identified certain hazards associated with power production at the existing Project Site. There are a number of risks to human health and safety possible in the course of constructing and operating a power plant, including hazards such as fire, slips, trips, falls, electrical hazards, confined space entry, and many others. Additionally, hazardous substances or wastes may be released, generated, or required for construction and operation of the Facility. Examples may include the use and storage of fuels, lubricating oils, chemicals, and other materials that may be considered hazardous. AEPCO has also identified one existing structure within property boundaries that stores hazardous and non-hazardous waste. This storage facility is on the south side of the Project Site; however, it will be avoided during and after construction.

EMF will be strongest directly under the transmission line and will decrease with increasing distance from the transmission line ROW. There are no residences or businesses within 2,000 feet of the Project Site boundary. The Proposed Action will not require modifications of the transmission lines outside of the Project Site boundary; therefore, it will not increase risk due to EMF along the current transmission ROW.

During construction, the Project Site will be managed to prevent harm to the general public. The general public will not be allowed to enter any construction areas associated with the Proposed Action. The major risk to the general public will be from an increase in traffic volume on the roadways near the Project Site as a result of commuting construction workers and transportation of equipment and materials.

Construction and operation of the Proposed Action will also involve the use and storage of regulated and hazardous materials. During construction, diesel fuel, gasoline, and lubricating oils from heavy equipment and vehicles may accidentally leak or spill. Hydraulic fluid, paints, and solvents will likely be used during the construction phase as well. Additionally, the presence of aboveground fuel storage tanks and oil-filled equipment present the potential to release into the environment. Any contaminated soils as a result of the construction or future operation of the Proposed Action would be identified and handled as appropriate in

accordance with state and federal laws. Any excavated soil is tested and then handled by an appropriate third-party contractor who takes the material to an appropriate landfill.

3.12.2.2 No Action Alternative

The No Action Alternative would have no short- or long-term impacts on human health or safety at or in the vicinity of the Project Site because no construction or operation would occur.

3.12.3 Mitigation

A comprehensive safety program is in place at AGS. For instance, a safety briefing is required annually for employees and upon entry for contractors. Adequate training for human health and safety concerns will be mandatory for all construction workers on the Project Site. Personal safety equipment such as hard hats, ear and eye protection, and safety boots will be required for all workers at the Project Site. Accidents and injuries will be reported to the designated safety officer at the Project Site.

During construction and operation, all used oil generated at the Project Site and other potentially hazardous materials (automotive fluids, spray paint cans, etc.) will be collected and properly handled by a licensed/permitted recycler.

Construction-related hazards will be effectively mitigated by complying with all applicable federal and state occupational safety and health standards, applicable National Electrical Safety Code regulations, and utility design and safety standards.

Risk management associated with hazardous materials is an additional human health and safety concern. To reduce the potential for a release of regulated or hazardous materials during the construction phase of the Proposed Action, work will be planned and performed in accordance with Occupational Safety and Health Administration (OSHA) standards and protocols addressing the use of potentially hazardous materials and applicable federal and state environmental regulations. If a hazardous release were to occur, emergency response, cleanup, management, and disposal of contaminated soils will be conducted according to EPA and state standards. Conformance to these standards and procedures will reduce the potential for significant impacts resulting from the release of hazardous materials during the construction phase.

4.0 Cumulative Impacts

Cumulative effects may result from the incremental effects of an action when added to the effects of other past, present, and reasonably foreseeable actions, regardless of what agency or person undertakes such other actions.

Reasonably foreseeable projects that could contribute to the cumulative effects of this Proposed Action include private agriculture, new residential, or capital improvements to industrial sites, which are ongoing and anticipated to continue after this Proposed Action is complete. No substantial cumulative effects are anticipated due to the implementation of the Proposed Action.

4.1 Region of Influence

To determine the contribution of the Proposed Action to cumulative effects, impacts on each resource are analyzed for a geographic scope that includes a wider area than the footprint of the Project Site. Various areas of Cochise County were analyzed for regional cumulative impacts. These cumulative impacts are described in the following sections.

4.2 Past, Present, and Reasonably Foreseeable Future Actions

AEPCO has entered into a contract with EPNG to establish a gas metering station using an interconnection between their existing pipeline facility to provide a sufficient natural gas supply to the existing permitted AGS facility. The metering station will be built regardless of decision on the Proposed Action (i.e., the meter station has independent utility from the Proposed Action). Additionally, EPNG will design, procure, and construct the necessary infrastructure for the gas metering station. Construction of the proposed metering station will take place within the existing AGS site. Since the metering station is located on land where the existing electric generation facility is currently located and operating, minimal changes to the existing land use, geology, or soil will occur as a part of metering station construction. The metering station is not expected to have any impacts on formally classified lands. Minimal vegetation removal will occur where the new metering station will be constructed. There is no infrastructure expected to be constructed off-site for the metering station. EPNG will perform on-going maintenance of the area for operations.

Past, present, and reasonably foreseeable future actions that may affect the resources of the area include:

- Areas within the Wilcox Playa have been bombing ranges, radio towers, and other uses by the US Military since the 1940s;
- Original development of the AGS;
- Private agricultural management, which resulted in the removal of the desert shrub vegetation;
- Transmission line upgrades, including supporting infrastructure like a ring bus;
- Development of non-AEPCO renewable energy generating technologies in the area;
- Anticipated additional capacity at AGS (fast-response, natural gas-fired, etc.). This could include the addition of two new gas turbines (in addition to GT5&GT6).
- Southline transmission project that will include a new substation east of AGS. The project will enhance grid reliability and resiliency and make the power system less vulnerable to price volatility and extreme weather events. The proposed project would involve upgraded WAPA facilities between the Apache and Vail, Arizona substations;
- Development of PPA solar + battery storage on AEPCO owned property – the solar portion is anticipated to provide 294 MWdc of intermittent renewable capacity to AEPCO in addition to 940 MWh of battery storage. The future action will be constructed on approximately 1,300 acres of AEPCO land adjacent to the AGS; and

- EPNG natural gas metering station occurring onsite.

The following resources were determined to have no direct effects, therefore no cumulative effects, and will not be further evaluated in this section: land use, formally classified land, soils, important farmland, floodplains, wetlands and waterbodies, biological resources, socioeconomics and community resources, noise, and transportation.

4.2.1 Water Resources

The Basin and Range basin-fill aquifers underlie the Sulphur Spring's valley and serve as some of the southwest's main water supplies. Historical and current agricultural activities are water intensive.

Development of generation units over time at the AGS has required dedicated water resources for steam generation, cooling, and other needs onsite. Water supply for the AGS is supplied through dedicated wells. While the Proposed Action will use small amounts of water, there is not expected to be an increase over existing usage. For wastewater, the existing AGS is a zero liquid discharge facility and will remain one after the Proposed Action.

If additional generation is developed at the AGS, it is anticipated that older, existing units will see significant reductions in use, if not complete retirement. In either scenario, water usage at the site is anticipated to be reduced for a new generation scenario. Agricultural use of water resources is anticipated to continue at approximately the same level. None of the other present and reasonably foreseeable future actions require water for operations. Thus, there are not anticipated to be any cumulative impacts to water resources in the area.

4.2.2 Aesthetics

The AGS has been in operation as a power plant since 1961. Although the area is very rural in nature and semi-isolated, the Proposed Action will add visual elements, at an electric generating plant that already exists. While there will be additional visual contrast from the new Proposed Action, the overall nature of the Proposed Action will remain consistent with and compatible with the currently existing views in the area, and no substantial cumulative impacts are expected.

Other reasonably foreseeable projects in the area, such as new solar farms and or additional gas turbines at the existing AGS may have visual impacts from associated equipment and new stacks. Each of these actions, and the other identified actions, has the potential to change the natural landscape in the area, and therefore, potential cumulative impacts related to aesthetics. It is worth noting that additional generation at AGS (i.e., beyond GT5&GT6) would essentially blend into the existing AGS aesthetic.

4.2.3 Air Quality

ADEQ permit requirements for the Proposed Action will ensure the local area remains in compliance with the NAAQS cumulatively. It's anticipated that any future generation units at AGS (i.e., beyond GT5 &GT6) would be accompanied by associated federally-enforceable reductions in emissions from an older, existing unit at AGS. These reductions would offset any impacts of future generation at AGS, and therefore, no adverse cumulative impacts are anticipated.

Each of the identified actions would have emissions associated with construction. However, only the future generation mentioned will have on-going air emissions once construction is complete. Considering the expected reductions in emissions long-term at AGS, the cumulative air quality impacts from operations will be localized as there are no other large on-going sources of air emissions near the AGS. As such, there are no expected cumulative impacts and more likely, beneficial reductions in long-term emissions near the AGS.

5.0 Summary of Mitigation

The following Table 5-1 is a summary of the mitigation proposed for the Proposed Action by resource.

Table 5-1: Summary of Mitigation

Resource	Potential Environmental Consequences	Mitigation Measures Proposed	Intensity of Residual Effects
Water Resources	Soil erosion and stormwater runoff into nearby streams and rivers may impact waterways during construction.	AEPCO will follow standard BMPs to be implemented during construction. There will be no discharge during operations.	Minimal
Air Quality	Air emissions from construction are low and temporary in nature, fall off rapidly with distance from the construction site, and will not result in any long-term impacts.	Fugitive dust control measures will include, but are not limited to, the following: • Applications of water; • Paving or watering of roadways after completion of grading; • Reduction in speed on unpaved roadways to 15 miles per hour or less.	Minimal
Air Quality	Emissions from construction activities can be difficult to quantify, as they are dependent on the number and type of construction vehicles in operation at any given point during construction, the number of construction workers driving to and from AGS, and the number and type of construction activities occurring, etc.	Construction equipment will be properly maintained. No other mitigation is anticipated.	Minimal
Air Quality	Emissions will occur from operation of the Proposed Action.	All equipment will meet applicable NSPS and NESHAP limits. The Proposed Action will include an SCR system to control NO_x emissions and an oxidation catalyst to control emissions of CO and VOCs. Good combustion practices and the use of clean fuels will mitigate emissions of PM_{10} and $PM_{2.5}$. The Facility will continue to operate within permitted levels.	Minimal
Noise	Noise will be produced from the construction equipment and activities. Actual noise levels generated by construction will vary on a daily and hourly basis, depending on the activity that is occurring, and the types and number of pieces of equipment that are operating.	The Proposed Action will comply with Cochise County planning and zoning noise requirements within Heavy Industrial zones. Any excessive construction noise should be of short duration and have minimal adverse long-term effects on land uses or activities associated with the Project Site area. Construction equipment will be properly maintained and utilize mufflers where appropriate. No other mitigation is anticipated.	Minimal

Resource	Potential Environmental Consequences	Mitigation Measures Proposed	Intensity of Residual Effects
Noise	Noise will be produced from the operation of the Proposed Action.	It is likely that some sound mitigation measures will be included in the base design of the Proposed Action. Details of these measures will be determined as the Proposed Action proceeds. Impacts from new equipment at an existing Facility rarely change the overall sound level substantially.	Minimal
Transportation	Damage to existing roads during construction.	Roadways will not be purposefully damaged. In the event this does occur, repairs for damage caused by construction activities will be made when appropriate.	Minimal
Human Health and Safety	During construction, the Project Site will be managed to prevent harm to the general public. The general public will not be allowed to enter any construction areas associated with the Proposed Action. The major risk to the general public will be from an increase in traffic volume on the roadways near the Project Site as a result of commuting construction workers and transportation of equipment and materials.	Perimeter fences and controlled access will remain in place throughout the construction and future operation of the Proposed Action. Increases in traffic will be temporary in nature and following construction will decrease to acceptable, safe travel levels. No specific mitigation is anticipated.	Minimal
Human Health and Safety	There are a number of risks to human health and safety possible in the course of constructing and operating a power plant including hazards such as fire, slips, trips, falls, electrical hazards, confined space entry, and many others. Additionally, hazardous substances or wastes may be released, generated, or required for construction and operation of the Facility.	A comprehensive safety program is in place at AEPCO. For instance, a safety contractor orientation is required annually for contractors. Adequate training for human health and safety concerns will be mandatory for all construction workers on the Project Site. Personal safety equipment such as hard hats, ear and eye protection, and safety boots will be required for all workers on the Project Site. Accidents and injuries will be reported to the designated safety officer at the Project Site.	Minimal

Resource	Potential Environmental Consequences	Mitigation Measures Proposed	Intensity of Residual Effects
Human Health and Safety	Construction and operation of the Proposed Action will also involve the use and storage of regulated and hazardous materials. During construction, diesel fuel, gasoline, and lubricating oils from heavy equipment and vehicles may accidentally leak or spill. Hydraulic fluid, paints, and solvents will likely be used during the construction phase as well. Additionally, the presence of aboveground fuel storage tanks and oil-filled equipment present the potential to release into the environment.	Risk management associated with hazardous materials is an additional human health and safety concern. To reduce the potential for a release of regulated or hazardous materials during the construction phase of the Proposed Action, work will be planned and performed in accordance with OSHA standards and protocols addressing the use of potentially hazardous materials and applicable federal and state environmental regulations. If a hazardous release were to occur, emergency response, cleanup, management, and disposal of contaminated soils will be conducted according to EPA and State standards. Conformance to these standards and procedures will reduce the potential for significant impacts resulting from the release of hazardous materials during the construction phase.	Minimal

6.0 Coordination, Consultation, And Correspondence

The following sections detail the agency and tribal coordination efforts completed for the Proposed Action and public involvement plan.

6.1 Agency Consultation

Letters were sent to agencies to inform agency contacts that AEPCO had engaged RUS and was requesting financing for the Proposed Action during the scoping period. The letter provided a Proposed Action description and explained that the action triggers an EA. The agencies were provided with this information on the Proposed Action as an opportunity to ask questions and provide initial feedback. Agency correspondence is provided in Appendix D. Table 6-1 provides a list of agencies who received letters.

Table 6-1: RUS Scoping Letter Distribution

Agency	Date(s)	Contact	Response
Federal Agencies			
USACE[1]	February 23, 2023	Sallie Diebolt	Acknowledged receipt of letter and advised the possibility of a permit if the discharge of dredged or fill material may reach a water of the US.
EPA[2]	February 23, 2023	Martha Guzman	No response
USFWS[3]	February 23, 2023	Scott Richardson	No response
State Agencies			
ADEQ[4]	February 23, 2023	Balaji Vaidyanathan	Acknowledged receipt of letter
AZDOT[5]	February 24, 2023	Matt Holcombe	No response
AGFD[6]	February 23, 2023	Ty Gray	No response
AZNRCS[7]	February 23, 2023	Scott Woodall/Emily Yulga	Received Form AD-1006 to fill out along with request for GIS information. Returned Form AD-1006 with scoring significantly below their thresholds..
Local Agencies			
Cochise County Administrator	February 23, 2023	Richard Karwaczka	Received Special Use Permit

[1]USACE – U.S. Army Corps of Engineers
[2]EPA – U.S. Environmental Protection Agency
[3]USFWS – U.S. Fish and Wildlife Service
[4]ADEQ – Arizona Department of Environmental Quality
[5]AZDOT – Arizona Department of Transportation
[6]AGFD – Arizona Game and Fish Department
[7]AZNRCS – Arizona National Resources Conservation Service
[8]AZSHPO – Arizona State Historic Preservation Office

6.1.1 Tribal Coordination

On July 7, 2023, Section 106 Consultation Letters requesting concurrence or objection to the Proposed Action were mailed to the Indian tribes listed below (Table 6-2). In addition to providing details on the Proposed Action under 36 CFR 800.11, the letters engaged the tribes to participate with RUS and AEPCO and requested concurrence or objection regarding the presence of cultural resources on the Project Site.

Table 6-2: Section 106 Consultation Letter Distribution

Tribe	Date(s) Sent	Response
Fort Sill Apache Tribe	July 7, 2023	Confirmed receipt, no response provided
Hopi Tribe of Arizona	July 7, 2023	No response provided
Mescalero Apache Tribe of the Mescalero Reservation, New Mexico	July 7, 2023	Confirmed receipt, no response provided
San Carlos Apache Tribe of the San Carlos Reservation, Arizona	July 7, 2023	Confirmed receipt, no response provided
Tohono O'odham Nation of Arizona	July 7, 2023	Confirmed receipt, concurrence of No Effect
White Mountain Apache Tribe of the Fort Apache Reservation, Arizona	July 7, 2023	Confirmed receipt, responded No Adverse Effect
Ak-Chin Indian Community of the Maricopa Indian Reservation	July 7, 2023	Confirmed receipt, no response provided
Gila River Indian Community of the Gila River Indian Reservation	July 7, 2023	Confirmed receipt, no response provided
Pascua Yaqui Tribe	July 7, 2023	Confirmed receipt, responded there are no concerns
Salt River Pima – Maricopa Indian Community of the Salt River Reservation	July 7, 2023	Confirmed receipt, no response provided
Tonto Apache Tribe	July 7, 2023	Confirmed receipt, concurrence of No Effect
Yavapai Apache Nation	July 7, 2023	Confirmed receipt, responded no comments, questions, or concerns
Pueblo of Zuni	July 7, 2023	No response provided
Arizona State Parks/AZSHPO	February 23 and July 7, 2023	Confirmed receipt. Generally concurred with findings but recommended editorial changes to report and concluded no adverse effect. Did not request Tribal reconsult for edited report

No objections were received. Follow-up communication to verify that the Indian tribes had received the letter was conducted via phone and email.

6.1.2 State Agency Coordination

6.1.2.1 ADEQ

Permits from ADEQ are required for the Proposed Action. The following sections describe coordination correspondence with ADEQ related to these permits.

ADEQ – An air permit application has been submitted for the Proposed Action. The application was reviewed by agency staff prior to a draft permit being issued for public comment. The final permit was issued by ADEQ on June 5, 2024.

6.1.2.2 AZSHPO

RUS provided the AZSHPO with documentation supporting a finding of no historic properties affected on July 7, 2023. AZSHPO responded on August 11, 2023, recommending that RUS reconsider the finding of effect as the AZSHPO considered a finding of no adverse effect may be more appropriate. No other consulting parties objected to the finding of no historic properties affected. RUS concluded Section 106 consultation with a finding of no historic properties affected.

6.1.2.3 NRCS

The NRCS is responsible for implementing the Farmland Protection Policy Act (7 USC 4201 et seq). The NRCS was sent an Agency Scoping Letter on February 2, 2023, with subsequent emails distributed to various NRCS representatives. On February 24, 2023, NRCS responded that the Proposed Action falls on Prime Farmland and requested Form AD-1006 be filled out. AEPCO returned the form, along with GIS information, to NRCS. Subsequently, the final signed AD-1006 form was provided back to AEPCO, indicating a total impact score of 24, significantly below their threshold of 160 (Appendix D).

6.1.3 Local Coordination

6.1.3.1 Cochise County Administrator

Permits from Cochise County are required for the Proposed Action. AEPCO applied for a Special Use Permit for the Proposed Action in 2023, and it was issued in 2023. Cochise County Development Services staff routed Special Use Permit applications to several County departments and local agencies, including Board of Supervisors, County Attorney and Arizona Department of Transportation.

Following, AEPCO applied for a Building Permit. That permit was approved by county staff after rounds of review and comments by several County departments. AEPCO responded to each of those reviews and comments in a timely manner.

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8.0 List of Preparers

The environmental review for the Proposed Action was prepared by Burns & McDonnell Engineering Company, Inc. under the direction of AEPCO. The following is a list of preparers of this document.

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APPENDIX A – INTEGRATED RESOURCE PLAN (PUBLIC)

APPENDIX B – BIOLOGICAL EVALUATION

APPENDIX C – AIR PERMIT COMPLETENESS DETERMINATION

APPENDIX D – AGENCY LETTERS AND CORRESPONDENCE