# Environmental Assessment

## Turney Energy Center
## Clinton County, Missouri


**U.S Department of Agriculture Rural Utilities Service**

**Prepared by:**

**Burns and McDonnell**
**9400 Ward Parkway**
**Kansas City, MO 64114**

**Prepared for:**

**Associated Electric Cooperative, Inc.**
**2814 S. Golden**
**Springfield, MO 6580**

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# List of Abbreviations

| Abbreviation | Term/Phrase/Name |
|---|---|
| ACHP | Advisory Council on Historic Preservation |
| AECI | Associated Electric Cooperative, Inc. |
| AJD | Approved Jurisdictional Determination |
| APE | area of potential effect |
| BACT | Best Available Control Technology |
| BGEPA | Bald and Golden Eagle Protection Act |
| BMP | best management practice |
| CAA | Clean Air Act |
| CCAP | Comprehensive Climate Actions Plan |
| CEMS | continuous emission monitoring system |
| CFR | Code of Federal Regulations |
| CIA | Critical Issues Analysis |
| Clinton County PWSD #4 | Consolidated Public Water Supply District No. 4 of Clinton, Caldwell, Ray, and Clay Counties, Missouri |
| CO | carbon monoxide |
| $CO_2$ | carbon dioxide |
| $CO_2e$ | carbon dioxide equivalent |
| CWA | Clean Water Act |
| dBA | A weighted decibel |
| EA | environmental assessment |
| ELFS | Electric Load Forecast Study |
| EMF | electromagnetic field |
| EPA | U.S. Environmental Protection Agency |
| EPC | Emergency Planning Committee |
| ESA | Endangered Species Act |
| °F | degree Fahrenheit |
| FAA | Federal Aviation Administration |
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| FIRM | Flood Insurance Rate Maps |
| FONSI | Finding of No Significant Impact |

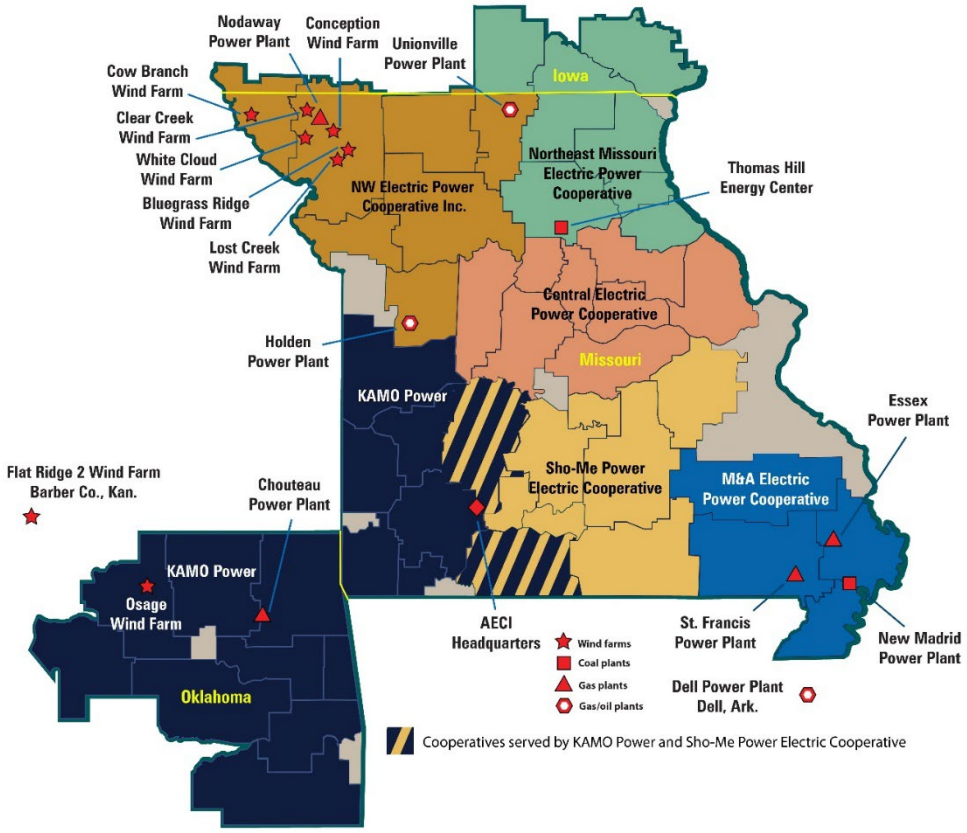
| | |
|---|---|
| FR | Federal Register |
| gpm | gallons per minute |
| GSU | generator step-up |
| G&T | generation and transmission |
| HAP | hazardous air pollutant |
| HDPE | high-density polyethylene |
| HHV | higher heating value |
| Hz | hertz |
| IDP | Inadvertent Discoveries Plan |
| IPAC | Information for Planning and Consultation |
| IRP | Integrated Resource Plan |
| kV | kilovolt |
| LHV | lower heating value |
| m | meter |
| MACT | Maximum Achievable Control Technology |
| MDC | Missouri Department of Conservation |
| MDNR | Missouri Department of Natural Resources |
| MMBtu/hr | million British thermal units per hour |
| MoDOT | Missouri Department of Transportation |
| MONHP | Missouri Natural Heritage Program |
| MRLC | Multi-Resolution Land Characteristics |
| MW | megawatt |
| $N_2O$ | nitrous oxide |
| NAAQS | National Ambient Air Quality Standards |
| NAIP | National Agriculture Imagery Program |
| NEPA | National Environmental Policy Act |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NHD | National Hydrography Dataset |
| $NO_2$ | nitrogen dioxide |
| $NO_x$ | nitrogen oxide |
| NPDES | National Pollutant Discharge Elimination System |
| NPV | net present value |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NSPS | New Source Performance Standards |
| NSR | New Source Review |

| | |
|---|---|
| NWI | National Wetlands Inventory |
| NWP | Nationwide Permit |
| OSHA | Occupational Safety and Health Administration |
| Pb | lead |
| PCAP | Priority Climate Action Plan |
| PEM | palustrine emergent |
| PFO | palustrine forested |
| PM | particulate matter |
| $PM_{2.5}$ | particulate matter 2.5 microns or less in diameter |
| $PM_{10}$ | particulate matter 10 microns or less in diameter |
| PPA | power purchase agreement |
| PSD | Prevention of Significant Deterioration |
| PUB | palustrine unconsolidated bottom |
| RFP | Request for Proposal |
| ROW | right-of-way |
| RUS | Rural Utilities Service |
| SCGT | simple-cycle gas turbine |
| SCR | selective catalytic reduction |
| SER | Significant Emission Rate |
| SHPO | State Historic Preservation Office |
| SIL | Significant Impact Level |
| $SO_2$ | sulfur dioxide |
| STIP | Statewide Transportation Improvement Plan |
| SSURGO | Soil Survey Geographic |
| TEC | Turney Energy Center |
| THPO | Tribal Historic Preservation Officer |
| tpy | tons per year |
| $\mu g/m^3$ | microgram per cubic meter |
| USACE | U.S. Army Corps of Engineers |
| USC | U.S. Code |
| USCB | U.S. Census Bureau |
| USDA | U.S. Department of Agriculture |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| VOC | Volatile Organic Compound |

# 1.0 Introduction

Associated Electric Cooperative, Inc. ("AECI") is a member-owned, member-led wholesale power generation and transmission cooperative created in 1961 by rural electric cooperatives to provide electricity reliably and affordably for rural areas of the Midwest. Today, AECI and its member cooperatives deliver electricity to 935,000 meters (member-consumers) representing 2.1 million people across rural Missouri, northeast Oklahoma, and southeast Iowa (Figure 1-1). AECI's member-consumers are primarily older, lower income electricity users who live in rural parts of the three-state system. More populous urban and suburban areas of these regions are generally served by municipal or investor-owned electric utilities.

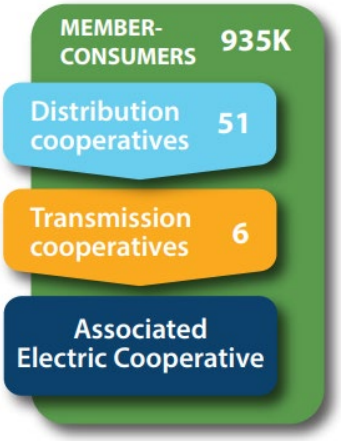
Figure 1-1: AECI Service Territory




AECI is a system comprised of three distinct tiers, each specializing in one critical area of the electric utility process and accountable for its performance through democratic control at every tier.

- Generation: In the first tier, AECI generates power for six regional transmission cooperatives who are member-owners of AECI.

- Transmission: In the second tier, the six regional transmission co-ops use an extensive network of substations and high-voltage power lines to deliver the power to 51 distribution co-ops who are their member-owners. AECI and its six transmission co-op owners own and operate 10,288 miles of transmission lines.
- Distribution: The third tier is made up of the 51 local power co-ops that deliver electricity to member-consumers at homes, farms and businesses in rural areas. 935,000 member-consumers (meters) served by this distribution tier own and are democratically represented at their local co-ops.




## 1.1 Project Description

### 1.1.1 Proposed Action

AECI is requesting a loan from the U.S. Department of Agriculture ("USDA"), Rural Utilities Service ("RUS") to procure and construct a 421-megawatt ("MW") simple-cycle gas turbine ("SCGT"), located approximately 2 miles southwest of Turney, in Clinton County, Missouri (the "Project Site"). The approximately 95.5 acres that AECI owns, of which, approximately 45 acres will be disturbed for construction of the generation site and approximately 37 acres will ultimately be fenced. The general location of the Project Site including the transmission line is shown in Figure 1-2 and the proposed site layout is shown in Figure 1-3.

To support operation of the new combustion turbine, a new natural gas lateral would be constructed to supply fuel to the Project Site. The new eight (8)-inch lateral would extend south from a tap point on the existing natural gas Rockies Express Pipeline, LLC within the Project Site boundary approximately 1,000 feet to supply the SCGT (see Figure 1-2). The lateral pipeline will not be owned or operated by AECI and is considered a connected action.

The project site will be interconnected to the transmission grid via construction of a two (2)-mile, single-circuit 161 kilovolt ("kV") transmission line between the generation site and the proposed Shoal Creek switch station. N.W. Electric Cooperative ("N.W."), a member-owner Generation and Transmission ("G&T") of AECI, will construct, own, operate, and maintain the transmission line and right-of-way ("ROW") to the three (3)-acre fenced Shoal Creek switch station (also owned and operated by N.W. Approximately 2.5 miles of existing distribution electrical line, owned by Platte Clay Electric Cooperative, will be reconstructed within existing ROW to supply power to the generation site.

A new 1.5-mile water pipeline would be constructed of six (6)-inch high-density polyethylene ("HDPE") pipe that would tap into an existing water tower nearby owned by the Consolidated Public Water Supply District No. 4 of Clinton, Caldwell, Ray, and Clay Counties, Missouri ("Clinton County PWSD #4"). The new water pipeline would be needed to supply water to the Project and the surrounding community, with a portion of the line being upgraded and a portion being constructed.

The Project would be constructed over a 24-month period. The footprint for construction of this Project is approximately 45 acres, located primarily in an open agricultural area within the Project Site boundary (Figure 1-2). Construction activities would also include equipment laydown, temporary offices, and parking.

The proposed action will require the following major new components:

- Advanced-class SCGT and auxiliary equipment
- Air cooled generator and auxiliary equipment
- Selective catalytic reduction

- Generator step-up ("GSU") and auxiliary transformers
- Fuel oil tanks, offload, and forwarding equipment
- Water tanks
- Electrical equipment for the station including the onsite switchyard
- Fire protection
- Natural gas metering, filtering and pressure regulating equipment
- Permanent offices and warehousing
- Permanent plant roads, lighting, fencing, and cameras

These proposed actions will be treated as connected actions:

- 2-mile transmission lead line owned by N.W. Electric Cooperative
- 2.5-mile distribution electric line owned by Platte Clay Electric Cooperative
- 3 acre fenced Shoal Creek Switch Station owned by N.W. Electric Cooperative
- 1.5-mile water pipeline extension and upgrades owned by Clinton County PWSD #4

### 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 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, and the USDA Rural Development guidance document 1970-C which serves as a guide for preparing EAs under NEPA.

## Figure 1-2: Proposed Layout of New Equipment

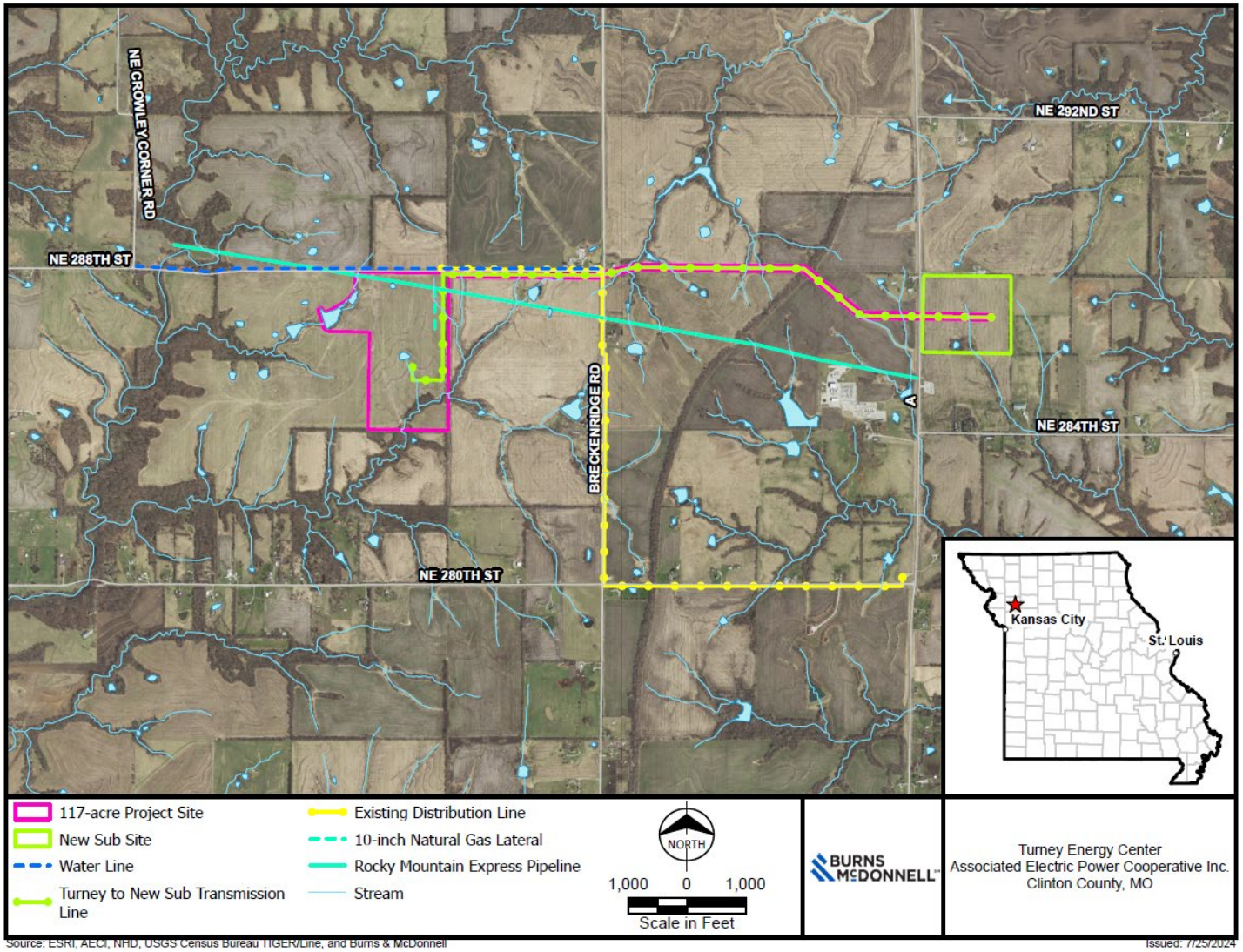


Figure 1-3: Turney Energy Center Location

Figure 1-4: Turney Energy Center Switch Station Location

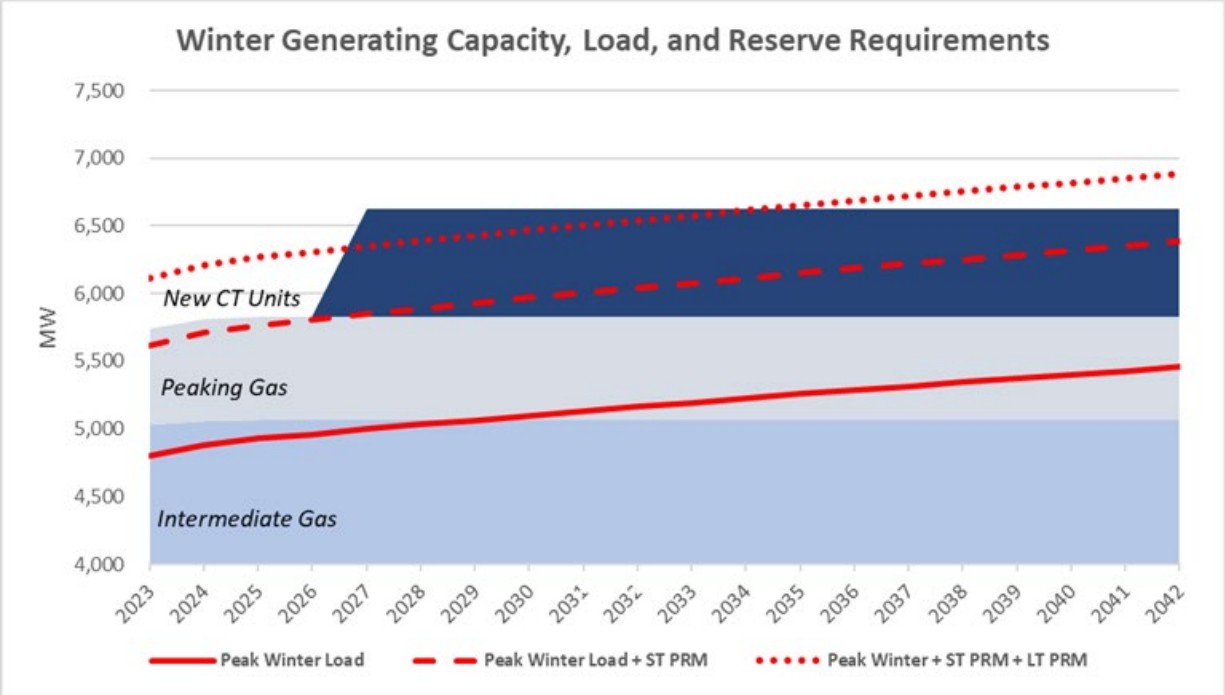
## 1.2 Purpose and Need

AECI is obligated to provide generating capacity needed to meet its member load requirements through 2075 per all-requirements of G&T coordination agreements. AECI consults with Clearspring Energy Advisors to perform an Electric Load Forecast Study ("ELFS") every other year (on even years). The ELFS study process takes into account AECI's energy efficiency rebate program and projects additional energy efficiency impacts driven by regulatory appliance standards. The 2022 ELFS was refreshed with 2022 load data, economic outlook, and demographic factors, and serves as the basis for these forecasts.

The load forecast study was used to prepare AECI's 2022 Integrated Resource Plan ("IRP"). The load forecast studies indicate that AECI will be in a capacity deficit position, without the addition of new resources, by winter season, 2027. As shown in Figure 1-5, the demand forecasts show a deficit between current assets and future demand, thus supporting the need for additional capacity. The detailed analysis identified a need of 844 MW of capacity, in total, and potential operational constraints of AECI's overall system by 2027. These operational constraints fall in three main areas:

1. the need to diversify fuel usage;
2. a necessary bridge to a larger renewables' portfolio in the future; and
3. a firm dispatchable generation asset.

Figure 1-5: Winter Generating Capacity, Load, and Reserve Requirements



# 2.0 Alternatives

To determine if RUS can fund the Proposed Action, Alternatives that meet the purpose and need should be considered. Several options were evaluated to meet the identified future capacity needs. The options that were evaluated but eliminated from consideration, the preferred alternative, and the no action alternative are discussed in more detail below.

## 2.1 Introduction

AECI conducted detailed analysis and held internal discussions through strategic planning sessions in the production of its preferred power supply plan to meet the identified need of up to 900 MW of capacity between both the Missouri and Oklahoma service areas, with at least 421 MW at a single site. AECI conducted a study of self-build options in tandem with a request for proposal ("RFP") for capacity and energy on a long-term basis in AECI's service territories from potential energy providers. Outside bids were solicited to determine if the open market could provide the capacity needed at a more competitive rate than AECI's self-build options. The RFP yielded alternatives including capacity from a fossil resource (natural gas), standalone batteries, and batteries paired with solar. As there is a need for dispatchable, fast-start capacity to backup renewables and provide peaking capacity, only the fossil fuel option meets the purpose. The most competitive RFP response held a net present value ("NPV") cost from 2027-2042 of almost $200 million higher than self-build alternatives. Therefore, AECI is pursuing RUS funding for a self-build option.

## 2.2 Alternatives Considered

The following is a bulleted list of alternatives evaluated but eliminated from consideration. The reason for elimination is briefly described for each.

- Load Management – Load management is voluntary on the power user side. Because of this, load management does not provide reliable reductions sufficient to offset the need for additional capacity.
- Distributed Generation – Distributed generation are systems of generating power, often renewable energy sources, near the point of use instead of centralized generation sources from power plants (e.g., solar panels on a house). These types of systems neither provide sufficient capacity, nor are they dispatchable in response to intermittent power generation from renewables.
- Renewable Energy Resources – Renewable energy resources such as wind, solar, hydro, or energy storage can provide varying amounts of renewable capacity. AECI contracts with eight wind farms totaling 1,240 MW of nameplate capacity. Because of wind generation's intermittent nature, wind energy is not included as capacity for planning purposes. AECI also receives nearly 478 MW of hydropower from the Southwestern Power Administration.
- Hydrogen Combustion – while there are turbines capable of burning hydrogen to create sufficient capacity, there are no viable supplies of hydrogen to an AECI electrical point of interconnection.
- Buying open market power purchase agreements ("PPA"). The option for new PPAs is very expensive, more expensive than AECI's self-build option, and limited because the region is expected to see a shortfall in capacity when several coal facilities are proposed for retirement coupled with an increase in demand.

Remaining alternatives to consider include various fossil fuel generation sources. Alternatives for the technology to meet the identified need are described in the next section.

### 2.2.1 Technology Selection

A technology assessment was completed to determine the self-build generation technology that best met the identified need. SCGTs and combined-cycle gas turbines are capable of generating the amount of capacity need identified and were selected for further analysis.

A SCGT will generate power by combusting natural gas and propelling the exhaust through a turbine. The spinning turbine is connected to a generator. An advanced-class SCGT has the lowest total cost when looking at 20 years of operation, less reliance on the energy market, and greater flexibility. An advanced-class SCGT benefits from faster ramp rates, greater efficiency, and economies of scale due to larger unit capacity.

Combined-cycle units are a combination of gas and steam turbines. The result is that the generation of electricity is increased almost by 50%. The waste heat from the gas turbine is routed to the nearby steam turbine, which generates extra power. However, combined-cycle units require significant amounts of water for process use and cooling. Higher temperatures within the units require additional maintenance. Additionally, the units aren't designed for fast response.

Based on the abilities of these technologies and the financial analyses discussed above, the alternative of a natural gas-fired, simple-cycle combustion turbine (i.e., the Proposed Action) was selected. The Proposed Action will balance AECI's traditional and more intermittent renewable generation assets on the system.

### 2.2.2 Alternative Project Locations

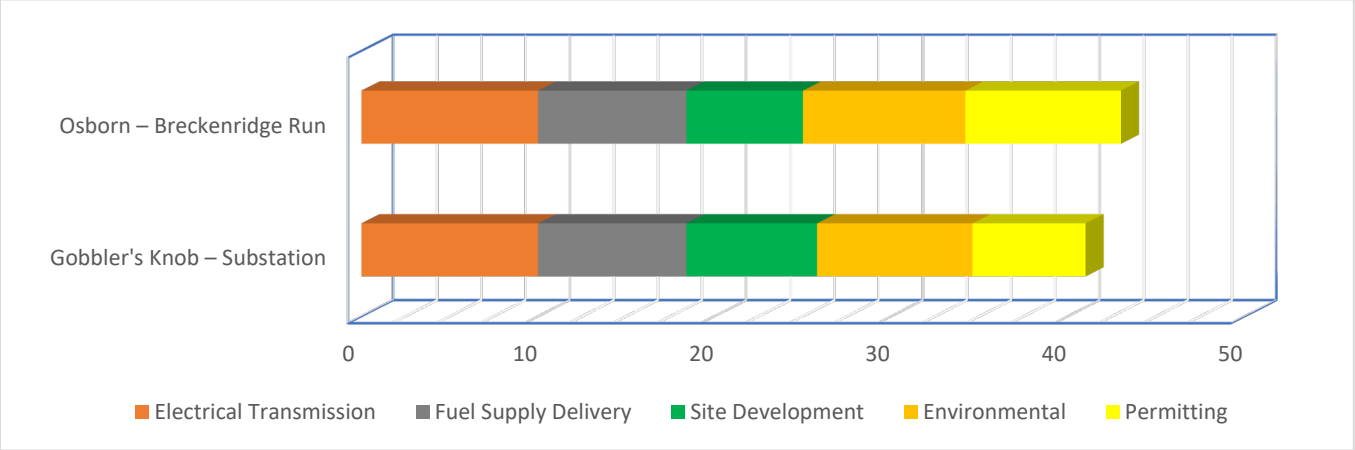
For the identified technology, AECI will need a site that can accommodate new generation. Both existing and greenfield sites were considered.

Existing power plant sites were considered in identifying a site that could accommodate the identified technology. AECI's existing power plant sites in the interconnection region cannot provide sufficient load-following gas supply, and there is no gas available in most locations. Additionally, most sites have existing point sources of air emissions nearby which could potentially lead to cumulative air quality issues. Other reasons an existing AECI site could not be used include transmission constraints (i.e., no reasonable interconnection opportunity) and/or national wildlife refuges nearby (i.e., potential federal land air quality impacts). Therefore, AECI's existing sites were considered, but are not carried forward as viable alternative locations. As such, greenfield sites that accommodate the technology identified and minimize environmental impacts were considered.

A siting study of greenfield locations was then conducted to determine suitable sites for the Project's development within AECI's service territory in Missouri. The proposed site needed to be capable of accommodating up to 421 MW of natural gas fueled simple-cycle generation and possess the necessary infrastructure critical to plant development. An initial 55 sites across both Oklahoma and Missouri, designated as Preliminary Site Areas, were identified that met the infrastructure requirements. Preliminary Site Areas were subjected to review for multiple criteria organized by five categories: Electrical Transmission, Fuel Supply Delivery, Site Development, Environmental, and Permitting. Preliminary Site Areas were ranked according to the composite evaluation score of the five categories.

From this analysis, two sites were selected as Candidate Site Areas: the "Osborn Breckenridge Run" site (i.e., the Turney Energy Center ["TEC"]): and the "Gobbler Knob - Substation" site. The scoring for both sites is shown in (Figure 2-1).

Figure 2-1: Preferred and Alternate Site Area Rankings




After scoring was complete, an analysis of availability of the sites for purchase was conducted. Additionally, a Critical Issues Analysis ("CIA") was performed for each of these sites to identify potential fatal flaws. The CIA used desktop analysis to determine preliminary, anticipated impacts for a generic power plant at each site.

Both of the sites appear to have the infrastructure necessary to support the Project. Based on the identified criteria, the Osborn-Breckenridge (i.e., TEC) site located in Clinton County, Missouri was selected.

## 2.3 Proposed Action Alternative

Based on a review of available and feasible alternatives, the construction of a new 420-445 MW, natural gas-fired simple cycle combustion turbine located at the TEC is the Proposed Action Alternative to effectively address all purpose and need criteria described in Subsection 1.2. Under the Proposed Action Alternative, RUS would approve AECI's financing request and AECI would construct and operate the new generating facility and associated facilities.

The Proposed Action is a natural gas fired SCGT capable of generating approximately 420-445 MW. It is anticipated that the air permitting process will limit operation of the unit to the standards of 40 CFR Part 60 Subpart TTTT. The project would burn natural gas, with the capability to use fuel oil as a backup, would employ selective catalytic reduction ("SCR") technology to control nitrogen oxide ("$NO_x$") emissions.

Potential impacts associated with the construction, rebuild, and operation of the distribution line, transmission line and water pipeline, are analyzed as connected actions in this EA. Potential impacts associated with the development of the natural gas pipeline for the Turney Energy Center are included in the evaluation of cumulative impacts in Chapter 4 of the EA.

As mentioned, the Project would be constructed over a 24-month period with the footprint for construction being approximately 45 acres (Figure 1-2).

## 2.4 No Action Alternative

Under the No Action Alternative, RUS would not provide financial assistance to AECI for the construction of the TEC. As a result, AECI would be required to secure alternative financing for the proposed Project or secure power to address the projected capacity shortfall from other third-party resources. The No Action Alternative would result in increased Project financing costs, which would have an adverse impact on the financial viability of the Project or require AECI to get power from another source, increasing power output from existing generating

resources in the AECI service territory (e.g., existing coal-fired power plants, etc.), or experience rolling blackouts of varying intensity, especially during winter polar vortex events and extreme summer heat.

# 3.0 Affected Environment/Environmental Consequences

Chapter 3 provides descriptions of the existing environmental conditions of the Project areas and the impacts that may be expected from constructing and/or operating the Project. This chapter provides an understanding of the affected environment and potential environmental consequences for the following resources: air quality; biological resources including vegetation, wildlife, and special status species; cultural resources; geology and soils; infrastructure, transportation, public health and safety; land use; noise; socioeconomics; visual resources; and water resources. Federal, state, and local regulations that apply to managing these resources are also discussed in context of the existing environment. AECI's proposed Project will be located on a greenfield site in northwestern Missouri (Figure 1-2). The Site is located in Clinton County, approximately 2 miles southwest of the City of Turney.

This chapter assesses the potential impacts of the Proposed Action Alternative and the No Action Alternative. The No Action Alternative provides a basis for comparison in which none of the Project components would be constructed. The U.S. Environmental Protection Agency's ("EPA") NEPAssist tool was used as a starting point to identify potential concerns for the various resources to be analyzed (Appendix A).

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

### 3.1.1 Affected Environment

**Land Use**

Multi-Resolution Land Characteristics ("MRLC") Consortium's National Land Cover Database was utilized to determine land cover within the approximately 183-acre area project boundary. Land cover within the Project Boundary contains large portions of cultivated cropland. The vegetation type in the Project Boundary is common for this region. Locations surrounding the Project Boundary are similar in composition and are primarily composed of cultivated cropland, pasture/hay lands, deciduous forest with low intensity development. A full breakdown of land use types identified within the Project Boundary is shown in Table 3-1.

Table 3-1: Land Cover Identified within the Project Boundary

| Land Use Type | Acres |
|---|---|
| Cultivated Crops | 138.5 |
| Hay/Pasture | 20.4 |
| Developed, Low Intensity | 13.3 |
| Deciduous Forest | 5.4 |
| Developed, Open Space | 2.8 |
| Open Water | 1.3 |
| Developed, Medium Intensity | 0.5 |

Source: MRLC National Land Cover Database (MRLC, 2021)

**Formally Classified Lands**

There are no formally classified lands within the Project. The nearest Protected Area is Ronald and Maude Hartell Conservation Area, which is managed by the State Department of Conservation and is located approximately 1.6 miles to the west-southwest (U.S. Geological Survey ["USGS"], 2024b).

**Geology**

Missouri geologic map data from the USGS was used to determine the geology of the site (USGS, 2024a; MDNR, 2024a). According to the map, Clinton County is primarily made up of the Lansing Group containing cyclic deposits of limestone and shale, and the Kansas City Group covering the remaining 23% of Clinton County. The Kansas City Group consists of cyclic deposits of limestone and shale with minor sandstone and coal. The Site is contained within the Lansing Group.

Karst is a prominent feature of the Missouri landscape and can form sinkholes, caves, and springs. No sink holes were revealed within five miles of the Project. One cave is located nearby in the Lathrop quadrangle and has a cave density of zero. Two historical limestone surface mines are located within one mile of the study area.

**Soils**

The general soils maps of Clinton County, published by the USDA Natural Resources Conservation Service ("NRCS") (USDA, 2019), were referenced for the following descriptions of the general soil map units within the Project Boundary. The NRCS Soil Survey Geographic ("SSURGO") database was used to identify the specific soil map units associated with the Project Boundary as mapped by the USDA-NRCS. The SSURGO database is generally the most detailed level of soil geographic data available and utilizes information contained in published NRCS soil surveys. The Project Boundary consists of nine USDA-NRCS soil map units, as summarized in Table 3-2. There are no hydric soils within the Project Boundary.

Soils present in the proposed Project Site area are classified as low to moderate risk of corrosion to concrete. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Eight of the nine soils present on the Site were classified as higher risk to corrosion of uncoated steel, the remaining soil (30062) is classified as a moderate risk of 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.

Table 3-2: Soil Map Units within the Project Boundary

| Map Soil Unit Symbol | Description | Acres |
|---|---|---|
| 30085 | Grundy silt loam, 2 to 5 percent slopes* | 76.9 |
| 30087 | Grundy silt loam, 5 to 9 percent slopes | 85.7 |
| 30092 | Grundy silty clay loam, 5 to 9 percent slopes, moderately eroded | 0.36 |
| 30142 | Lamoni silty clay loam, 5 to 9 percent slopes, moderately eroded | 4.1 |
| 34020 | Colo silty clay loam, drainageway, 2 to 5 percent slopes, frequently flooded* | 10.5 |
| 30036 | Armstrong silt loam, 5 to 9 percent slopes | 0.7 |
| 30062 | Gara loam, 9 to 14 percent slopes*** | 1.2 |
| 36028 | Nevin silt loam, 0 to 2 percent slopes, rarely flooded* | 0.5 |
| 36020 | Kennebec silt loam, 0 to 2 percent slopes, occasionally flooded** | 0.5 |

Source: USDA, 2019

Gray shading indicates soil map unit is considered hydric.

* - Indicates soil map unit is considered prime farmland, if drained.

** - Indicates soil map unit is considered prime farmland

*** - Indicates soil map unit is considered farmland of statewide importance.

**Farmland**

The Site and surrounding areas consist of disturbed soils from agricultural production. The USDA's Web Soil Survey lists the present soils as prime farmland that could yield high crop production if drained, prime farmland, and

farmland of statewide importance. Of the nine soil units in the Project, five (5) are considered prime farmland (Table 3-2). There is approximately 87.9 acres of prime farmland, if drained; 0.5 acres of prime farmland; and 1.2 acres of farmland of statewide importance crossed by the Project. There are no agricultural areas using center pivot irrigation near the Project.

Prime farmland is defined by the USDA as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for those uses. A farmland of statewide importance does not meet the criteria for prime or unique farmland for the production of food, feed, fiber, forage, and oilseed crops. These tracts of land could also have been designated for agriculture by State law. Less than 1% of the project footprint is classified as a farmland of statewide importance and will be limited to ROW area for the water pipeline.

### 3.1.2 Environmental Consequences

The following sections summarize potential environmental consequences of the proposed Action Alternatives and No Action Alternative related to land use, formally classified lands, geology, soils, and farmland.

#### 3.1.2.1 Proposed Action Alternative

Construction and operation of the Project would impact the existing agricultural land use. The Project has been tilled and is actively cultivated for the production of row crops. Soils within the Project boundary are designated as prime farmland or farmland of statewide importance by the NRCS. The NRCS was consulted, and the AD-1006 form was filled out by RUS/AECI and NRCS. The total screening score for the site was below their threshold of 160, indicating no significant impacts to prime farmland are anticipated and an alternative site does not need to be considered. The site is currently used for agriculture, and the remainder of the site is anticipated to continue crop production after the Project is built. Construction and operation of the proposed Project will therefore not have a significant impact on prime farmland or soils. The project is not anticipated to significantly impact geological resources or formally classified lands.

#### 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, or farmland at or near the Project because no construction or operation would occur.

### 3.1.3 Mitigation

Construction and operation of the proposed Project will alter the current land use and remove prime farmlands from use for production. No specific mitigation measures are anticipated.

During construction, portions of the Project site will be cleared, grubbed, graded, excavated, and revegetated. In areas not impacted by these activities, such as areas that do not require clearing, existing vegetation will be preserved where practicable. The amount of soil exposed during construction will be minimized.

Temporary seeding will be applied to areas of exposed soil that have not been brought to final grade yet, where the establishment of vegetation is desired. Additionally, temporary seeding will occur in disturbed areas where further land-disturbing activities will not be performed for a period greater than 30 days, and vegetative cover is required for less than 1 year. Areas needing protection during periods when permanent seeding is not applied, must be seeded with annual species.

Final stabilization is achieved when all soil-disturbing activities at the site have been completed and a uniform (i.e., evenly distributed, without large bare areas) perennial vegetation cover with a density of 70 percent of the native

background vegetative cover has been established on all unpaved areas or areas not covered by permanent structures or with alternative surfacing, such as riprap or crushed rock.

## 3.2 Floodplains

### 3.2.1 Affected Environment

The U.S. Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Maps ("FIRM") indicates that there are no 100- or 500-year floodplains within the Project Boundary (FEMA, 2024).

### 3.2.2 Environmental Consequences

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

#### 3.2.2.1 Proposed Action Alternatives

All construction that will take place will not result in any impacts to floodplains. No future impacts to floodplains are anticipated during operation of the Project. The Project will not result in any additional runoff or impedance of flood flows.

#### 3.2.2.2 No Action Alternative

The No Action Alternative would have no short- or long-term impacts to floodplains as no construction or operation would occur.

### 3.2.3 Mitigation

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

## 3.3 Wetlands and Water Bodies

### 3.3.1 Affected Environment

Burns & McDonnell completed a desktop assessment using the U.S. Fish and Wildlife Service ("USFWS") National Wetland Inventory ("NWI") Maps, USGS National Hydrography Dataset ("NHD"), 2018 USGS 7.5-minute topographic maps (Lathrop, Plattsburg), National Agriculture Imagery Program ("NAIP") aerial photography (2019), and USDA NRCS 2017 SSURGO digital data. The NWI data indicates the potential presence of palustrine forested ("PFO") wetland, palustrine unconsolidated bottom ("PUB") wetlands and riverine wetlands within the proposed Project Boundary. The Project Boundary includes the plant site, switch station site, transmission line corridor, water pipeline corridor, natural gas lateral, and the existing distribution line corridor. A total of 3.3 acres of NWI wetlands are mapped within the Project Boundary. The NHD data shows there are 20 streams present within the Project Boundary. The NRCS SURGO data shows one hydric soil in the Project Boundary. Based on the assessment it was determined a field visit would be necessary to identify any wetlands or other aquatic resources that may be present within the Project Boundary. The Project Boundary encompasses the TEC plant site, the new transmission line route, the new water pipeline route, the existing distribution line rebuild route, and the proposed switch station site.

Burns and McDonnell conducted onsite wetland delineations on April 22 and August 6, 2024. The delineation was completed following the 1987 *Corps of Engineers Wetlands Delineation Manual* (1987 Manual) and the 2010

*Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest – Version 2.0* (Regional Supplement).

Nine wetlands and 24 streams were identified during the wetland delineations study. A total of 4.55 acres of wetlands were delineated representing approximately 2% of the total 193-acre area evaluated within the Project Boundary and the surrounding affected areas (the "Survey Area"). Each delineated wetland was assigned a type based on the Cowardin Classification System (Cowardin et al., 1979). Wetland types identified include palustrine emergent ("PEM"), PFO, and PUB. A total of 4,562 feet (0.86 miles) of ephemeral, intermittent, and perennial stream crossings were delineated within the Survey Area. Table 3-3 and Table 3-4 summarize the identified wetlands and streams, respectively, within the Survey Area. The wetlands report is attached as Appendix B, containing maps with callouts of surveyed wetlands and streams.

### Table 3-3: Delineated Wetlands within the Survey Area by Type

| Wetland Type[1] | Delineated Area (Acres) | Description[2,3] |
|---|---|---|
| PEM | 1.81 | Characterized by a 30 percent or greater areal cover of emergent, herbaceous vegetation. Additionally, the combined areal cover of shrubs, saplings, and trees in these wetlands was less than 30 percent. Dominant vegetation included tufted foxtail (*Alopecurus carolinianus*), reed canary grass (*Phalaris arundinacea*), stinging nettle (*Urtica dioica*), yellow ironweed (*Verbesina alternifolia*), Canada goldenrod (*Solidago canadensis*), narrow-leaf cattail (*Typha angustifolia*), black willow (*Salix nigra*), American sycamore (*Platanus occidentalis*), white mulberry (*Morus alba*), and American elm (*Ulmus americana*). Wetland hydrology was indicated by surface water, high water table, saturation, geomorphic position, and a positive FAC-neutral test. |
| PFO | 0.21 | Characterized by a 30 percent or greater areal cover in tree stratum. Dominant vegetation included Canadian wood nettle (*Laportea canadensis*), American sycamore, and hackberry (*Celtis occidentalis*). Wetland hydrology was indicated by geomorphic position and a positive FAC-neutral test. |
| PUB | 2.22 | Characterized by open water ponds with a combined areal cover of less than 30 percent of vegetation. Common surrounding vegetation included reed canary grass, stinging nettle, curly dock (*Rumex crispus*), tall goldenrod (*Solidago altissima* L.), black willow, and white mulberry. |

[1]Symbols for wetland type: PEM = palustrine emergent, PFO = palustrine forested, PUB = palustrine unconsolidated bottom.
[2]Source: Cowardin et al 1979
[3]Source: Descriptions as observed by Burns & McDonnell onsite wetland delineations completed April 22 and August 6, 2024.

### Table 3-4: Streams Identified within the Survey Area

| Stream Type | Delineated Length (Feet) | Characterization[1] |
|---|---|---|
| Ephemeral | 1,639 | A defined bed and bank but had limited or no flow during the site visit, indicating that the stream largely carries water only during and after precipitation events. Common riparian vegetation included Kentucky bluegrass (*Poa pratensis*), black willow, honey locust (*Gleditsia triacanthos*), black walnut (Juglans nigra), American elm, and mulberry. |

| Stream Type | Delineated Length (Feet) | Characterization[1] |
|---|---|---|
| Intermittent | 2,871 | The presence of a limited volume of flow at the time of the site visit, indicating that the stream is partially fed by groundwater but that the streams may not flow during dry periods. Common riparian vegetation included Kentucky bluegrass, tall goldenrod, and American elm. |
| Perennial | 52 | The presence of a substantial volume of flow at the time of the site visit, indicating that water likely flows year-round. Common riparian vegetation included jewelweed (Impatiens pallida), coralberry (Symphoricarpos orbiculatus), honey locust, black walnut, and Osage orange (Maclura pomifera). |

[1]Source: Characterizations as observed by Burns & McDonnell onsite wetland delineations completed April 22 and August 6, 2024.

No other wetlands, water bodies, or other aquatic resources have been identified within the Survey Area except for as noted above. Coordination with U.S. Army Corps of Engineers ("USACE") Kansas City District occurred and an Approved Jurisdictional Determination ("AJD") was received on February 3, 2025 (Appendix D). Seven features (channels, wetlands, or ponds) were determined to be jurisdictional and subject to Clean Water Act ("CWA") Section 404. AECI will obtain the applicable Nationwide Permit ("NWP") for the Project.

## 3.3.2 Environmental Consequences

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

### 3.3.2.1 Proposed Action Alternatives

AECI has selected suitable locations for laydown staging that will be necessary for construction of this Project to avoid any wetlands impacts. The Project Site has been selected to avoid and minimize wetland impacts as much as practical.

Seven waters in the Project footprint were determined to be jurisdictional through consultation with USACE. The existing jurisdictional surface water (pond) on the Project site will be avoided. A jurisdictional offsite stream along the new interconnect line may receive civil engineering design, for which AECI would obtain a NWP. Other jurisdictional ponds, wetlands, and streams will be avoided including the pond located on the switch station parcel.

Any wetlands or streams occurring near distribution line upgrades or construction are expected to be spanned and best management practices ("BMPs") will be used to prevent fill from entering the waterbody. Thus, construction and operation of the proposed Project will have no effects on non-jurisdictional wetlands. It is anticipated that the Project will not have a significant impact on unavoidable jurisdictional wetlands.

### 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 Project because no construction or operation would occur.

## 3.3.3 Mitigation

As construction and operation of the proposed Project will avoid most jurisdictional wetlands. AECI will obtain the applicable NWP for the Project. BMPs will be used for any impacts to non-jurisdictional and unavoidable jurisdictional wetlands. It is anticipated there will be no significant impacts on wetlands and no specific mitigation measures are required (e.g. spanning streams, no permanent impacts).

## 3.4 Water Resources

### 3.4.1 Affected Environment

**Surface Waters, Water Supply, and Discharge**

As discussed in Section 3.3: Wetland and Water Bodies there are surface waters present within the Project Boundary. However, these are not sources that are viable for water supply and siting has been selected to avoid permanently impacting these sources.

A rural district supply of water is the most viable option for the TEC. The Clinton County PWSD #4 was determined to be an appropriate nearby public water source. An existing water tower owned by the Clinton County PWSD #4 is present between the TEC and the proposed switch station and appears to be the most viable option for the Site. A new 1.5-mile water pipeline would be constructed of six (6)-inch HDPE pipe that would tap into an existing water tower nearby. The new water pipeline would be needed to supply water to the Project and the surrounding community, with a portion of the line being upgraded and a portion being constructed.

A Limited Special Service Agreement between Clinton County PWSD #4 and AECI was signed on July 11, 2024, by the Board of Directors of Clinton County PWSD #4 and the District Clerk. According to the Agreement, the Project is approved for 88 gallons per minute (“gpm”).

**Groundwater**

The Project Boundary does not directly overlie any major or minor alluvial or bedrock aquifers as the subsurface is composed primarily of clay and massive shale units and does not directly overly any sole source aquifers according to NEPAssist (see Appendix A) and therefore groundwater is not readily available.

Karst features can act as a direct conduit of surface waters and pollutants to groundwater. Precautions will be taken avoid the introduction of pollutants to sensitive groundwater resources. Wells can also act as conduits of pollutants to groundwater. One active domestic well is located within one mile of the Project site and 42 wells are located within five miles of the Project site. No active public wells were identified in the area. One abandoned public well is located near the project area. Abandoned wells should be plugged prior to land disturbance to avoid the introduction of pollutants to the unconfined aquifer.

**Water Quality**

The Site’s water will be supplied by Clinton County PWSD #4 per the agreement signed on July 11, 2024. The rural water district purchases water from the City of Plattsburg, which sources their water from the Smithville Reservoir, which is located approximately 8 miles southwest of the Project Site in Clinton County. Raw water from Smithville Reservoir is transported to the City of Plattsburg’s treatment facility. Water to be provided to the site is potable. There are no 303d waterbodies (i.e., waterbodies that do not meet water quality standards) within or adjacent to the property (EPA, 2024b). While Smithville Reservoir/Lake is a 303d listed waterbody, the City of Plattsburg manages the water quality supplied to Clinton County PWSD #4 end users.

### 3.4.2 Environmental Consequences

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

### 3.4.2.1 Proposed Action Alternatives

**Construction**

There are minimal surface water resources near the Site. The approximately 2.1-acre surface water located on the TEC site may receive civil design work to restore design and surface flow integrity. The approximately 0.12-acre surface water located on the switch station site is anticipated to be avoided. One stream is spanned by the existing distribution line and will be affected by the rebuild, but the impacts will be consistent with impacts of the existing distribution line. AECI will coordinate with MDNR to complete an Antidegradation Review that complies with the Missouri Antidegradation Rule and Missouri's Antidegradation Implementation Procedure ("AIP"). For industrial facilities, this requires an Antidegradation Report, the Geohydrologic Evaluation, and the Natural Heritage Review to be submitted for review. Seven of these waters were determined to be jurisdictional through consultation with USACE (Appendix D). The Project will not have a significant impact on unavoidable jurisdictional wetlands. AECI will obtain the applicable NWP for the Project.

AECI will also comply with National Pollutant Discharge Elimination System ("NPDES") and utilize 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 as necessary throughout Project construction.

Construction activities from the Project will not impact the groundwater at the Site. Accordingly, no lowering of the groundwater level will be required during construction.

A new 6-inch HDPE water pipeline, approximately 1.5-miles in length, will be constructed to tap into an existing water tower owned by the Clinton County PWSD #4.

**Operation**

No groundwater would be used for the Project. There would be no impact to groundwater. The new water pipeline will provide approximately 88 gpm to the onsite water storage tanks, per the agreement with Clinton County PWSD #4. The Project is expected to use approximately 150 gpm of water, at maximum operation in the rare instance the facility is operating on fuel oil. The majority percentage of water use will be below 150 gpm of water for operations. Water will be used at the site for process water and sanitary purposes. Wastewater streams include process water, sanitary water, and stormwater. Engineering determinations regarding final wastewater pathways are still being decided. Wastewater pathways decisions will be made in accordance with NPDES and the facility will obtain a NPDES Permit.

Process water and stormwater from the proposed Project will result in discharged liquids to an onsite settling pond. Drains for areas around equipment that could be contaminated with oil would be gravity drained and directed through oil/water separators prior to discharge to the settling pond. The outfall from the settling pond is expected to be the point of compliance for the facilities water permit and will ultimately leave the site via the discharge to drainage onsite. Facility waste streams (i.e., toilets, sinks, etc.) are directed to an onsite septic system with lateral fields.

The proposed Action Alternative will have no effect on the water quality or the impairment status of the surrounding areas.

### 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 Project because no construction or operation would occur.

### 3.4.3 Mitigation

Construction and operation of the proposed Project is not anticipated to have any adverse impacts on surface waters or groundwater. AECI will employ good water management practices during construction and operation and will comply with NPDES permit. No specific mitigation is required.

## 3.5 Coastal Resources

### 3.5.1 Affected Environment

The Facility is proposed to be located in an area where there are no coastal resources.

### 3.5.2 Environmental Consequences

As there are no coastal resources near the proposed Project, there is no potential for environmental consequences of the proposed Action Alternatives related to coastal resources.

## 3.6 Biological Resources

The biological resources of the area surrounding the Project along with the impacts on biological resources because of the Project are discussed in the following sections.

### 3.6.1 Affected Environment

The following sections discuss vegetation, wildlife, and special status species within the Study Area.

#### 3.6.1.1 Vegetation

The Project Area is within the Loess Flats and Till Plains level IV ecoregion as mapped by the EPA (Chapman et al., 2002). The Survey Area is dominated by agricultural fields and vehicular ROWs. The agricultural fields are subject to regular disturbance through agricultural practices. Common vegetation in the Survey Area included eastern cottonwood (*Populus deltoides*), black willow (*Salix nigra*), American elm (*Ulmus americana*), Osage orange (*Maclura pomifera*), American sycamore (*Platanus occidentalis*), white mulberry (*Morus alba*), stinging nettle (*Urtica dioica*) tall goldenrod (*Solidago altissima*), short-awn meadow foxtail (*Alopecurus aequalis*), and sticky-willy (*Galium aparine*). There are no vegetation species listed as federally threatened or endangered in Clinton County.

#### 3.6.1.2 Wildlife

A habitat assessment survey was completed to evaluate the potential for special-status species or their critical habitat to occur within or in the vicinity of the Project Area (Appendix C). Special-status species are defined as species designated by the USFWS as Endangered, Threatened (“T/E”), Proposed for Listing or Candidate for Listing under the Endangered Species Act (“ESA”) and species protected under the Bald and Golden Eagle Protection Act (“BGEPA”).

Based on special-status species lists generated from the sources shown below, a habitat assessment was completed to evaluate the potential for special-status species to occur within the Project Area and its vicinity and to determine the presence or absence of designated or proposed critical habitat. The habitat assessments were based on review of the following sources and field observations:

- The natural history and known geographical and elevation range of the special-status species.
- USFWS Information for Planning and Consultation (“IPAC”) tool used to determine protected or likely to be protected under the ESA that are known or likely to occur in the Project Vicinity.

- Results of a Missouri Department of Conservation ("MDC") listed species and known critical habitat and the Missouri Natural Heritage Program ("MONHP") online review to identify known occurrences of protected species.

- Observations recorded by Burns & McDonnell during field reconnaissance on April 22 and August 6, 2024, of the habitats present in the Project Area (Appendix C).

In total, five ESA species and one BGEPA listed species were evaluated for their potential to occur in the Project Area. Table 3-5 shows ESA-listed, proposed, and candidate species and designated or proposed critical habitat considered for potential to occur in the Project Area. Final critical habitat for federally protected species has not been designated by the USFWS in the vicinity of the site.

## Table 3-5: Clinton County Federally Threatened and Endangered Wildlife Species

| Common Name (*Scientific Name*) | Federal Status (USFWS) | Known Suitable Habitat | Effect / Potential to Occur |
|---|---|---|---|
| **Birds** | | | |
| 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). | No adverse effect.<br><br>The Project Area lacks appropriate aquatic habitats within 1.3 miles and no bald eagle nests were observed within the vicinity of the Project Area. |
| **Insects** | | | |
| Monarch butterfly (*Danaus plexippus*) | Federally Proposed for Listing as Threatened | 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.<br><br>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). | No effect.<br><br>The Project is located on primarily agricultural fields and roadsides. Any suitable habitat that is currently present is likely fragmented and highly disturbed. Permanent impacts by the Project are sited in agricultural fields. |
| Western Regal Fritillary (*Argynnis idalia occidentalis*) | Federally Proposed for Listing as Threatened | Regal Fritillary caterpillars feed on leaves of plants of the genus Viola (violets), preferring V. pedatifida. Adults forage for nectar on flowers, especially butterfly weed, milkweed, pale purple coneflower, thistles, mountain mints, blazing starts, ironweeds, and clovers. Regal fritillary butterflies are | No effect.<br><br>The Project is located on primarily agricultural fields and roadsides. Any suitable habitat that is currently present is likely fragmented and highly |

| Common Name (*Scientific Name*) | Federal Status (USFWS) | Known Suitable Habitat | Effect / Potential to Occur |
|---|---|---|---|
| | | non-migratory; the eggs hatch in late summer or fall and the caterpillars overwinter amongst leaf litter. In Missouri, this species is now confirmed to high quality native tallgrass prairies in the northern portion of the state (MDC, 2024). | disturbed. Permanent impacts by the Project are sited in agricultural fields. |
| Mammals | | | |
| Tricolor Bat (*Perimyotis subflavus)* | Federally Proposed for Listing as Endangered | The tricolored bat hibernates in caves or abandoned mines during the winter. During spring, summer, fall, the bats roost among live and dead leaf clusters in trees of hardwood forested habitats including pine trees, easter red cedar trees, and structures such as barns, sheds, under bridges, or in other buildings that have little human disturbance.<br><br>Foraging habitats include forest edges and riparian corridors. (USFWS, 2024d) | May affect but is not likely to adversely affect. Mist-net surveys confirmed likely absence from Project area.<br><br>The Project Area supports leaf clusters and trees suitable for tricolored bat roosts. However, critical habitat has not been designated by USFWS within Clinton County. Conducting tree clearing during bats' inactive season is generally recommended as a best management practice. |
| Gray bat *(Myotis grisescens)* | Federally Endangered | The gray bat hibernates in caves or abandoned mines during the winter. During spring, summer, fall, the bats continue to use caves or cave-like structures such as mines, dams, bridges, quarries, and culverts<br><br>Foraging habitat includes lakes, rivers, and streams. Wooded areas may also be used for foraging. (USFWS, 2024a) | May affect but is not likely to adversely affect. Mist-net surveys confirmed likely absence from Project area.<br><br>The Project Area lacks potential roosting sites. However, potential foraging habitats may be preset. |
| Indiana bat *(Myotis sodalist)* | Federally Endangered | The Indiana bat hibernates in caves or abandoned mines during the winter. During spring, summer, fall, the bats roost in bark or cavities within the trunks of trees.<br><br>Foraging habitat includes forest edges and riparian corridors. (USFWS, 2024c) | May affect but is not likely to adversely affect. Mist-net surveys confirmed likely absence from Project area.<br><br>The Project Area supports potential roost trees. The Project was sited to minimize the amount of tree clearing; however, some tree clearing may be required. Conducting tree clearing during bats' inactive season is generally recommended as a conservation measure. |

Source: Buehler, 2020; Jepsen et al., 2015; MDC, 2024; MONHP, 2024; USFWS, 2024a; USFWS, 2024b; USFWS, 2024c; USFWS, 2024d

[1]BGEPA Listed Species.

According to the Missouri Heritage Review there is one state-listed endangered species in Clinton County, the Indiana bat, which is also identified as a federally endangered species.

A field-based habitat assessment was completed on April 22 and August 6, 2024, to evaluate the potential for special-status species or their critical habitat to occur within or in the vicinity of the Project Area (Appendix C). A bat mist-net survey was conducted during the nights of May 20 to May 23, 2024, for the main generation site, switch station site, transmission routes, and gas pipeline route. Nets were placed across streams, field edges, and forested wetlands. Weather conditions were within the acceptable limits based on USFWS Guidelines. No bats were captured during the surveys (Appendix C). An acoustic bat survey was conducted for the waterline addition during the nights of August 5 through August 9, 2024. Weather conditions were within the acceptable limits based on USFWS Guidelines. The Indiana bat, northern long-eared bat, and tricolored bat were determined to be likely absent based on identification results of the acoustic survey.

## 3.6.2 Environmental Consequences

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

### 3.6.2.1 Proposed Action Alternative

#### 3.6.2.1.1 Vegetation

Since the Project is located on a site that has been continuously agricultural and highly prone to disturbance it is not a suitable habitat for vegetation to grow and flourish. Approximately 37 acres of the site will be fully disturbed once construction of the Project is complete. It is anticipated that the remaining areas of the site will continue to be hayed. Therefore, the amount or type of vegetation onsite is not expected to significantly change due to the Project. It is expected that construction-related disturbances from the Project will not provide an opportunity for the establishment of invasive species as the area will not be conducive to the growth of vegetation.

#### 3.6.2.1.2 Wildlife

In total, five ESA species and one BGEPA listed species were evaluated for their potential to occur in the Project Area. Two federally endangered and one federally proposed endangered ESA listed species were determined to have potential to occur in the Project Area. No BGEPA species had the potential to occur on the Project Area.

As indicated above in Table 3-5, there is no critical habitat for federally endangered or threatened species as identified in the IPaC report dated September 17, 2024, at the Project Site. Therefore, the proposed Project may affect but is unlikely to adversely affect protected species or their critical habitats; nor will the proposed Project result in short - or long-term impacts to protected species or critical habitats that may occur in Clinton County. While there is suitable habitat for some endangered, threatened, or candidate species in the Project area, no impacts are anticipated to federally listed species that may occur in Clinton County if avoidance techniques like tree clearing in the winter is performed.

For the BGEPA listed species evaluated, the bald eagle was determined to have a potential to occur of **Unlikely** as no bald eagle nests were observed within the vicinity of the Project Area during the habitat assessment. Golden eagles were determined to have potential to occur of **None** but may be observed as temporary visitors.

As referenced in Table 3-5, the proposed Project will have no short- or long-term impacts to migratory birds or eagles as there is no suitable habitat on the Project Site, and construction is not anticipated to result in any long-term impacts to wildlife at the 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 are not likely to have great impacts to surrounding species.

#### 3.6.2.2 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 because no construction or operation would occur.

### 3.6.3 Mitigation

#### 3.6.3.1 Vegetation

As construction and operation of the proposed Project will have minimal impacts to on-site vegetation and will not lead to the introduction of invasive species, no mitigation measures will be necessary.

#### 3.6.3.2 Wildlife

Construction and operation of the proposed Project will have no impacts to listed threatened or endangered species, migratory birds, or eagles. Good conservation practices such as tree clearing during the each of the bats' inactive season will be implemented as needed. Should instances such as the observation of an active bald eagle nest occur during construction activities, AECI will work with the USFWS to minimize potential impacts. No impacts to listed threatened or endangered species, migratory birds, or eagles are expected to occur within the Project Site.

## 3.7 Historic and Cultural Resources

### 3.7.1 Affected Environment

In accordance with Section 106 of the National Historic Preservation Act and 36 CFR Section 800.1, 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 for all of the federal agencies. The federal agency or lead federal agency is responsible for coordination with consulting parties which may include the State Historic Preservation Office ("SHPO"), Tribal Historic Preservation Officers ("THPO") if tribal land is involved, Indian Tribes, the public, the ACHP, local governments, and applicants.

The following investigations have been completed to assist the federal agency in their compliance with Section 106. The area of potential effect ("APE") has been defined as the entirety of the TEC property comprising a natural gas-powered turbine electrical generation plant, a water pipeline to supply the plant, a natural gas lateral line to supply the plant, an electrical distribution line upgrade to supply power for construction activities of the plant, a new electrical interconnection line to supply the generated power to the grid, and a new proposed switch station connection located east of the Project site and south of Turney, Missouri was subject to a Phase I cultural resources investigation (the "Project Area"). The total area for this investigation is 182.5. acres.

The cultural resources investigation was conducted to professional standards and guidelines provided by the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716-44742) and the *Secretary's Standard for Identification* (48 FR 44720-44723) and was designed to conform with the Osage Nation Historic Preservation Office Archaeological Survey Standards. The first part of this investigation consists of a background review of previously recorded cultural resources and previously reported cultural resources surveys in a Study Area consisting of the Project Area and a 1-mile buffer around it. The second part of the investigation

consists of the field survey of the Project Area to include systematic shovel testing at 30-meter (“m”) intervals along each transect and each transect spaced no wider than 30 m apart.

RUS defined the APE for the Project as an area that includes all Project construction and excavation activity required to construct, modify, improve, or maintain any facilities; any ROW or easement areas necessary for the construction, operation, and maintenance of the Project; 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 consists of the approximately 45.5-acre area of the proposed switch station, the approximately 2-mile new transmission line, the 2.5-mile distribution line upgrades, 1,000-foot natural gas pipeline, 1.5-mile water line, and the approximately 96-acre area of the proposed TEC plant, as shown in the enclosed maps. The APE does not include any tribal lands as defined pursuant to 36 CFR § 800.16(x). This definition was submitted to the SHPO and THPOs in the agency coordination letters sent September 5, 2024, with a follow-up letter sent to the Missouri SHPO on October 29, 2024.

The cultural resources inventory fieldwork was conducted over multiple mobilizations to the Project site between December 2023 and July 2024. A total of 941 shovel tests were excavated in the APE. Two historic-age archaeological sites were recorded within the Plant portion of the APE and a historic-age railroad berm was noted in the Interconnection Line portion of the APE.

Site 23CI2222 was identified with three positive shovel tests containing historic-age artifacts within the plow zone. Site 23CI1112 was identified in five positive shovel tests where artifacts were found distributed throughout the plow zone to a depth of 40 cm below surface. Both sites are severely disturbed by plowing which has compromised their contextual integrity. These sites do not meet eligibility criteria for listing in the National Register of Historic Places (“NRHP”). A finding of no historic properties affected within the APE and no further cultural resource work was recommended.

The survey area is located within the Dissected Till Plains Section of the Central Lowlands Province in the Interior Plains Division of North America. In the Dissected Till Plains, the primary source for most of the late Quaternary loess is glacial. In Missouri, glaciogenic loess is concentrated in areas along the Missouri and Mississippi rivers. This loess derives from glacial flour that was transported by the rivers, deposited in their floodplains, and subsequently blown into the uplands by the wind. Glacial flour is a very fine-grained silty byproduct of glaciers grinding along and eroding bedrock (Bettis et al. 2003). The Project APE is surrounded by agricultural fields with multiple primary streams and drainage ditches running throughout. Streams within the Little Platte River basin are typical prairie-type streams, turbid and possessing homogeneous substrates of silt and sand. An approximately 2-acre pasture pond located along the west edge of the Site represents the largest body of standing water in the APE.

### 3.7.2 Environmental Consequences

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

#### 3.7.2.1 Proposed Action Alternative

Based on the findings of no historic properties affected during background research and field surveys, the cultural report was submitted to the SHPO. SHPO stated a finding of no adverse effect to historic or cultural properties was appropriate.

The cultural report and findings of no adverse effect were presented to the following tribes for concurrence:

- Apache Tribe of Oklahoma
- Iowa Tribe of Kansas and Nebraska
- Iowa Tribe of Oklahoma
- Omaha Tribe of Nebraska
- Otoe-Missouria Tribe of Indians, Oklahoma
- Sac and Fox Nation of the Mississippi in Iowa
- Sac and Fox Nation of Missouri in Kansas and Nebraska
- Sac and Fox Nation of Oklahoma

No tribes responded to Section 106 consultation requests. Details of the consultations are provided in Chapter 6.3.

Therefore, construction and operation of the proposed Project is expected to have no adverse effects on any historic or cultural properties.

#### 3.7.2.2 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 because no construction or operation would occur.

### 3.7.3 Mitigation

Avoidance of any identified historic or cultural resources is recommended for the proposed Project.

If avoidance is not possible, it is recommended that a testing and data recovery plan be developed and implemented to mitigate impacts to the sites. No further archaeological work is recommended for the site. All ground-disturbing activities have the potential to unearth human remains

As construction and operation of the proposed Project will have no impacts on historic or cultural properties, no mitigation measures are necessary. Should any material of historical significance be discovered during construction activities, appropriate steps will be taken following the reviewed Inadvertent Discovery Plan (“IDP”) (Appendix E).

## 3.8 Aesthetics

### 3.8.1 Affected Environment

The Project Site is primarily cultivated cropland and pasture/hay lands, bordered by a county road on the northern boundary. To the east and southeast of the Site is an existing distribution line. There is an existing natural gas pipeline that runs through the Site. There is gently rolling topography with minimal trees. The properties surrounding the Site are similar in composition and are primarily composed of cultivated cropland and pasture/hay lands with low intensity development. There are two ponds onsite with some treed areas around the banks. The 2 miles of new transmission line traverses the same general topography and use.

The construction of a new 2-mile-long transmission line would be constructed within the new transmission line ROW near the Project Site. A new 1.5-mile water pipeline would be constructed extending from an existing water

pipeline within existing waterline ROW. The distribution line upgrades will occur in an existing ROW that already contains a distribution line. The natural gas lateral would be constructed on the Project site extending from an existing natural gas pipeline and ROW.

### 3.8.2 Environmental Consequences

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

#### 3.8.2.1 Proposed Action Alternative

The aesthetics of the surrounding area would be altered by the Project. Vegetation would need to be cleared and light emissions at the Project Site would increase compared to current levels of light emissions, as a result of facility lighting. The approximately 140-foot stack at the facility, other facility equipment, transmission line structures, and switching station would introduce new features to the landscape. The project is not anticipated to significantly impact any visual resources of the surrounding areas.

#### 3.8.2.2 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 because no construction would occur.

### 3.8.3 Mitigation

Construction will have temporary visual impacts. Once the Project is built, there will be long-term aesthetic changes associated with the new facilities. AECI intends to leave the majority of existing tree rows bordering the property in place to work as a visual buffer, no other mitigation measures are proposed.

## 3.9 Air Quality

The air quality of the area surrounding the Project and the impacts of the Project on air quality are discussed in the following sections.

### 3.9.1 Affected Environment

According to the Koppen climate classification, the Project Site is in the Northern Hemisphere's Hot-Summer Humid Continental zone. Features of this zone include extreme seasonal changes with very cold winters and hot summers. Annual average precipitation is variable across the state, with the northwest receiving less (low of 35 inches) precipitation than the southeast (high of 55 inches). Winter precipitation includes snow, with the northern portion of the state receiving more than the south. Summertime precipitation is irregular, with no lengthy periods of above or below average precipitation. (Frankson et. al, 2022) The annual average rainfall in Clinton County is 38.68 inches (USDA, 2010).

The federal government established the National Ambient Air Quality Standards ("NAAQS") under the Clean Air Act ("CAA") 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 3-6, below.

Table 3-6: NAAQS and SIL Thresholds

| Pollutant[a] | Averaging Period | NAAQS[b] ($\mu g/m^3$)[e] | SIL[c,d] ($\mu g/m^3$) |
|---|---|---|---|
| $SO_2$ | 3-hour | 1,300 | 25 |
| | 1-hour | 196 | 7.8 |
| $PM_{10}$ | 24-hour | 150 | 5 |
| $PM_{2.5}$ | Annual | 9 | 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[f] |
| Pb | Rolling 3-month | 0.15 | -- |

(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, Pb=Lead
(b) NAAQS = National Ambient Air Quality Standards
(c) SIL = Significant Impact Level
(d) SIL values listed are for Class II areas
(e) $\mu g/m^3$ = micrograms per cubic meter
(f) interim SIL value

Clinton County is in attainment, meaning that the area follows federal clean air standards. One of the closest air quality monitoring sites is approximately 38 miles to the southwest of the Site operated by the Kansas Department of Health and Environment located at the JFK Recreation Center in Kansas City, KS. This site monitors pollutants CO, $NO_x$, $SO_2$, $PM_{10}/PM_{2.5}$, and ozone.

## 3.9.2 Environmental Consequences

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

### 3.9.2.1 Proposed Action Alternative

Construction and operation of the proposed gas turbine at the Project Site would be subject to applicable state and Federal air quality regulations. These regulations would apply to the Project equipment (one SGT6-9000HL). Regulations applicable to the proposed Project are New Source Review (“NSR”), Missouri Air Conservation Law Chapter 643 Title V Operating Permits, New Source Performance Standards (“NSPS”), National Emission Standards for Hazardous Air Pollutants (“NESHAP”), and Maximum Achievable Control Technology (“MACT”). 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 Project 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 vary 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 Site, and the number and type of construction activities occurring. AECI submitted a Construction Permit Application in April 2024. 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.

**Operation**

AECI proposes installing a single 421-MW Siemens SGT6-9000HL (60 Hertz ["Hz"]) simple-cycle combustion turbine to be constructed on a greenfield site. This combustion turbine has a maximum heat input of 3,870 million British thermal units per hour ("MMBtu/hr"), higher heating value ("HHV") (3,488 MMBtu/hr lower heating value ["LHV"]) will be installed as part of the Project. The SCGT will be capable of firing both natural gas and fuel oil. Additionally, it is expected that the turbine will have as many as 730 total startup/shutdown events per year. The combustion turbine will install Continuous Emission Monitoring Systems ("CEMS") to monitor emissions of $NO_x$.

Operation will be restricted to complying with the NSPS Subpart TTTTa load categories. Subpart TTTTa regulates $CO_2$ emissions from electric generating units under the NSPS (CAA 111b regulations). The standard provides a limit for natural gas-fired combustion turbines based on their annual operation. AECI will not operate the unit such that it exceeds the intermediate-load threshold and becomes subject to base-load requirements. A newly constructed (commenced construction after May 23, 2023) natural gas-fired combustion turbine that operates between 20 and 40 percent annually (intermediate-load category) is limited to 1,170 pounds of $CO_2$ per megawatt-hour of gross energy output on a 12-operating month rolling average basis.

The combustion turbines will have an SCR system to control emissions of $NO_x$. To minimize the emissions of $SO_2$, CO, and $PM/PM_{10}/PM_{2.5}$, the SCGT 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. $CO_2$ emissions will be minimized with the use of natural gas as the only fuel, with fuel oil only being used in emergencies.

The potential emissions from the SCGT were analyzed at 100%, 75% and 30% load on natural gas, and 100% and 70% on fuel oil. 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 potential-to-emit calculations were performed for each pollutant for the Project and are listed Table 3-7. Because the potential emissions of criteria pollutants are below the PSD permitting threshold, the Project does not trigger the PSD permitting process. Accordingly, no BACT analysis was required. However, as the potential emissions for CO, $NO_x$, and $PM/PM_{10}/PM_{2.5}$ are above the de minimis threshold, the Project is required to submit a minor source construction permit application. The Project is expected to exceed the 100 tpy threshold for at least two criteria pollutants and therefore will be considered a Part 70 Major source. AECI will apply for a Part 70 operating permit within 12 months of the start of Project operation per MNDR requirements.

Table 3-7: Total Project Emission Summary

| Pollutant[a] | Potential Project Emissions (Tons per Year [tpy])[b] | PSD SER Thresholds (tpy) | PSD Review Applicable? (Yes, No) | De Minimis[e] Levels (tpy) | Above De Minimis? (Yes, No) |
|---|---|---|---|---|---|
| $NO_X$ | 249[f] | 250 | No | 40 | Yes |
| CO | 249 [f] | 250 | No | 100 | Yes |
| $SO_2$ | 24.99 | 250 | No | 40 | No |
| VOC | 29.89 | 250 | No | 40 | No |
| $PM/PM_{10}$[c]/$PM_{2.5}$[c] | 65.01 | 250 | No | N/A/15/10 | N/A/Yes/Yes |

(a) $NO_x$ = nitrogen oxides; CO = carbon monoxide; $SO_2$ = 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) If the Project does not trigger PSD for any other pollutant, 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).
(e) Missouri Department of Natural Resources ("MDNR") Air Pollution Control Program Permit Applicability
(f) The project is taking a limit of 249 tpy for CO and $NO_x$.

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

The facility is expected to be a minor source of HAPs (less than 25 tpy of total HAPs and less than 10 tpy of any single HAP). Therefore, the facility is not subject to MACT standard Subpart YYYY: National Emission Standards for HAPS for Stationary Combustion Turbines.

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. AECI will be subject to the Acid Rain Program for the natural gas-fired combustion turbine located at the facility.

The Project 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 Project hold allowances for $SO_2$ 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).

#### 3.9.2.2 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 because no construction or operation would occur. However, there will still be a need for power capacity that will be obtained elsewhere, likely from existing fossil-fueled sources or new PPAs with fossil-fueled sources.

### 3.9.3 Mitigation

Construction activities will have air emissions but are anticipated to be minimal outside of the construction areas, and are temporary in nature. The majority of the construction emissions will be from fugitive sources and construction equipment. AECI's EPC contractor has prepared a fugitive dust control plan as a component of their Environmental Operations Plan. Dust control methods must also be included in the SWPPP. Plan measures could include, but are not limited to, the following:

- Application of water or chemicals (palliatives) to control dust;
- Installation of gravel/stone on unpaved roads;
- Limiting access of unnecessary vehicles or equipment in the Project area,
- Confining vehicular and equipment traffic to maintained roads, where feasible;
- Establishment of non-driving areas and driving areas;
- Erosion controls outlined in the SWPPP;
- Maintenance of paved roads, as needed;
- Restricting vehicles to slow speeds on the Project site

For operations, the air emissions calculations have determined that the Project will not be a major PSD source but will require a Part 70 Major Source operating permit. All equipment will meet all applicable NSPS and NESHAP limits. The Project will include an SCR system to control $NO_x$ emissions. 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 CO, VOC, $SO_2$, $PM_{10}$ and $PM_{2.5}$. AECI submitted an air permit application for the Project to the MDNR in April 2024 and will adhere to the conditions and requirements of the permit during operation of the Project.

## 3.10 Socio-Economic Impact Assessment

### 3.10.1 Affected Environment

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

**Population Growth Trends**

The Site is in Clinton County, Missouri, a predominantly rural county that has experienced a slight increase in population over the last 10 years. Table 3-8 presents the population trends near the Project.

Table 3-8: Population Trends

| | Missouri | Clinton County |
|---|---|---|
| 2010 Census (population) | 5,988,927 | 20,743 |
| 2020 Census (population) | 6,154,913 | 21,184 |
| % Change 2020-2021 | 0.97% | 0.98% |
| 2023 Estimate (population) | 6,169,156 | 21,548 |

Source: USCB, 2019 and USCB, 2024

**Racial and Ethnic Characteristics**

The U.S. Census Bureau ("USCB") has published demographic, housing, and employment estimates for 2020 for all counties and the state as a whole. These estimates, along with the 2020 Census Block data for the area immediately around the Site, are presented in Table 3-9. The Census Tract and Block Group that the Site is located in are shown in Table 3-9. Figure 3-1 shows the Census Block divisions and Block Groups.

Table 3-9: 2020 Racial Characteristics

| | Missouri | Clinton County | Census Tract 9603 | Census Tract 9603 Block Group 1 | Census Tract 9602.02 | Census Tract 9602.02 Block Group 2 |
|---|---|---|---|---|---|---|
| Total Population 2020 | 6,154,913 | 21,184 | 4,228 | 610 | 4,012 | 1,905 |
| White | 4,663,907 | 19,264 | 3,746 | 558 | 3,709 | 1,763 |
| Hispanic or Latino | 303,068 | 502 | 120 | 25 | 89 | 34 |
| American Indian and Alaskan Native | 30,518 | 78 | 13 | 1 | 19 | 11 |
| Other | 127,942 | 137 | 42 | 8 | 22 | 13 |
| Black or African American | 699,840 | 209 | 130 | 2 | 10 | 3 |
| Pacific Islander | 9,730 | 6 | 1 | 0 | 0 | 0 |
| Asian | 133,377 | 85 | 16 | 0 | 9 | 6 |

Source: USCB, 2020a and 2020b

Based on these estimates, the 2020 racial makeup of Clinton County is composed of 90.9 percent White, 2.3 percent Hispanic or Latino, 0.9 percent African American, 0.3 percent American Indian, 0.03 percent Pacific Islander, 0.4 percent Asian, and 0.6 percent of Clinton County's population considers itself other. For the area around the Site, the 2020 Census population estimates by census tract and block data were reviewed and are listed in Table 3-9 for comparison with Clinton County and state population estimates. According to the 2020 Census estimates, the total population of Missouri in 2020 was composed of 75.8 percent White, 4.9 percent Hispanic or Latino, 11.4 percent African American, 0.5 percent American Indian, 0.16 percent Pacific Islander, 2.2 percent Asian, and 2.1 percent as other.

**Employment and Income**

In 2020, Clinton County's resident labor force, defined as the population aged 16 and over, was 16,962 individuals, or 80 percent of the total population (21,184); 10,178 of these workers were employed, resulting in an annual unemployment rate of (for the civilian labor force) of 6.1 percent (USCB, 2022f). Major industries in Clinton County include educational service, health care, and social assistance. Table 3-10 provides the employment characteristics for the state, county, and local community.

## Table 3-10: 2022 Employment Data

| | Missouri | Clinton County | Census Tract 9603 | Census Tract 9603 Block Group 1 | Census Tract 9602.02 | Census Tract 9602.02 Block Group 2 |
|---|---|---|---|---|---|---|
| Population 16 years and over | 4,940,395 | 16,962 | 3,480 | N/A | 3,076 | N/A |
| In labor force | 3,107,514 | 10,178 | 1,918 | N/A | 1,987 | N/A |
| Employed (civilian labor force) | 2,954,860 | 9,539 | 1,856 | N/A | 1,760 | N/A |
| Unemployed (civilian labor force) | 132,657 | 621 | 62 | N/A | 227 | N/A |
| Armed forces | 19,997 | 18 | 0 | N/A | 0 | N/A |
| Not in labor force | 1,832,881 | 6,784 | 1,562 | N/A | 1,089 | N/A |
| Percent unemployed (civilian labor force) | 4.3% | 6.1% | 3.2% | N/A | 11.4% | N/A |
| Top occupation | Management, business, science, and arts occupations | Management, business, science, and arts occupations | Management, business, science, and arts occupations | N/A | Management, business, science, and arts occupations | N/A |
| Top industry | Educational services, and health care and social assistance | Educational services, and health care and social assistance | Educational services, and health care and social assistance | N/A | Educational services, and health care and social assistance | N/A |

Source: USCB, 2022f

The unemployment rate and poverty rate in Clinton County is slightly higher than that of Missouri as a whole.

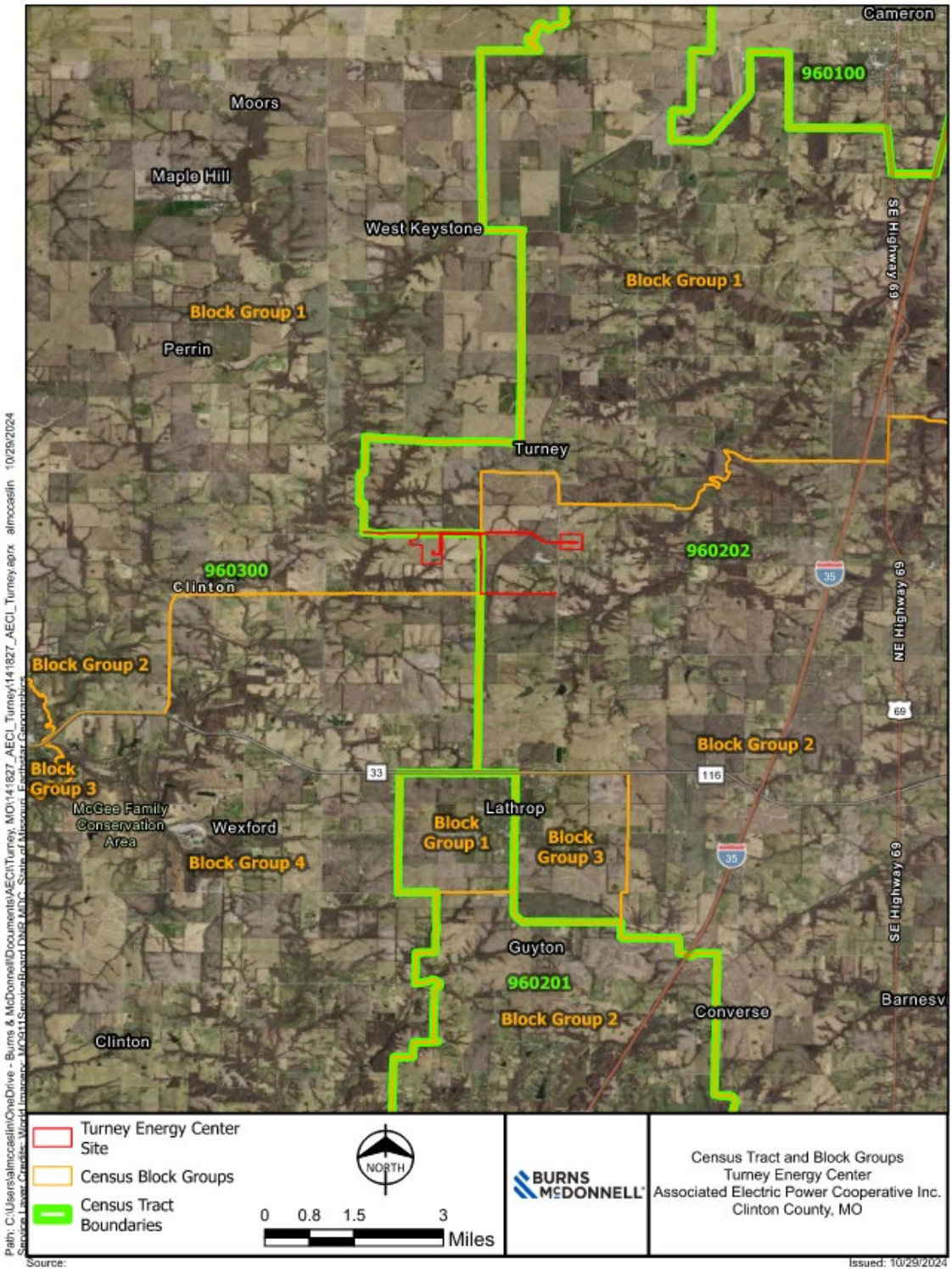
Census Tract 9603 has lower unemployment rates and poverty rates than the state or Clinton County. No income or employment data exists for Census Block 9603 Group 1. Census Tract 9602.02 has higher unemployment rates and lower poverty rates than the state or Clinton County. No income or employment data exists for Census Tract 9603 Block Group 1 or Census 906.02 Tract Block Group 2. Table 3-11 shows income and poverty data for the state, county, and local community.

## Table 3-11: 2022 Income and Poverty

| | Missouri | Clinton County | Census Tract 9603 | Census Tract 9603 Block Group 1 | Census Tract 9602.02 | Census Tract 9602.02 Block Group 2 |
|---|---|---|---|---|---|---|
| Median household income in 2022 dollars | $65,920 | $66,494 | $64,609 | N/A | $78,472 | N/A |
| Families and people whose income in the past 12 months is below the poverty level | 8.5% | 8.4% | 6.4% | N/A | 5.3% | N/A |

Source: USCB, 2022c and USCB, 2022e

## Figure 3-1: Census Tract and Block Groups



**Housing**

Clinton County has 8,955 housings units with 8,050 occupied housing units and 905 vacant housing units. Sixty-six percent of the occupied housing units are owner-occupied. The median value of owner-occupied housing in Clinton County was $187,200, versus the state-wide median value of owner-occupied housing of $199,400. (USCB, 2022a)

**Area Public Service and Utilities**

**Educational Facilities**

The closest school to the Site is Lathrop High School, approximately 3.3 miles south-southeast of the Site within Lathrop, Missouri. The next closest schools are Lathrop Middle School and Lathrop Elementary School, approximately 4.5 miles south-southeast of the Site.

**Medical Facilities**

The closest hospital to the Site is Cameron Regional Medical Center in Cameron, Missouri, about 10.43 miles northeast of the Site. Cameron Regional Medical Center has a 24-hour level three stroke emergency room in the State of Missouri's Time Critical Diagnosis Program. The medical center also has cardiovascular, gastrointestinal, surgeries, cancer, dialysis, radiology, laboratory, and rehabilitation services. The closest level two trauma emergency room is Liberty Hospital located in Liberty, Missouri, approximately 23.59 miles to the southwest of the Site.

During construction, the Emergency Planning Committee ("EPC") is responsible for the emergency response plan. The plan will have a site map showing areas for assembly, location of emergency stations, and site evacuation route.

The site will have on-site safety professionals during working hours for non-life-threatening injuries and first aid treatment. The local medical treatment facility will be used for medical services beyond that scope.

**Fire Protection**

The closest fire department to the Site is located in Lathrop, Missouri approximately 3.6 miles south-southeast of the Site.

**Police Protection**

Because the Site lies within a rural area, it is served by the Clinton County Sheriff's Office, located in Plattsburg, Missouri, approximately 5.8 miles southwest of the Site. The City of Turney, Missouri does have a full-time police department.

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

The Site is in a rural area. It is served by the Clinton County PWSD #4 water supply located in Lathrop, Missouri. Electricity to the Site will be supplied by the electrical grid. Natural gas will be supplied to the site by the Rockies Express Pipeline, LLC operated by Tallgrass Energy Partners. Solid waste will be disposed of through a local service provider and sanitary waste will utilize on on-site septic system with lateral line fields.

**Recreation and Open Space**

Public recreational land does exist near the Site. Wallace State Park, which is located approximately 5 miles to the northeast, includes picnic areas, a playground, hiking trails, fishing, camping, boating, and wildlife viewing opportunities. Ronald and Maude Hartell Conservation Area, which is located approximately 1.6 miles to the west, includes picnic areas, hiking, fishing, boating, and wildlife viewing opportunities.

### 3.10.2 Environmental Consequences

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

#### 3.10.2.1 Proposed Action Alternative

The current capital cost estimate for the improvements is approximately $500 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 Project is expected to be approximately 468 employees. The length of peak employment will range from a few weeks to several months, depending on skill or specialty.

Gas stations, convenience stores, and restaurants in nearby communities including Turney, Lathrop, and Plattsburg could experience increases in business during the construction period in response to activity from construction workers.

The construction workforce required for the proposed Project 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 Project. Clinton County has a 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 Project area. Generally, housing options for construction crews will consist of area hotels or RV camps.

The proposed Project will be located in a rural area with relatively few homes and businesses within close proximity to the proposed Project. Adverse human impacts as a result of the proposed Project will include additional noise and traffic impacts during construction, temporary visual impacts during construction, and changes in long-term visual impacts during operation.

#### 3.10.2.2 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 because no construction or operation would occur.

### 3.10.3 Mitigation

Socioeconomic impacts are expected to be insignificant. Project will generally have a positive impact on the socioeconomics of the surrounding areas. Therefore, no mitigation measures are required for socioeconomic impacts.

## 3.11 Noise

### 3.11.1 Affected Environment

The Project is located in Clinton County, Missouri, approximately 2 miles southwest of Turney. Surrounding the immediate Project site is agricultural fields and some residential structures. There are five residences within 1.3 miles of the proposed construction activity and Project equipment. Primary existing noise sources in the area included insect noise, local agricultural activity, and plane flyovers at monitor location MP1 and local traffic and existing substation noises at monitor location MP2.

**Noise Regulations**

The area immediately surrounding the proposed Project is unincorporated residential and agricultural. There are residential properties to the east, south, and northwest of the Project property and agricultural fields on all sides of the Project.

Applicable Federal, state, county, and municipal noise ordinances were reviewed for the Project and surrounding area. The Project is outside of any municipalities, and the State of Missouri and Clinton County do not have noise ordinances with applicable numerical sound level limits for the Project.

## 3.11.2 Environmental Consequences

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

### 3.11.2.1 Proposed Action Alternative

**Construction**

Project construction would result in temporary and minor noise impacts to 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 (nearest residence is approximately 1/2 a mile away) may temporarily experience increased noise during construction.

Construction of the proposed Project is expected to last approximately 12-18 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 7-day per week 24-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 might have 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 3-12 lists generic activities and their minimum and maximum instantaneous sound levels at 50 feet.

Table 3-12: Range of Typical Construction Equipment Noise Levels in dBA

| Generic Construction Equipment | Minimum Noise at 50 feet | Maximum Noise at 50 feet |
|---|---|---|
| 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 (FHWA) Highway 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 Project 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. There will be periods when concrete needs to dry and no construction occurs. 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 Project area.

**Operation**

A noise study was completed for the Project operational sound levels based on the expected equipment. The noise study is provided in Appendix F and included background sound monitoring and acoustical modeling for the Project.

The Project could operate day or night. Base operational sound levels for the Project indicate that the Project will be audible during periods of low traffic and are expected to cause a significant increase to existing nighttime sound levels of approximately 44 a weighted decibel (“dBA”) at the worst-case receptor. A summary of the existing ambient sound levels and the predicted Project-generated sound levels during operation are shown in Table 3-13 below for the nearest noise-sensitive receptors.

Table 3-13: Project Background and Operational Sound Levels

| Receptor Location | Lowest Daytime/Nighttime Average Sound Levels (dBA)* | Predicted Project Sound Levels (dBA) |
|---|---|---|
| NSA1 | 46 | 44 |
| NSA2 | 46 | 41 |
| NSA3 | 46 | 42 |
| NSA4 | 46 | 35 |
| NSA5 | 46 | 36 |

*Based on L90[a] measurements at monitor location MP1.

(a) L90=level exceeded for 90% of the time

Even though there are no limits in the area to comply with, these predicted unmitigated impacts are likely to have moderate to high adverse effects on the nearby neighbors.

#### 3.11.2.2 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 because no construction or operation would occur.

### 3.11.3 Mitigation

Sound mitigation measures are not required for the Project since there are no applicable noise limits for the Project. Occupational Safety and Health Administration ("OSHA") standards will be met onsite. The Project will utilize low noise emitting equipment and stack silencers to reduce impacts to the surrounding properties.

## 3.12 Transportation

### 3.12.1 Affected Environment

The Project Site is bordered by NE 288th Street (County Road 114), a gravel road at the northern boundary of the project site. NE Breckenridge Road is a gravel road present to the east but does not immediately adjoin with the project site. No data was available regarding the Average Annual Daily Traffic ("AADT") for either road. State Highway (Route) A is the closest roadway to the project site with available data per Missouri Department of Transportation's ("MoDOT") Traffic Volume Maps (MoDOT, 2023). Highway A is two lane, asphalt paved highway to the east of the project site and the 2023 AADT for Route A is approximately 1,972 vehicles per day. A traffic study was completed for the Project to verify road adequacy and flow parameters (Appendix G).

### 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

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

The peak construction labor force for the construction Project and operation workforce is anticipated to be approximately 468 employees. This labor, along with equipment and material deliveries in support of the Project, is expected to increase daily vehicle and truck traffic (above current operation) by approximately 468 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 Project, the impacts will be temporary. Further traffic impacts to NE State Highway A (Route A), NE 280th Street, NE Breckenridge Road, and NE 288th Street were evaluated in a traffic study.

The construction entrance to the site will be on NE 288th Street (County Road 114). Operating permits will be issued by the state or county for oversized truck movements, as required. Because NE 288th Street is a low volume road, the addition of turn lanes is not warranted; however, because of its current less frequent use, the increased traffic may cause damage to the road during construction. A section of unpaved road to the Project site will be paved. Based on current projections, the roads, bridges, and crossings in the area are sufficient for the Project's delivery and transportation needs. The traffic study identified a sight distance issue at the intersection of State Highway A and NE 280th Street and for additional traffic control measures to be implemented at the intersections of NE Breckenridge Road & NE 280th Street and NE Breckenridge Road & NE 288th Street. No adverse impacts are anticipated.

#### 3.12.2.2 No Action Alternative

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

### 3.12.3 Mitigation

As construction and operation of the proposed Project will have only temporary impacts on transportation. Per MoDOT an existing condition survey will be completed. Any damage to roads during construction will be mitigated. A post-construction survey will be completed to verify condition. Existing roads damaged by construction traffic will be repaired once construction is complete.

The Traffic Study (Appendix G) identified a sight distance issue at the intersection of State Highway A and NE 280th Street. The sight distance issue could be mitigated with the use of administrative controls. Examples could include flashing beacons, road signage, etc. The need for additional traffic control measures was also identified at the intersections of NE Breckenridge Road & NE 280th Street and NE Breckenridge Road & NE 288th Street. Recommendations for traffic control measures could include the use of a flagger, yield or stop signs, or staged start/stop times during peak hours. AECI will also coordinate the proper construction signage near access points on the roads used by construction vehicles for the Project to make drivers aware of the increased hazards associated with the construction vehicle(s) presence.

## 3.13 Human Health and Safety

### 3.13.1 Affected Environment

Two potential human health and safety concerns associated with the Project 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/switch stations, generally those greater than 230kV. EMF drops off rapidly with distance from the transmission line (EPA, 2024a). The Project will require a new transmission line interconnection, a proposed new switch station, an upgrade of the existing distribution line from an existing substation in order to accommodate the Project and connect to the AECI's grid. The Facility's access will generally be restricted to AECI employees and contractors, and substations/switch stations are surrounded by security fencing to limit access to the area.

A core value of AECI is the safety of its employees and contractors. As such, AECI has identified certain hazards associated with power production. 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.

### 3.13.2 Environmental Consequences

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

#### 3.13.2.1 Proposed Action Alternative

EMF will be strongest directly under the transmission line and will decrease with increasing distance from the transmission line ROW. The proposed Project requires the construction of a new interconnection transmission line to a proposed switch station and an upgrade to an existing distribution line to an existing substation, all outside of the Site boundary, with a distribution line passing through several housing areas. The upgrades to the distribution line are not anticipated to increase risks due to EMF along the current ROW. The new interconnection transmission line will be constructed along a new route, primarily through agricultural fields. The new transmission line is anticipated to be less than 230 kV; therefore, increased EMF exposure is expected to be minimal.

During construction, the Project 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 Project. The major risk to the general public will be from an increase in traffic volume on the roadways near the proposed Project as a result of commuting construction workers and transportation of equipment and materials.

Construction and operation of the proposed Project 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.

#### 3.13.2.2 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 because no construction or operation would occur.

### 3.13.3 Mitigation

A comprehensive safety program is in place at AECI. For instance, safety bulletins are distributed weekly, and procedures are frequently reviewed and updated. Also, 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 onsite. Accidents and injuries will be reported to the designated safety officer onsite.

During construction and operation, all used oil generated at the proposed 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 Project, 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.

## 3.14 Summary of Impacts

The following table (Table 3-14) provides a summary of potential impacts by Alternative.

## Table 3-14: Summary of Potential Impacts

| Resource | Impacts from Proposed Action | No Action Alternative |
|---|---|---|
| Air Quality | The existing air quality in the Clinton County area is designated as attainment or unclassifiable in regard to the NAAQS for all criteria pollutants. Construction of the Project will generate air emissions that are low and temporary in nature and will not lead to long-term impacts. It is anticipated that the Project would not affect the attainment status for Clinton County. The Owners would comply with the issued MDNR construction air permit that would include emission limitations, monitoring requirements, and other terms and conditions. | The PPAs required to meet load requirements could lead to increased power production from coal-fired facilities, which would lead to worsened air quality. |
| Biological Resources | The Project will not result in short- or long-term impacts to protected species or their critical habitats for federally endangered or threatened species.<br><br>Construction and operation of the Project would not result in a significant change to the amount or type of vegetation onsite as it has been continuously used for agricultural purposes and disturbed. | No impacts anticipated for this alternative |
| Cultural Resources | Based on the distance from NRHP properties and the concurrence from SHPO, the Project would have no adverse affects on historic properties or cultural resources. An IDP will be followed for any inadvertently discovered or affected during project construction. | No impacts anticipated for this alternative. |
| Geology and Soils | The Project site would need to be graded and grading design would change the topography to facilitate storm water drainage patterns. Storm water runoff on the Site would be collected and directed to an onsite storm water detention pond.<br><br>The Site will require excavation for underground utilities and deep structures such as pump pits. For the transmission line, foundation construction would occur after vegetation clearing is complete. Excavated soils from foundation drilling would be used for foundation backfill if appropriate.<br><br>Surplus soils would be spread within upland areas of the right of way and stabilized.<br>After all line construction is complete, the ROW is restored.<br><br>Soils at the Project site would be converted to plant site development with much of the area occupied by the facilities and covered by concrete and gravel areas. The transmission line corridor would be cleared but only soil areas at the structure locations would be permanently excavated. Other areas of hydric and statewide important soils would remain largely unaffected by construction and following any necessary stabilization would be available for agriculture and other activities. | No impacts anticipated for this alternative. |
| Infrastructure, Transportation, Public Health and Safety, and Hazardous Materials | <u>Utilities:</u> *No outages would be required to construct the new transmission line and proposed switch station.* Outages would be required to update the distribution line and to allow for connection with the TEC. The Project would require minor construction of a water pipeline to connect with the district system.<br><br><u>*Transportation:*</u> The daily automobile traffic to the site would increase from approximately 1,972 vehicles per day in the initial stages of construction to approximately 2,440 vehicles per day during peak. The traffic would begin to decrease until it reaches approximately 1,982 vehicles per day near construction | No impacts anticipated for this alternative |

| Resource | Impacts from Proposed Action | No Action Alternative |
|---|---|---|
| | completion.<br><br>No permanent changes to existing road alignments are anticipated as part of this Project. No permanent damage to roads is anticipated with the implementation of mitigation measures. Paving of existing roads is generally beneficial for the community.<br><br>*Public health and safety:* Access roads would be blocked from public access. Existing healthcare facilities are anticipated to be sufficient for the Project during construction and operation, and no necessary improvements are anticipated. The Project would have fire suppression measures of its own, as well as facilities for the storage of hazardous materials. No City fire department improvements are anticipated. Police protection would be provided by the Clinton County Sherriff's Department during both construction and operations, and no improvements are anticipated.<br><br>*Waste management:* Local waste disposal and sanitation facilities are not anticipated to be adversely affected by the additional waste streams generated during construction and operation of the Project. No additional solid wastes would be generated by the Project as byproducts from the production of electricity. | |
| Land Use, Recreation, Farmland, and Coastal Facilities | *Land use:* Construction and operation of the Project would impact the existing cropland use; however, it will not have a significant impact on prime farmland or farmland of statewide importance.<br><br>*Recreation:* No direct impacts to parks are anticipated. The transmission line interconnection route is new ROW through privately owned land. Construction traffic and any road closures would be temporary in nature and cease after construction is complete.<br><br>*Farmland*: Farming activities currently occur at the Site; however, no significant impacts to prime farmland are anticipated and an alternative site does not need to be considered. Overhead transmission lines will continue to allow farming to occur within the ROW and any area not permanently converted for plant use will return to farmland if practical. In addition, the Project's electrical clearances and ROW width are designed to limit neutral-to-earth and induced voltages that can create concern with livestock operations.<br><br>*Coastal:* No coastal facilities are located within the Project Study Area or macro- corridors. No impacts to coastal facilities are anticipated due to the Project | No impacts anticipated for this alternative |
| Noise | Project 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.<br><br>A preliminary noise study was conducted. The results of this study showed expected noise level contributions of 44 dBA at the nearest NSA. AECI plans to install stack silencers to reduce impacts to the surrounding properties. As such, all residences are predicted to be below EPA noise guideline levels. | No impacts anticipated for this alternative |

| Resource | Impacts from Proposed Action | No Action Alternative |
|---|---|---|
| Socioeconomics | During construction, the Project would create up to 468 jobs during peak activity. The number of workers onsite would begin at nominal levels at the beginning of construction and steadily increase over time, declining as major construction activities are completed. Local businesses near the Facility, such as gas stations, convenience stores, and restaurants, may experience increases in business during construction due to construction workers onsite. This increased demand would cease after construction is complete and would not add considerably to the demand on existing business, services, or community facilities.<br><br>The Project would create up to 8 full-time permanent jobs. These new permanent employees may be from the local workforce or may relocate to the area for the position. Considering the population of the City of Turney, other nearby communities, and Clinton County, the addition of 8 jobs is not anticipated to considerably increase demand for housing, schools, or other local services.<br><br>The Project would not directly impact any residences, public facilities, farming structures, cemeteries, religious facilities, or other structures. Temporary disruptions to normal traffic may occur during construction as equipment and employees commute to and from the Project. The frequency of the daily workforce automobile traffic would follow the Project workforce numbers onsite at a given time. The daily automobile traffic to the site would increase from approximately 1,972 vehicles in the initial stages of construction to approximately 2,440 vehicles for peak months. The traffic would decrease until it reaches approximately 1,982 vehicles near construction completion and during operation. | No impacts anticipated for this alternative |
| Visual Resources | The aesthetics of the surrounding area would be altered by the Project. Vegetation would need to be cleared permanently for the Project Site. The Project site would require lighting for safety and security. Light emissions at the Project Site would increase compared to current levels of light emissions as a result of facility lighting. The dominant visual features of the Project would be a stack (approximately 140 feet tall) and other facility equipment at the Project Site.<br><br>The transmission line construction will occur within existing ROW. | No impacts anticipated for this alternative |
| Water Resources | *Surface Water*: The Site has been chosen to avoid permanently impacting surface water sources as much as practical.<br><br>*Groundwater*: No groundwater is located on the Site and no groundwater will be used for the Project. Therefore, there would be no impacts to groundwater.<br><br>*Floodplain*: The Site is not within 100- or 500-year floodplains.<br><br>*Wetlands/Riparian:* The Project Site has been selected to avoid and minimize wetland impacts as much as practical. All laydown and staging areas necessary for construction have been selected to avoid any wetland impacts. All wetlands will be spanned by transmission structures and no fill will enter any waterways. One stream will be crossed by the distribution line upgrades and may receive civil design work. This stream is already spanned by the existing distribution line and the impacts from upgrading will be consistent with the impact from the existing distribution line. AECI will coordinate with MDNR to complete an Antidegradation | No impacts anticipated for this alternative. |

| Resource | Impacts from Proposed Action | No Action Alternative |
|---|---|---|
| | Review. Seven waters were determined to be jurisdictional through consultation with USACE. The Project will not have a significant impact on unavoidable jurisdictional wetlands. AECI will obtain the applicable NWP for the Project. No other mitigation measures are anticipated<br><br>*Wastewater*: Facility waste streams from the Project will be directed to an onsite septic system. Process water from the Project and stormwater will be discharged to an onsite settling pond. | |

# 4.0 Cumulative Impacts

Cumulative impacts are  impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.

The following resources were determined to have no direct effects. Therefore, there are no cumulative effects, and will not be further evaluated in this section:

- Floodplains
- Water Resources
- Coastal Resources
- Biological Resources
- Historic and Cultural Resources
- Socioeconomics
- Human Health and Safety

## 4.1 Region of Influence

To determine cumulative effects, impacts on each resource are analyzed for a geographic scope that includes an area footprint appropriate for the resource. Various areas of Clinton County were analyzed for regional cumulative impacts. Local utility and Missouri Public Service Commission (“PSC”) webpages were accessed. The MoDOT Statewide Transportation Improvement Plan (“STIP”) interactive GIS website was accessed (MoDOT, 2024) to determine if any road projects are occurring in the area. News articles were researched, and discussions were held with local agencies. The identified actions are described in the following section.

## 4.2 Past, Present, and Reasonably Foreseeable Future Actions

Past actions that have affected the resources of the area include:

- Private agriculture on and near the Site is common, which resulted in the removal of native vegetation;
- Railroad development took place; railroad was removed from use prior to 1984;
- Construction of roadways removed land from use and created on-going air and noise sources;
- Construction of the existing distribution line east of the proposed TEC took land out of use and spanned several streams;
- Construction of the existing distribution substation at the intersection of NE State Hwy A and NE 280$^{th}$ Street took land out of use;
- Construction of the existing water pipeline and water tower near the proposed TEC took land out of use;
- Construction of the existing gas pipeline crossing the TEC site and the existing natural gas facility to the east took land out of use;
- Residential development within the surrounding area removed land from use.

Present actions that have affected the resources of the area may include:

- Kinder Morgan natural gas facility operations (Rockies Express Pipeline station) will impact its immediate footprint for various resources;

Reasonably foreseeable actions that may affect the resources of the area include the following:

- The State of Missouri has established a Priority Climate Action Plan ("PCAP") that was submitted to EPA on February 27, 2024 (MDNR, 2024b), as part of the Inflation Reduction Act grant process. The PAP presents the State's intention to reduce $CO_2$ emissions by following "Priority Measures" that support the development of solar farms and increase grid resiliency. Clinton County has a moratorium on solar and wind resource development in response to residents being generally opposed to these developments. As such, none are reasonably foreseeable.
- AECI will pave roads from the Project site to the nearest highway to provide better/more reliable access to the area but are doing so outside of RUS financing. There may be temporary impacts to local resources during construction, but no long-term cumulative effects are anticipated.
- Highway projects unrelated to the Proposed Action including pavement rehabilitation of north and southbound lanes on I-35 from Shoal Creek to north of Route 116 near Lathrop, Missouri is expected in 2025. Pavement resurfacing on Highway H east and westbound lands through Turney, Missouri and on Highway 69 north and southbound lanes from Route 116 near Lathrop to the Clay County boundary are expected to occur in 2026. These projects will have minimal effects during construction, but no additional long-term effects are anticipated.

The various entities involved in implementing each of these actions would have been and/or are required to obtain their own permits, clearances, and/or licenses prior to construction and operation of their respective actions. These entities would also be responsible for the on-going maintenance and compliance of their actions. The potential cumulative impacts on each resource are described in the following sections.

### 4.2.1 Land use, Formerly Classified Land, Geology, Soils, and Farmlands

Past and present actions have affected the land use, soils, and farmlands in the surrounding area, much of the native vegetation was historically converted to agricultural use. Existing development in the area has removed farmland from agricultural use. The Project Site would further remove land from agricultural use due to conversion of soils to plant site and switch station site development. Much of the area occupied by these facilities will be covered by concreate and gravel areas. Transmission and distribution line structures would require excavation for foundations to be installed. Trench excavation would be relatively shallow and would not be expected to have any impact on the area geology. Care would need to be taken during excavation and installation of the water pipeline, natural gas lateral, and transmission/distribution line structures to minimize overall soil disturbance, control runoff, and avoid mixing of soil profiles and compaction during storage and trench backfilling. Should trenchless techniques be used for installation of pipelines, potential disturbance to soils would be reduced compared to trench installation. The Project site would be graded and grading design would change the topography to facilitate site construction and stormwater drainage patterns. Impacts to prime farmlands and farmlands of statewide importance will be limited as the acres below overhead electric lines would remain farmable. After construction is completed, disturbed areas would be stabilized as appropriate, either revegetated or covered with gravel or solid pavement material. With the implementation, monitoring, and maintenance of appropriate BMPs, it is anticipated that the Project would have minimal impacts on geological resources. Therefore, minimal cumulative impacts to soils and geological resources are anticipated. Additionally, NRCS concluded that the Project's total screening score for the site was below their threshold of 160, indicating no significant impacts to prime farmland are anticipated and an alternative site does not need to be considered. It is not anticipated that the Project will contribute considerably to cumulative soil impacts due to these factors.

Clearing of the ROW for the construction of new transmission line and expansion of the existing water pipeline would contribute the cumulative loss of woodland habitat. The Project would require removal of approximately 9.1 acres of ROW. The Project would introduce land uses compatible with current land uses that are already

present in the surrounding area. Due to this, cumulative effects on land cover and land use are not considered substantial.

### 4.2.2 Wetlands and Water Bodies

As discussed in Section 3.3.1, several wetlands and water bodies were identified for the Project Area, and there are more adjacent to the site. Due to their abundance in the Study Area, it seems likely that agricultural use and past projects may have impacted and likely altered wetland and water bodies in the region. Present and future actions are subject to federal permitting requirements that may not have existed previously. While the identified present and future actions in the area may also have the potential to impact wetlands and water bodies, each of the entities undertaking those actions will be required to survey, permit, and/or mitigate impacts to wetlands, implementing what the USACE determines is appropriate. An AJD was received from USACE on February 3, 2025. The Project site could affect seven jurisdictional features including one pond, one wetland, and two channels on the TEC site; one channel on the transmission line corridor; one channel on the distribution line corridor; and one channel on the switch station site. NWP for wetland and water body impacts will be obtained as needed. The cumulative impact to wetlands and water bodies is therefore anticipated to be minimal.

### 4.2.3 Aesthetics

The landscape of Clinton County has been altered by agriculture, and residential and business development. Construction of identified past activities required vegetation clearing and, in some instances, built permanent visual features into the viewshed (e.g., existing transmission line, existing substations, and other community infrastructure). The aesthetics of the surrounding area would be minimally altered by the Project. Vegetation would need to be cleared from the TEC and switch station footprints and tree removal from the ROW would occur. Light emissions at the Project site would increase compared to current levels of light emissions as a result of facility lighting. The approximately 140-foot stack at the facility, other facility equipment, transmission line structures, and switch station would introduce new features to the landscape.

The aesthetics of the surrounding area could be altered by reasonably foreseeable future actions. Vegetation could need to be cleared and light emissions from construction could occur. However, none of the identified future actions are likely to cause long-term effects, having a limited footprint. Overall, the aesthetics of the area are not anticipated to significantly change and would not cumulatively adversely contribute to the aesthetics of Clinton County.

### 4.2.4 Air Quality

Past actions would have contributed to construction emissions and vehicle emissions in the area. Present actions have the potential to temporarily impact air quality during construction and operation. Construction activities are typically intermittent and temporary in nature, ceasing after construction is complete.

The identified future actions are reasonably foreseeable actions that are expected to have minimal and temporary air emissions during construction, but minimal additional emissions in the long term. The State of Missouri does not have any definitive $CO_2$ emissions reduction goals (C2ES, 2024). A Comprehensive Climate Actions Plan (“CCAP”) is being developed to set emission reduction targets (MDNR, 2024b), but as previously stated, it has submitted a PAP with actionable Priority Measures as part of the Inflation Reduction Act grant process. The TEC fosters these Priority Measures by providing reliable, fast-start capacity to cover solar shortfalls and improved transmission facilities.

There is no current state policy mandating $CO_2$ emissions reductions. Target $CO_2$ emission reduction levels are being developed in conjunction with the CCAP. The increases associated with the TEC will be minimal over current

levels (~0.5% of State total $CO_2$). Cumulatively, emissions are not anticipated to substantially impact the overall air quality in the region, as the MDNR and EPA regulate activities to maintain ambient air quality. Therefore, no adverse cumulative impacts to air quality are anticipated as a result of the identified actions.

### 4.2.5 Noise

Existing residential and agricultural activities, and associated traffic all currently contribute to noise in the Study Area. Identified past actions may have increased existing noise during construction, and the addition of large roadways has created a long-term source of noise in the area. The identified present and future actions will have temporary construction noise associated with them.

Operational impacts from most of the actions are anticipated to be negligible long-term. The existing substations will have localized noise impacts, and the roadways are a long-term source of noise in the community. There have been localized cumulative noise impacts near the Project Site from the various actions. However, none are currently considered adverse cumulative noise impacts because most of the actions are expected to have no long-term impact or are far enough away to not create cumulative impacts.

### 4.2.6 Transportation

Construction of the Project will increase traffic to the area; however, these impacts would be intermittent and temporary in nature and would utilize existing roadways. Project construction traffic accessing the Site would primarily consist of automobile traffic for craft labor, construction management staff, contractors, equipment, and vendors. Material and equipment deliveries may be made by large trucks as well as heavy haul vehicles. Traffic on the Project site is anticipated to primarily consist of heavy construction equipment and material transport equipment. The frequency and intensity of the daily workforce automobile traffic would follow the Project workforce numbers at a given time. When possible, bulk deliveries would be scheduled to avoid peak traffic on local roads.

A traffic study was conducted in conjunction with this EA. The study identified a sight distance issue at the intersection of State Highway A and NE 280$^{th}$ Street. The sight distance issue could be mitigated with the use of administrative controls. Examples could include flashing beacons, road signage, etc. The need for additional traffic control measures was also identified at the intersections of NE Breckenridge Road & NE 280$^{th}$ Street and NE Breckenridge Road & NE 288$^{th}$ Street. Recommendations for traffic control measures could include the use of a flagger, yield or stop signs, or staged start/stop times during peak hours.

No permanent changes to roads are anticipated as a part of this Proposed Action. Several roads leading to the TEC site may be paved; however, road paving would be conducted separately from the Proposed Action. No permanent damage to roads is anticipated. As mentioned, MODOT has requested a pre- and post-construction road assessment survey occur and that any necessary repairs be made.

# 5.0 Summary of Mitigation

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

## Table 5-1: Summary of Mitigation

| Resource | Potential Environmental Consequences | Mitigation Measures Required | Intensity of Residual Effects |
|---|---|---|---|
| Land Use, Formally Classified Lands, Geology, Soils, and Farmland | Construction and operation of the Project will occur on previously disturbed land within the Facility boundary. Land use within the area is expected to change from agricultural to industrial for a small portion of the site, and land not used for facilities will likely still be farmable. No impacts to geology or formally classified lands are anticipated. | No mitigation measures are anticipated. | Minimal |
| Floodplains | Construction will not occur in any floodplains. | No mitigation measures are anticipated. | None |
| Wetlands and Water Bodies | 4.55 acres of wetlands and 24 streams are present within the construction zone and have the potential to be impacted by the Project and associated transmission line and water pipeline construction. | All wetlands will be spanned by transmission structures and no fill will enter any waterways. One stream will be crossed by the distribution line upgrades and may receive civil design work. This stream is already spanned by the existing distribution line and the impacts from upgrading will be consistent with the impact from the existing distribution line. One pond located on the TEC site may receive civil design work. AECI will coordinate with MDNR to complete an Antidegradation Review. Seven of these waters were determined to be jurisdictional through consultation with USACE. AECI will obtain the applicable NWP for the Project. The Project will not have a significant impact on unavoidable jurisdictional wetlands. No other mitigation measures are anticipated and BMP will be used as appropriate.. | Low |
| Water Resources | A new 6-inch water pipeline will supply water to the facility from the existing water tower. A portion of the water pipeline will be upgraded, and a portion will be new construction to extend the existing water pipeline (See Figure 1-2). | Facility will have its own dedicated water supply per agreements with Clinton County PWSD #4. No mitigation is necessary. | Not Applicable |
| | Soil erosion and stormwater runoff into nearby streams and rivers may impact waterways during construction. | Before construction activities commence, AECI's EPC contractor will apply for the appropriate MDNR NPDES Construction Stormwater permit and will follow all requirements of the permit. AECI's EPC contractor will prepare a SWPPP that will describe the BMPs to be implemented during construction. | Minimal |

| Resource | Potential Environmental Consequences | Mitigation Measures Required | Intensity of Residual Effects |
|---|---|---|---|
| | Stormwater runoff into nearby streams and rivers may impact waterways during operation. | Once the EPC files the Notice of Termination (“NOT”) and MDNR inspects the site and it passes, that will conclude the construction stormwater permit obligation. AECI’s operational runoff for the plant will be covered in the facility’s water permit. | Minimal |
| Threatened and Endangered Species | The Project may affect but is not likely to adversely affect the Indiana bat, northern long-eared bat, gray bat, tricolored bat, monarch butterfly, or western regal fritillary butterfly. | Tree clearing will occur outside of bat roosting season in Missouri (April 1-Novemver 15). Approximately 9.1 acres of tree clearing is proposed. | Minimal |
| | Potential bird strikes on transmission lines may occur. | There is no suitable habitat for migratory birds or eagles on the Project Site. Approximately 9.1 acres of tree clearing is proposed. The Project does not cross major waterways. | None |
| Vegetation | Construction will occur on previously disturbed soils on an active agricultural field. | No mitigation measures are anticipated. | Not Applicable |
| | It is not expected that construction related disturbances will provide an opportunity for the establishment of invasive species as the area will not be conducive to the growth of vegetation. | No mitigation measures are anticipated. | None |
| Wildlife | Facility will be built on an existing agricultural field. Habitat and foraging characteristics will be permanently removed before and after the Project. Areas not permanently converted by the facility will be reseeded with vegetation or returned to agricultural use if practical. | No mitigation measures are anticipated. | Minimal |
| | During construction, noise and activity may drive wildlife out of the area immediately surrounding the Project. | No mitigation is needed. After construction ends, wildlife will return. | Minimal |
| | Construction activities will not introduce or spread invasive species in the area. | No mitigation measures are anticipated. | None |
| Historical and Cultural Properties | Construction will occur on previously disturbed soils and no eligible resources were identified. | No mitigation measures are anticipated. An IDP (Appendix E) has been created. | Minimal |
| Aesthetics | There will likely be visual contrast from the new Facility. | General landscaping and maintaining existing tree line buffer where practical. No mitigation measures are anticipated. | None |

| Resource | Potential Environmental Consequences | Mitigation Measures Required | Intensity of Residual Effects |
|---|---|---|---|
| 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. | AECI's EPC contractor has prepared a fugitive dust control plan as a component of their Environmental Operations Plan. The Project will utilize BMPs and reasonable precautions such as: application of water or chemicals (palliatives) to control dust, installation of gravel/stone on unpaved roads, limiting access of unnecessary vehicles or equipment in the Project area, confining vehicular and equipment traffic to maintained roads, where feasible; establishment of non-driving areas and driving areas; erosion controls outlined in the SWPPP; maintenance of paved roads, as needed; restricting vehicles to slow speeds on the Project site. Dust control methods must also be included in the SWPPP. | Minimal |
| | 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 site, and the number and type of construction activities occurring, etc. | Air emissions from construction equipment are low and temporary in nature, fall off rapidly with distance from the construction site, and will not result in any long-term impacts. During construction, steps to reduce air emissions may include reducing the idling of construction vehicles. No mitigation is anticipated. | Minimal |
| | Emissions will occur from operation of the Project | Air emission calculations have determined that the Project will not be a major PSD source, but will require a Part 70 Major Source operating permit. All equipment will meet the applicable NSPS and NESHAP limits. The Project will include an SCR system to control $NO_x$ emissions. Good combustion practices (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 $PM_{2.5}$. AECI will comply with the requirements in the air construction permit, once received. A Title V operating permit will be applied for within 12 months after the commercial operation date. | Low |
| Socioeconomic and Community Resources | Project will generally have a positive impact on the socioeconomics of the surrounding areas. | No mitigation measures are anticipated. | None |

| Resource | Potential Environmental Consequences | Mitigation Measures Required | Intensity of Residual Effects |
|---|---|---|---|
| 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. | 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 area. | Minimal |
| | Noise will be produced from the operation of the Project. | Sound mitigation measures will be included in the base design of the Project including low noise emitting equipment. Stack silencers will be utilized to reduce impacts to the surrounding properties. Details of these measures will be determined as the Project proceeds. | Minimal |
| Transportation | Construction of the Project will cause increased traffic in the area surrounding the Project. | Construction and operation of the proposed Project will have only temporary impacts on transportation. The Traffic Study identified a sight distance issue at the intersection of State Highway A and NE 280th Street. The sight distance issue could be mitigated with the use of administrative control. Example could include flashing beacons, road signage, etc. The need for additional traffic control measures was also identified at the intersections of NE Breckenridge Road & NE 280th Street and NE Breckenridge Road & NE 288th Street. Recommendations for traffic control measures could include the use of a flagger, yield or stop signs, or staged start/stop times during peak hours. AECI will also coordinate the proper construction signage near access points on the roads used by construction vehicles for the Project to make drivers aware of the increased hazards associated with the construction vehicle(s) presence. | Minimal |
| | 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. Road may be paved in advance of the Proposed Action to prevent damage to the extent practical. | Minimal |
| Human Health and Safety | EMF will be strongest directly under the transmission line and decreases with increasing distance from the transmission line ROW. The proposed Project is not anticipated to significantly increase the existing EMF levels in the current transmission corridor. | No mitigation necessary. | None |

| Resource | Potential Environmental Consequences | Mitigation Measures Required | Intensity of Residual Effects |
|---|---|---|---|
| | During construction, the 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 Project. The major risk to the general public will be from an increase in traffic volume on the roadways near the proposed Project 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 Project. Increases in traffic will be temporary in nature and following construction will decrease to acceptable, safe travel levels. | Minimal |
| | 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 AECI. 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 onsite. Accidents and injuries will be reported to the designated safety officer onsite. | Minimal |
| | Construction and operation of the proposed Project 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 Project, 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 Project and public involvement plan.

## 6.1 Public Involvement

A public open house was held on September 18, 2024, at the Lathrop Community Center in Lathrop, Missouri. Several methods of outreach were used to inform the public of this meeting. Approximately 1,200 email invitations and 1,800 postcards were sent, and a social media campaign was conducted which reached 2,000 people. At the public open house, there were 80 in-person attendees. Two written comments were received at the meeting; one positively commenting on the information presented in the meeting and one comment regarding enhancing the roads between the TEC site and Route A. Additionally, three email inquiries were received, two regarding paving and integrity concerns for the roadways and one regarding transmission map/tie-ins.

A virtual meeting was held on May 30, 2023 with the Clinton County Commission to provide an introduction to the Project. On July 18, 2023 AECI met with the Commission at the Clinton County Courthouse in Plattsburg, Missouri to discuss zoning for the project. Public hearings regarding the zoning of the Project were held on September 14, 2023 and December 14, 2023. Additionally, AECI met with the Clinton County Commission to discuss tax abatement for the Project on April 2, 2024; June 27, 2024; and September 5, 2024.

Various meetings were held at the Clinton County Courthouse in Plattsburg, Missouri to discuss zoning for the Project. AECI met with the Clinton County Zoning Administrator on June 20, 2023. The Clinton County Zoning Commission held public hearings on September 7, 2023 and December 7, 2023. An additional meeting with the Zoning Commission was held on October 5, 2023.

On November 14, 2023, members of AECI met with Missouri legislators Mazzie Boyd-Christensen, Jeff Farnan, Peggy McGaugh, Josh Hurlbert, Dean Van Schoiack, Bill Falkner, Breanda Schields. An introduction to the Project was discussed. No concerns were expressed at the time.

Various meetings were held with Clinton County PWSD #4 throughout 2024 (April 4, May 9, June 6, and June 17). Water supply needs for the Project were discussed. Two Clinton County Commissioners and the Superintendent of Lathrop R-II School District attended the meeting on June 17, 2024. No concerns were expressed at the time.

On April 17, 2024, separate meetings were held with Missouri District 12 State Senators Rusty Black and Cindy O'Laughlin at the capital building in Jefferson City, Missouri. An introduction to the Project was discussed. No concerns were expressed at the time.

## 6.2 Agency Consultation

Letters were sent to agencies to inform agency contacts that AECI had engaged RUS and was requesting financing for the Project. The letter provided a Project description and explained that the action triggers an EA. The agencies were provided with this information on the Project 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] | September 6, 2024 | Kansas City District | An AJD request was submitted on July 19, 2024. The AJD was received February 3, 2025. |
| USEPA[2] | September 6, 2024 | Meg McCollister | No response received. |
| USFWS[3] | September 6, 2024 | John Weber/Kathryn Bulliner | USFWS response concurred with the determination that the Project is not likely to affect the Indiana bat, northern long-eared bat, gray bat, tricolored bat, monarch butterfly or western regal fritillary butterfly. |
| FAA[4] | September 6, 2024 | Chris Smith/Brian Boehmer (MO DOT) | MoDOT's Aviation Department was forwarded the initiation letter by FAA. MoDOT response that the Project may require formal notice with FAA and the Notice Criteria Tool should be consulted to determine if formal notice was required. |
| US DOE – NEPA Policy and Compliance | September 6, 2024 | Brian Costner | Response stated DOE had no interest in providing input to the Project. |
| **State Agencies** | | | |
| MO NRCS | September 6, 2024 | Scott Edwards/Nathan Bilke | Project required Form AD-1006 Farmland Conversion Impact Rating be filled out. Follow up resulted in a score below the Farmland Protection Policy Act thresholds. |
| MO DNR, Director | September 6, 2024 | Dru Buntin/Hannah Humphrey | Letter response was received summarizing environmental impact considerations that should be reviewed regarding the Project. |
| MO DNR, Division of Environmental Quality | September 6, 2024 | Kyra Moore | A letter response was received from MDNR as stated above. Ongoing coordination with various MDNR Divisions is occurring for draft resource permits. |
| MO SHPO | September 6, 2024<br>October 29, 2024 | Dawn Scott | Email response stated that project submission had been received. Follow-up letter sent with Cultural Resources Report resulted in a finding of no adverse affect to historic properties or cultural resources by the Project. An IDP will need to be included for any historic properties that may be inadvertently discovered or affected during project construction. |
| MoDOT | September 6, 2024 | Patrick McKenna/Melissa Scheperle | Email response noted that MO DOT should be notified if improvements require alteration to or additional traffic control devices or auxiliary turn lanes. Response also stated that driveways accessing the site on Route A must be evaluated for sight distance and geometric design and requires a driveway permit. Route A require pre-construction documentation and evaluation during construction. Any damages must be remedied at contractor expense. Utility permits may be required for any work on the ROW and surety bond established. |
| MO Natural Heritage Inventory/MDC | September 6, 2024<br>December 6, 2024 | Environmental Review Coordinator/Kelly Rezac | Response stated that the Project was identified as a Level 3 with records of federal-listed species or critical habitats near the project site. No records were identified within the project area. The Project was identified as a Level 2 with records of state-listed endangered or state-ranked species and communities of concern. Records indicate the likely presence of the American Badger and Eastern Tiger Salamander as state ranked species (vulnerable) near the Project area. The response did not identify state-listed T/E species as likely occurring in the Project. |

| | | | |
|---|---|---|---|
| | | | Recommendations include consultation with USFWS, minimize erosion and sedimentation/runoff to nearby streams and lakes and adhere to CWA permit conditions with MDNR and USACE, use of BMPs, revegetation, minimize tree-clearing and conduct during bat's inactive season, monitor for bald eagle nests, and to inspect and clean equipment thoroughly before moving between project sites to prevent spread of invasive species. |

[1] United States Army Corps of Engineers
[2] United States Environmental Protection Agency
[3] United States Fish and Wildlife Service
[4] Federal Aviation Administration

Agencies that responded expressed no concern regarding the Project. In general, agencies responded that the Project should obtain permits if needed prior to any construction.

### 6.2.1 Federal Permitting

Appendix H provides the Federal permits and approvals required for the Project.

### 6.2.2 State Agency Coordination

The following sections provide details about specific State agency coordination and correspondence, as well as a list of state permits required for the Project.

#### 6.2.2.1 Missouri Department of Transportation (MoDOT)

AECI met with MoDOT representatives Brenda Harris, State ROW Manager; Jennifer Becker, State Utilities Coordinator; and Jay Wunderlich, Director of Government Affairs at their offices in Jefferson City, Missouri on November 14,2023. An introduction of the Project was discussed. No concerns were expressed at the time.

#### 6.2.2.2 Missouri Department of Conservation (MDC)

AECI met with MDC Deputy Director General Aaron Jeffries at MDC offices in Jefferson City, Missouri on November 14, 2023. An introduction of the Project was discussed. No concerns were expressed at the time.

#### 6.2.2.3 Missouri Department of Natural Resources (MDNR)

AECI met with MDNR representatives in at MDNR offices in Jefferson City, Missouri on April 17, 2024. An introduction of the Project was discussed with a focus on the purpose and need of the Project and planned environmental efforts. A letter response to the project initiation letter was received on September 27, 2024. The letter response summarized the environmental considerations for evaluating the Project's environmental impacts under NEPA.

### 6.2.3 Missouri State Historic Preservation Office (SHPO)

A findings letter was sent to the Missouri SHPO on September 6, 2024, providing preliminary information about the Project and a follow-up letter was sent on October 29, 2024. The SHPO concurred with all findings in the cultural survey and subsequent correspondence with a finding of no adverse affect to historic or cultural properties.

### 6.2.4 State Permitting

Appendix H provides the State permits and approvals required for the Project. The table includes permits that are related to the overall AECI Project, including permits that are the responsibility of entities other than AECI.

## 6.3 Tribal Coordination

On September 6, 2024, Section 106 Consultation Letters that provided preliminary Project details were mailed by RUS to the tribes listed below.

- Apache Tribe of Oklahoma
- Iowa Tribe of Kansas and Nebraska
- Iowa Tribe of Oklahoma
- Omaha Tribe of Nebraska
- Osage Nation
- Otoe-Missouria Tribe of Indians, Oklahoma
- Sac & Fox Nation of Missouri in Kansas and Nebraska
- Sac & Fox Nation of Oklahoma
- Sac & Fox Tribe of the Mississippi in Iowa

Section 106 Consultation Letters containing further details about the Project were mailed to the tribes listed above on October 29, 2024. Receipt notifications verified all Tribes received the letters by October 31, 2024. The conclusion of the Section 106 30-day timeline for the finding of no adverse affect letters was December 6, 2024. No comments were received.

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# 8.0 List of Preparers

The environmental review for the Project was prepared by RUS, AECI, and Burns & McDonnell Engineering Company, Inc. The following is a list of preparers of this document.

**Rural Utilities Services**

- Environmental and Historic Preservation Division

**Associated Electric Cooperative Inc.**

- Rob LeForce, Environmental Analyst Land & Water Resources
- Blake Pinkerton, Manager Air Quality

**Burns & McDonnell Engineering Company, Inc.**

- Chris Howell, Project Manager
- Audra McCaslin, Staff Environmental Scientist
- Taylor Volkers, Assistant Environmental Engineer
- Jessi Schoolcraft, Assistant Environmental Engineer
- Bruce Darnell, Staff Cultural Resources Specialist
- Christa Wisniewski, Section Manager Natural and Cultural Resources

# APPENDIX A – NEPASSIST

# APPENDIX B – WETLANDS REPORT

# APPENDIX C - THREATENED AND ENDANGERED SPECIES REPORT

# APPENDIX D – PROJECT CORRESPONDENCE

# APPENDIX E – INADVERTENT DISCOVERY PLAN

# APPENDIX F – NOISE STUDY

# APPENDIX G – TRAFFIC STUDY

# APPENDIX H – PERMIT MATRIX