Application
for a
Certificate of Environmental Compatibility

Belmont Solar Project
Generation-Tie Line

Prepared for:

State of Arizona
Power Plant and Transmission Line Siting Committee

Submitted by:

Belmont Energy Center, LLC

March 2023

Case No. TBD

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INTRODUCTION

Pursuant to Arizona Revised Statutes (ARS) 40-360 et seq., Belmont Energy Center, LLC (Belmont Energy) (Applicant), a subsidiary of NextEra Energy Resources, LLC (NEER), is seeking a Certificate of Environmental Compatibility (CEC) for a proposed 500-kilovolt (kV) alternating current generation intertie transmission line (gen-tie) and associated substation facilities (herein collectively called "Project"). The proposed Project is designed to deliver power from an adjacent 450-megawatt (MW) solar photovoltaic facility with a 450-MW battery storage system (herein called "solar facility").

The Applicant proposes to construct and operate the Project in order to connect the solar facility to the regional electrical transmission grid. Although the solar facility is mentioned in this Application, the Applicant seeks a CEC only for the gen-tie and associated substation facilities.

Belmont Energy is a wholly owned indirect subsidiary of NEER, which is a subsidiary of NextEra Energy, LLC. NEER is a global leader in renewable energy and is the largest generator of renewable energy in wind and solar resources in North America.

Project Overview

The proposed Project consists of the gen-tie or 500-kV transmission line and associated facilities including the Project Substation and interconnection to the existing Delaney Substation. The Preferred Route is approximately 7.7 miles long, while the alternate is approximately 5.8 miles long. Either the Preferred or Alternate Gen-Tie would connect the solar facility to the existing Arizona Public Service (APS) Delaney Substation (Figure 1). The Preferred Route was chosen because of more favorable landowner negotiations and to minimize impacts to existing agricultural uses.

The Project is needed to serve the Belmont solar facility and would allow for the connection of the solar facility to the regional electrical grid. Final design characteristics would be determined in the detailed design phase. Further information, including a typical structure diagram representative of the gen-tie, is presented in Exhibit G.

Gen-Tie Route

The Preferred Gen-Tie Route would originate at the Preferred Project Substation and be routed north for approximately 0.6 mile, then turn east toward Salome Road for approximately 1.4 miles. From there, the gen-tie would traverse southeast for approximately 3.4 miles, then would be routed east for 2 miles, until it reaches an existing 500-kV transmission line. The final portion of the alignment would run north for 0.1 mile, then west 0.2 mile to terminate at the point of interconnection (POI) at the Delaney Substation (Interconnection Option A). There is an alternate bay position at Delaney Substation, which would have the transmission line turn east into the substation (Interconnection Option B).

The Preferred Gen-Tie Route would be on primarily privately owned land (the majority of which is owned by Flood Control District of Maricopa County) except for the northern and southern portions of the alignment, which would be on State land for approximately 1.5 miles and 0.75 mile, respectively.

The Alternate Gen-Tie Route would start at the Alternative Project Substation and route east along Thomas Road toward Delaney Substation. Once the alignment reaches the Saddleback Diversion Canal, it would join the preferred gen-tie alignment, which would route toward the POI. This Alternative Gen-Tie Route is on primarily private land except for approximately 0.75 mile of State land at the POI.

Project Substation

An approximately 30-acre Project Substation, located within an approximate 50-acre site, would convert power from 34.5 kV to 500 kV. For Phase 1 (200 MW), it would consist of two power transformers, three

500-kV breakers, four 34.5-kV feeder breakers, switches, a control house, and a substation structure within an approximately 7-foot-tall fence enclosure. For Phase 2 (250 MW), additional equipment will be required like Phase 1. Two Project Substation location options are described and analyzed within this application. The Preferred and Alternative Project Substation locations would correspond with the selected gen-tie route (see Figure 1).

Proposed Interconnection

The proposed gen-tie would interconnect the solar facility to the regional grid at the POI at the Delaney Substation (Interconnection Option A). There is an alternate bay position at Delaney Substation, which would have the transmission line turn east into the substation (Interconnection Option B). The existing Delaney Substation would require modification or addition of equipment to allow for interconnection of the gen-tie; this work would be performed in accordance with applicable electric utility standards.

Proposed Corridor

The Applicant has included proposed corridors for the Preferred Gen-Tie Route and Preferred Subroute Option, the Alternative Gen-Tie Route, the Preferred and Alternative Project Substations, and Interconnection Options A and B (Figure 2). Each of these corridors is described below.

Preferred Gen-Tie Route and Subroute Option

For some of the Preferred Gen-Tie Route and Preferred Subroute Option, the corridor requested is approximately 1,000 feet wide, with 500 feet on either side of the centerline. The Applicant is requesting this corridor to provide the flexibility to microsite the Preferred Route and Preferred Subroute Options based on Project design adjustments and minimize environmental impacts. There are exceptions, however, where additional flexibility is needed along the Preferred Route and Preferred Subroute Option or where the corridor is not 500 feet wide on either side. These exceptions are noted below.

Corridor Near the Preferred Project Substation

Near the Preferred Project Substation, the Applicant is requesting a larger corridor (see Figure 2) due to ongoing landowner negotiations and the potential for additional transmission line infrastructure to be placed in the 1,000-foot-wide corridor. The Applicant is requesting this larger corridor to provide the flexibility to account for any unforeseen landowner negotiation issues and to safely site the Preferred Route and Subroute Options away from other transmission line infrastructure.

Corridor Near Salome Highway

The Applicant is requesting a larger corridor (see Figure 2) along Salome Highway. The Applicant has identified this area as having multiple existing and potential future right-of-way requests that could be placed in the 1,000-foot-wide corridor. The Applicant is requesting this larger corridor to provide the flexibility to safely accommodate all existing and future right-of-way requests along the Preferred Route and Subroute Options.

Corridor Along Flood Control District of Maricopa County Land

The Applicant is requesting a larger corridor (see Figure 2) along land administered by the Flood Control District of Maricopa County. The Applicant has identified this area as having multiple existing and potential future right-of-way requests that could be placed in the 1,000-foot-wide corridor. The Applicant is requesting this larger corridor to provide the flexibility to safely accommodate all existing and future right-of-way requests along the Preferred Route and Subroute Options.

Corridor Near Delaney Substation

The Applicant is requesting a larger corridor (see Figure 2) near where the Preferred Route and Subroute Options begin to turn east toward Delaney Substation. This corridor continues to expand south and east as it moves closer toward Delaney Substation (see Figure 2). The Applicant has identified this area as having multiple existing and potential future right-of-way requests to enter Delaney Substation, particularly around Arizona State Land Department–administered lands (Exhibit A-4). The Applicant is requesting this larger corridor to provide the flexibility to safely accommodate all existing and future right-of-way requests for entering the Delaney Substation.

Alternative Route

For the majority of the Alternative Route, the total corridor width requested is approximately 1,000 feet (see Figure 2). The northern portion of the Alternative Route corridor from the centerline would be 700 feet wide, whereas the southern portion of the Alternative Route corridor from the centerline would be 300 feet wide (see Figure 2). The Applicant is requesting this corridor to provide the flexibility to microsite the Alternative Route based on Project design adjustments and minimize environmental impacts. The Applicant also proposes this corridor because there is no suitable landowner interest south of Thomas Road. A deviation from this proposed corridor is that the Alternative Route would use the corridor near Delaney Substation identified for the Preferred Route and Subroute Options described above. Another exception is noted below.

Corridor Near Existing Residence

The Applicant is requesting a larger corridor (see Figure 2) near where the Alternative Route approaches an existing agricultural operation and the existing Harquahala Generating Station. The Applicant has identified this area as having the potential to be routed in multiple ways depending on the final landowner negotiations. The Applicant is requesting this larger corridor to provide the flexibility to route this portion of the Alternative Route based on final landowner negotiations.

Preferred and Alternative Project Substations

For both the Preferred and Alternative Project Substations, the Applicant has proposed a minimum 500-foot-wide corridor on all sides of both substation options (see Figure 2) except for the western side of the Preferred Substation Option, which has a proposed 2,600-foot-wide corridor. The Applicant is requesting this corridor to account for potential micrositing of both substation options.

Interconnection Options A and B

The Applicant is requesting that both Interconnection Options A and B have the flexibility to be sited within the corridor near Delaney Substation (see Figure 2).

Purpose and Need

The Project is needed to connect the proposed solar facility to the regional electrical transmission grid via the Delaney Substation for use by electric customers. The purpose of this CEC application is to secure approval of the Project that would connect the solar facility to the regional transmission system at the existing Delaney Substation.

The Project has been identified as an optimal location based on the recognized need to interconnect renewable energy sources to local electrical utilities, the existence of compatible adjacent and nearby land uses, and the proximity to the existing Delaney Substation. The location reduces the need for a long gen-tie or costly system upgrades and sites the proposed facilities in an area of existing compatible land uses.

Environmental and Public Siting Process

Siting Process

The Applicant completed a siting process that focused on the identification of possible transmission routes to interconnect the Belmont solar facility to the existing Delaney Substation. The proposed gen-tie route options were selected based on the consideration of numerous variables. The Applicant sought to minimize environmental impacts and expenses by choosing direct routing where possible, while accounting for existing land use and infrastructure. The two proposed gen-tie routes are sited primarily within previously disturbed private land with existing or planned compatible land uses.

Public Outreach Process

The Applicant has coordinated with stakeholders including agencies, municipalities, and the public to provide Project information and opportunities for comment.

Additional information regarding public outreach can be found in Exhibit J of this Application.

Summary of Environmental Compatibility

After conducting an environmental analysis and minimizing or avoiding environmental impacts based on the factors outlined in ARS 40-360.06, the Applicant believes the Project to be environmentally compatible. The Project would use little water and would produce no carbon or other emissions while working to meet Arizona's growing electricity demand.

Additionally, as discussed in the following sections, the Project

- would be compatible with existing plans in the vicinity of the proposed site,
- would not disturb any areas of unique biological wealth and would not impact special-status species,
- would have minimal visual effects and would not disturb any known archaeological or historical sites of significance,
- would not affect any recreation opportunities in the area, and
- is not anticipated to result in significant impacts associated with noise or signal interference.

Conclusion

This Application includes the environmental analysis and documentation relevant to the Project as specified by Arizona Administrative Code Rule R14-3-219. Belmont Energy is committed to avoiding and minimizing environmental impacts and believes the Project is environmentally compatible. Belmont Energy therefore respectfully requests that the Power Plant and Transmission Line Siting Committee grant, and the Arizona Corporation Commission approve, a CEC for the construction of a transmission line and Project Substation necessary to interconnect the solar facility to the Delaney Substation.

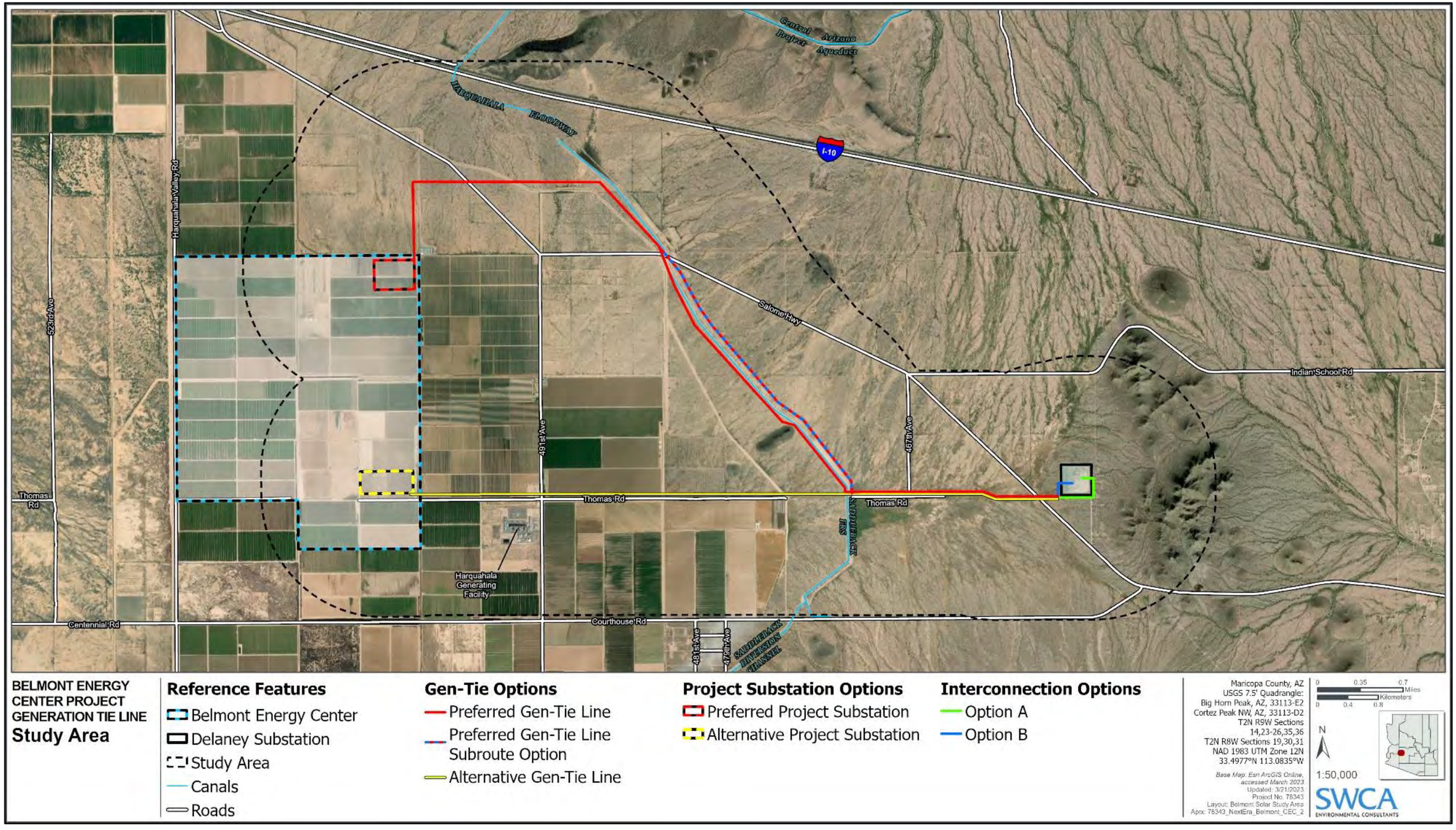

Figure 1. Preferred and Alternative Routes.

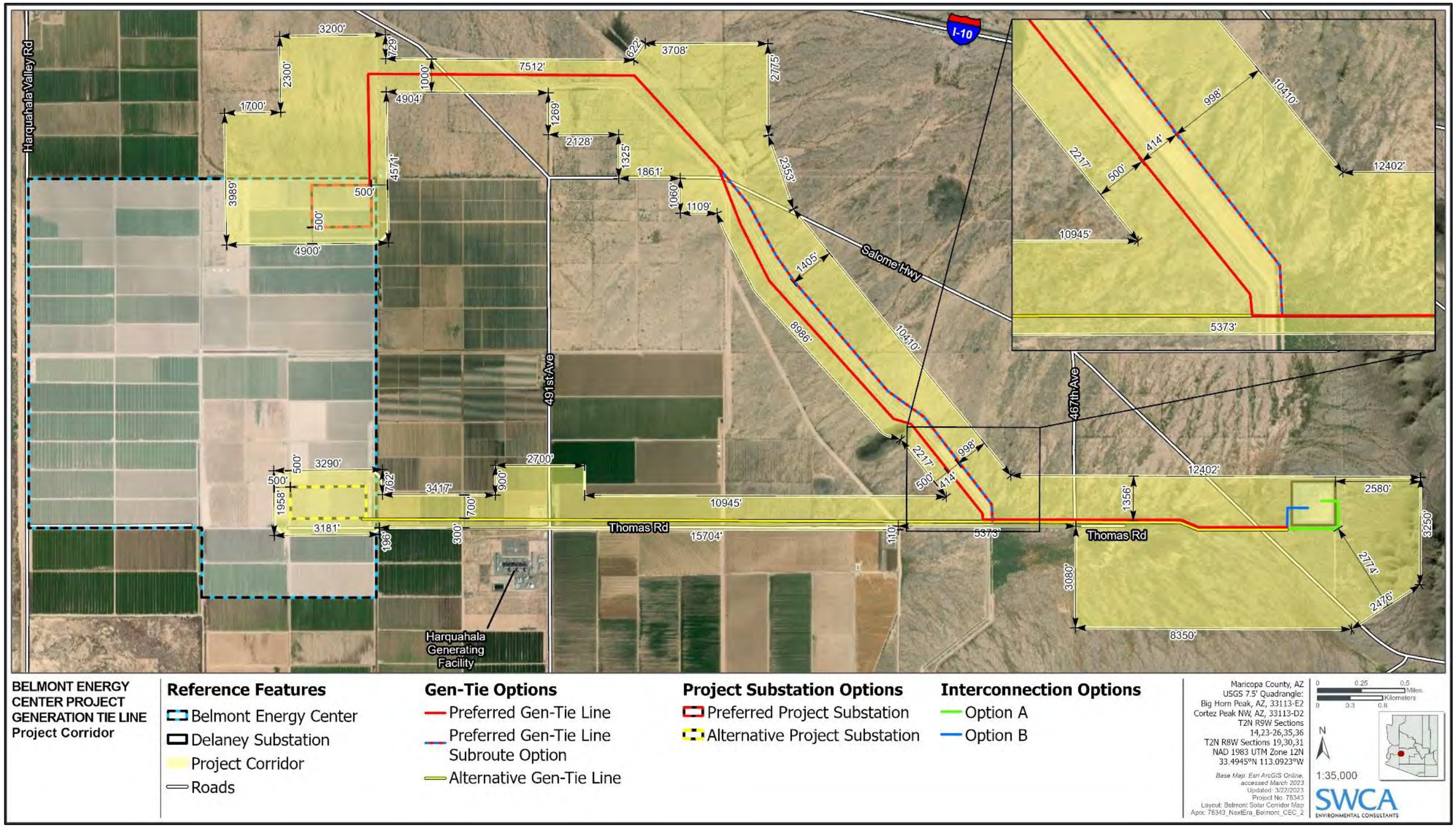

Figure 2. Project corridor map.

Application For
Certificate of Environmental Compatibility

1. **Name and address of the Applicant**

   Belmont Energy Center, LLC
   700 Universe Boulevard
   Juno Beach, Florida 33408

2. **Name, address, and telephone number of a representative of the applicant who has access to technical knowledge and background information concerning this application, and who will be available to answer questions or furnish additional information**

   Clinton Spencer
   Project Manager, Development
   Belmont Energy Center, LLC
   700 Universe Boulevard
   Juno Beach, Florida 33408
   (561) 691-2901
   Clinton.Spencer@nexteraenergy.com

3. **Date on which the applicant filed a Ten Year Plan in compliance with A.R.S. § 40-360.02, in which the facilities for which this application is made were described**

   The Applicant filed a Ten Year Plan in Docket E-99999A-21-0009 on January 31, 2023.

4. **Description of the proposed facility, including:**

   a. With respect to an electric generating plant:

   The Project does not include an electrical generating plant.

   b. With respect to a proposed transmission line:

   i. Nominal voltage for which the line is designed; description of the proposed structures and switchyards or substations associated therewith; and purpose for constructing said transmission line

   (1) Nominal voltage:

   The nominal voltage for the preferred and alternate transmission line alignment is 500 kV alternating current, single circuit.

   (2) Description of the proposed structures:

   The Preferred Transmission Line will be constructed using steel monopole and multi-pole structures and three phases of two-bundle conductor for a total of six transmission conductors, with an estimated 30.9 feet of ground clearance (National Electric Safety Code plus 2.5 feet). The transmission structures are expected to range in aboveground height from 80 to 195 feet and will be spaced apart anywhere from 100 to 1,200 feet. The estimated structure count for this Project is 42 structures, which is subject to change pending detailed design. Conceptual drawings for typical structure types can be found in Exhibit G.

The alternate alignment will use the same structure types and conductor as the Preferred Transmission alignment. The same ground clearance, aboveground height and span lengths as above apply. The estimated structure count for the alternate alignment is 32 structures which will include single circuit structures. Conceptual drawings for typical tangent structures can be found in Exhibit G.

(3) Description of proposed switchyards and substations:

The approximately 30-acre Project Substation, proposed within an approximate 50-acre site, will convert power from 34.5 kV to 500 kV. It will consist of a power transformer, one 500-kV main breaker, two 34.5-kV feeder breakers, switches, a control house, and a substation structure within an approximately 7-foot-tall fence enclosure.

A conceptual drawing of the Project Substation is provided in Exhibit G.

(4) Purpose for constructing said transmission line:

The purpose of the transmission line is to deliver electrical power generated by a new 450-MW photovoltaic solar energy generating facility and battery energy storage to the regional transmission grid for customer use.

ii. Description of geographical points between which the transmission line will run the straight-line distance between such points and the length of the transmission line for each alternative route for which the application is made

(1) Description of geographical points between which the transmission line will run:

The Project Substation is proposed to be in the northeast corner of parcel 506-23-017A in the northeast quarter of Section 24, Township 2 North, Range 9 West. The Preferred Transmission Line will originate at the Project Substation, route north for approximately 0.6 mile, then turn east for approximately 1.4 miles, then turn southeast for approximately 3.4 miles, then turn east for approximately 2 miles, then turn north for 0.1 mile, and then turn west where it will terminate at the existing APS Delaney Substation. There is an alternate bay position at Delaney Substation that would have the transmission line turn east into the substation and would eliminate the existing crossing.

The alternate alignment will have the Project Substation in the southeast corner of parcel 506-23-035A in the southeast quarter of Section 25, Township 2 North, Range 9 West. The transmission line will originate at the Project Substation, route east for approximately 5.5 miles, turn north for 0.1 mile, and then turn west where it will terminate at the existing APS Delaney Substation.

Figure 1 shows the Alternative Gen-Tie and Substation locations.

(2) Straight-line distance between such points:

For the preferred alignment, the straight-line distance between the Project Substation and the existing APS Delaney Substation is approximately 5.8 miles. For the alternate alignment, the straight-line distance between the Project Substation and the existing Delaney Substation is approximately 5.5 miles.

(3) Length of the transmission line for each alternative route:

The length of the Preferred Transmission Line is approximately 7.7 miles. The length of the Alternative Transmission Line is approximately 5.8 miles.

iii. Nominal width of right-of-way required, nominal length of spans, maximum height of supporting structures and minimum height of conductor above ground

(1) Nominal width of right-of-way required:

The transmission line right-of-way will be 200 feet wide within a requested variable-width corridor for the entirety of both the preferred and alternate transmission line alignments. The corridor is being requested to allow for minor adjustments to the location of structures to achieve site-specific mitigation objectives or meet site-specific engineering requirements.

(2) Nominal length of spans:

The span length between structures will vary depending on terrain, constraints, and other factors, but will generally range from 100 to 1,200 feet.

(3) Maximum height of supporting structures:

The maximum height of the supporting structures is anticipated to be approximately 195 feet.

(4) Minimum height of conductor above ground:

The minimum height of conductor above the existing grade will be 30.9 feet.

iv. To the extent available, the estimated costs of proposed transmission line and route, stated separately. (If application contains alternative routes, furnish an estimate for each route and a brief description of the reasons for any variations in such estimates.)

The estimated cost of the Preferred Transmission Line is $45 million.

The estimated cost of the Project Substation is $26 million.

The estimated cost of the Alternative Transmission Line is $40 million.

v. Description of proposed route and switchyard locations. (If application contains alternative routes, list routes in order of applicant's preference with a summary of reasons for such order of preference and any changes such alternative routes would require in the plans reflected in (i) through (iv) hereof.)

The proposed and alternate transmission line routes are described generally in (ii) above and are depicted in Figure 1. The Preferred Route was chosen because of more favorable landowner negotiations, minimizing impacts to existing agricultural uses, and minimizing conflicts with existing and planned utility rights-of-way.

The Preferred Route will originate at the Project Substation and will be routed north for approximately 0.6 mile (toward State land), then turn east toward Salome Road for approximately 1.4 miles. From there the transmission line will traverse southeast for approximately 3.4 miles then will be routed east for 2 miles until it reaches the existing 500-kV transmission line. The final portion of the alignment will run north for 0.1 mile, then west 0.2 mile to terminate at the POI at the Delaney Substation (Option A). There is an alternate bay position at Delaney Substation for which the transmission line turns east into the substation (Option B).

vi. For each alternative route for which application is made, list the ownership percentages of land traversed by the entire route (federal, state, Indian, private, etc.).

The Preferred Transmission Line will primarily be on privately owned land except for the northern and southern portions of the alignment, which will be on State land for approximately 1.5 miles and 0.75 mile, respectively.

The Alternate Route will start at the Project Substation and route east along Thomas Road toward Delaney Substation. Once the alignment reaches the Saddleback Diversion Canal it will join the preferred alignment which will be routed toward the POI. This Alternative Transmission Line alignment is on primarily private land except for approximately 0.75 mile of State land at the POI.

5. List the areas of jurisdiction [as defined in A.R.S. § 40-360(1)] affected by each alternative site or route and designate those proposed sites or routes, if any, which are contrary to the zoning ordinances or master plans of any of such areas of jurisdiction.

The Project is on land within an unincorporated area in Maricopa County and land under the jurisdiction of the Arizona State Land Department. The Proposed Route crosses areas zoned in the Maricopa County zoning code as Rural (one dwelling unit per acre) (RU-43), Light Industrial (IND-2), and one small area of Intermediate Commercial (C-2).

6. Describe any environmental studies applicant has performed or caused to be performed in connection with this application or intends to perform or cause to be performed in such connection, including the contemplated date of completion.

The Applicant has evaluated available secondary and field data related to biological resources, visual resources, cultural resources, recreational resources, land use, noise levels, and communications signals in order to assess the potential impacts that may result from the construction, operation, and maintenance of the Project. These evaluations are included in Exhibits B, C, D, E, F, H, and I to this application.

Belmont Energy Center, LLC

/s/ Anthony Pedroni
By Anthony Pedroni, Vice President

I HEREBY CERTIFY that on this thirty-first day of March 2023, I have delivered to the Arizona Corporation Commission twenty-five (25) copies of this Application for a Certificate of Environmental Compatibility.

EXHIBIT A. LOCATION MAP AND LAND USE MAPS

In accordance with Arizona Administrative Code Rules of Practice and Procedure R14-3-219, Exhibit 1, the applicant provides the following location maps and land use information:

> *Where commercially available**, 1) a topographic map, 1:250,000 scale, showing any proposed transmission line route longer than 50 miles and the adjacent area; and 2) a topographic map, a scale of 1:62,500, for routes shorter than 50 miles showing any proposed transmission line route and the adjacent area.*
>
> *Where commercially available, a topographic map,1:62,500 scale, of each proposed transmission line route longer than 50 miles showing that portion of the route within two miles of any subdivided area. The general land use plan within the area shall be shown on a 1:62,500 map required for Exhibit A-3, and for the map required by this Exhibit A-4, which shall also show the areas of jurisdiction affected and any boundaries between such areas of jurisdiction. If the general land use plan is uniform throughout the area depicted, it may be described in the legend in lieu of on an overlay.*
>
> ***If a topographic map is not commercially available, a map of similar scale, which reflects prominent or important physical features of the area in the vicinity of the proposed site or route, shall be substituted.*

Land Use Overview

The following exhibits are required by the Arizona Corporation Commission's *Rules of Practice and Procedure* R14-3-219 to support the land use studies conducted for this Application:

- Exhibit A-1 illustrates the land ownership and surface jurisdiction for the location of proposed Project facilities (Project Area) and land within 1 mile of the Project Area (Study Area).
- Exhibit A-2 illustrates existing land use within the Study Area.
- Exhibit A-3 illustrates planned land use within the Study Area.
- Exhibit A-4 illustrates planned land use at Delaney Substation.

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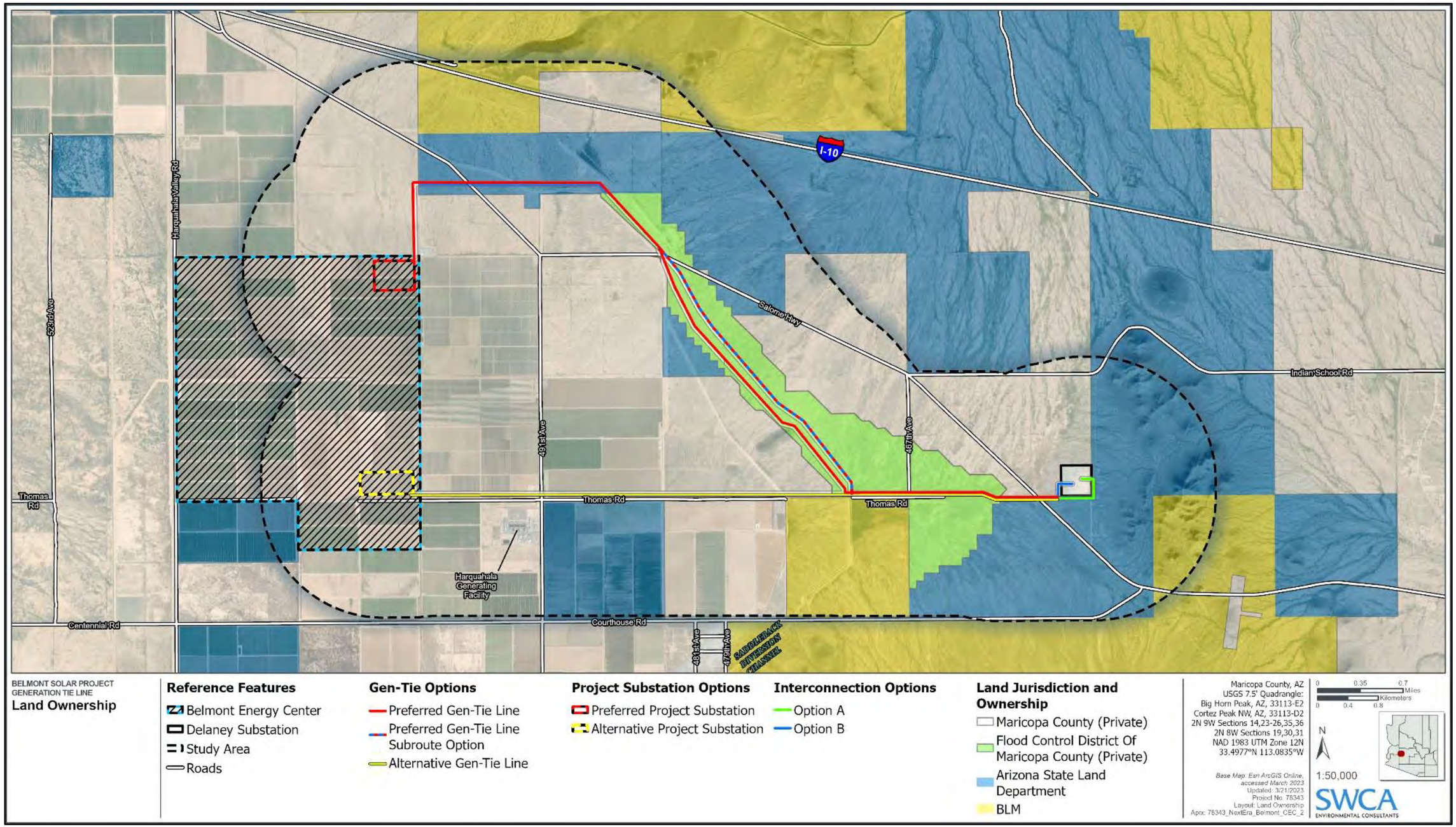

Exhibit A-1. Land ownership and surface jurisdiction.

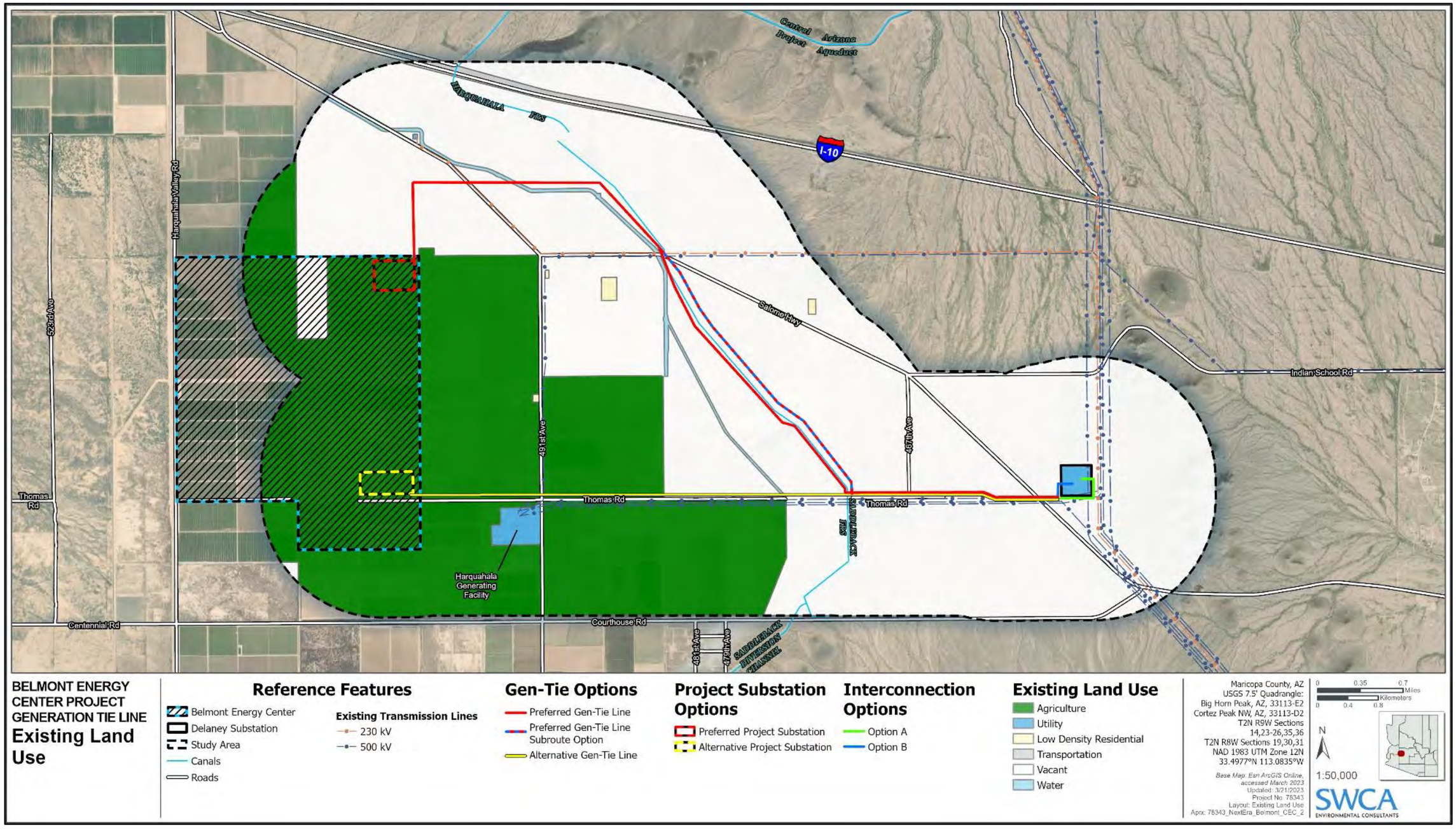

Exhibit A-2. Existing land uses.

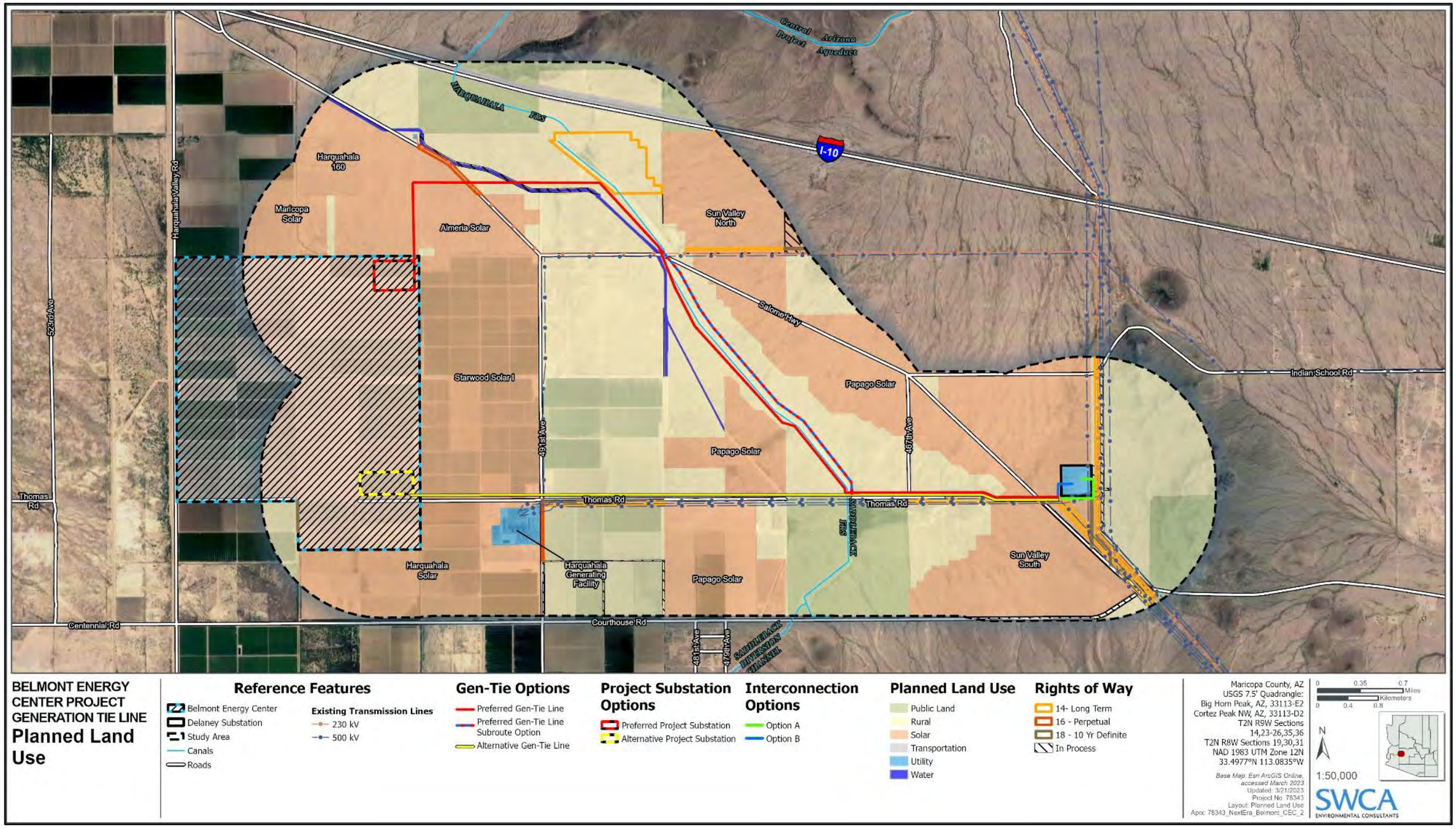

Exhibit A-3. Planned land uses.

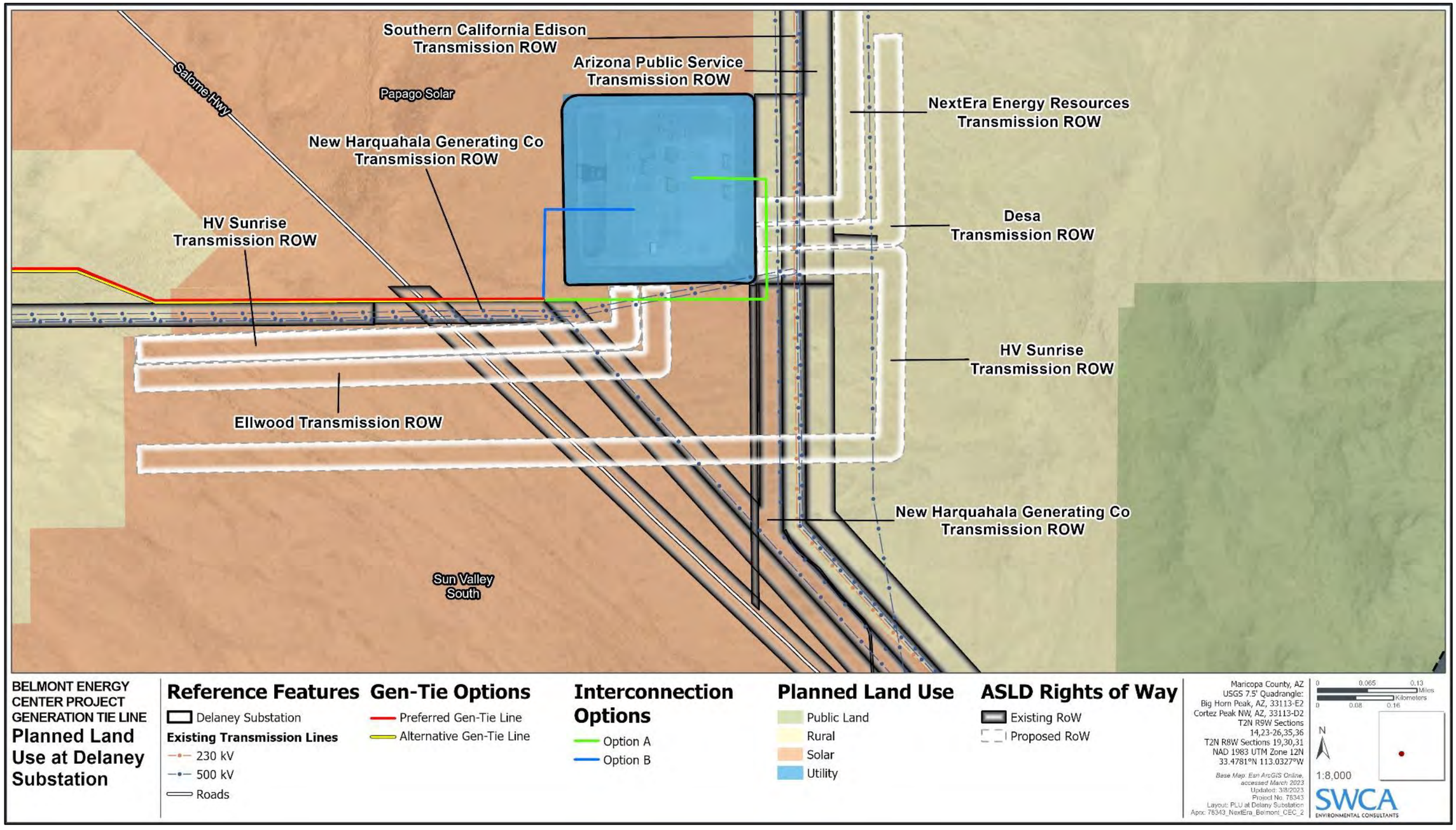

Exhibit A-4. Planned land use at Delaney Substation.

EXHIBIT B. ENVIRONMENTAL STUDIES

As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, Exhibit 1:

> *Attach any environmental studies which applicant has made or obtained in connection with the proposed site(s) or route(s). If an environmental report has been prepared for any federal agency or if a federal agency has prepared an environmental statement pursuant to Section 102 of the National Environmental Policy Act, a copy shall be included as a part of this exhibit.*

Introduction

SWCA Environmental Consultants (SWCA) was retained by Belmont Energy to complete environmental analyses for the Project, which includes the evaluation of land use as well as biological, visual, cultural, and recreation resources within the Project Area and a 1-mile buffer around the Preferred Gen-Tie Route, Alternative Gen-Tie Route, and Project Substation (herein called the Study Area). The Project consists of lands under the jurisdiction of Maricopa County, Arizona, and the Arizona State Land Department (ASLD). The Study Area includes lands under the jurisdiction of Maricopa County, the Bureau of Land Management (BLM) and the ASLD. This exhibit provides a detailed inventory and evaluation of existing and planned land use within the Study Area. Biological, visual, recreational, cultural resource, and noise evaluations are discussed in the subsequent Exhibits C, D, E, F, and I.

Land Use

Inventory

The methodology used for this land use inventory included field verification and a review of desktop data including maps, aerial imagery, general plans, and other supportive documents including the *Maricopa County Vision 2023 Comprehensive Plan* (Maricopa County 2016a), the *Tonopah/Arlington Area Plan* (Maricopa County 2000), the Maricopa Association of Governments Land Use Explorer (Maricopa Association of Governments 2023), and the Maricopa County Planning and Development Department's interactive mapping service (Maricopa County 2023). The inventory also included communication with government agencies, municipalities, and other stakeholders within the Study Area to gather information regarding further development plans or known development projects. Additional information regarding coordination with these entities can be found in Exhibit H.

Jurisdiction and Land Ownership

The Study Area includes lands under the jurisdiction of Maricopa County, the BLM, and ASLD. Land ownership within the Study Area consists of privately and publicly owned parcels as shown in Exhibit A-1.

Existing Land Use

The primary existing land uses within the Study Area are agricultural and vacant. Other land uses in the Study Area include utility, low-density residential, transportation, and water. Overall, the Study Area can be described as rural in character with agriculture, utilities, and vacant land present. Several high-voltage transmission lines exist within the Study Area, as shown in Table B-1. The existing land uses within the Study Area are displayed on Exhibit A-2 and described in detail below.

Agriculture – Agriculture, consisting primarily of irrigated row crops, is largely present in the western portion of the Study Area.

Utility – Utilities within the Study Area include seven 500-kV transmission lines, one 230-kV transmission line, the existing Harquahala Generating Facility, and the existing Delaney Substation to which the Project would interconnect. Transmission lines in the immediate vicinity of the Project are identified in Table B-1.

Table B-1. Transmission Lines in the Immediate Vicinity of the Project

Owner	Voltage
Arizona Public Service	500 kV
Arizona Public Service	500 kV
Southern California Edison	500 kV
Southern California Edison	500 kV
Southern California Edison	500 kV
Southern California Edison	500 kV
Southern California Edison	500 kV
Southern California Edison	230 kV
Unknown	230 kV

Low-Density Residential – Several small areas of single-family, low-density residences are present within the Study Area. The closest residence to the Preferred Route is approximately 0.7 mile south at the corner of 491st Avenue and Salome Highway.

Transportation – Transportation uses within the Study Area are associated with area roadways such as Salome Hwy, 491st Avenue, and Harquahala Valley Road, as well as Interstate 10.

Vacant – Numerous large tracts of privately and publicly owned undeveloped land are present within the Study Area. Undeveloped land within the immediate vicinity of the Harquahala and Saddleback Flood Retarding Structures (FRS) is owned and managed by the Flood Control District of Maricopa County, and land associated with the Saddle Mountain Recreation Area is owned and managed by the BLM.

Water – The main water facilities in the Study Area are irrigation canals and FRS. Named canals within the Study Area include the Harquahala FRS as well as the Saddleback FRS and Saddleback Diversion Channel, both of which divert runoff water from the Harquahala FRS if necessary.

Future Land Use

Data discussed in this section were derived from the *Maricopa County Vision 2030 Comprehensive Plan* (Maricopa County 2016b), the *Tonopah/Arlington Area Plan* (Maricopa County 2000), field studies, and coordination with the Maricopa County Planning and Development Department and ASLD.

Future land uses within the Study Area are mapped on Exhibit A-3 and can generally be characterized as rural with generation and associated transmission infrastructure, including several solar and battery storage facilities and high voltage transmission lines. The *Tonopah/Arlington Area Plan* defines "Rural" as "areas where single-family residential development is desirable but urban services such as sewer, water, law enforcement, fire protection, schools, parks, etc., are limited" (dwelling units are limited to 1.0 per acre). The *Maricopa County Vision 2023 Comprehensive Plan* includes solar development as one of its 10 Economic Growth Policies (Maricopa County 2000). Additionally, the ASLD provided rights-of-way data for future transmission infrastructure around the Delaney Substation. Five proposed transmission right-of-way corridors are proposed within the immediate vicinity of the Delaney Substation, as shown in Exhibit A-4.

In February 2023, the Applicant sent letters to the relevant jurisdictions to provide Project information and request new or additional information on plans or planned developments within the Study Area. Exhibit H provides a copy of the letter, written responses, and other correspondence from relevant jurisdictions.

Impact Assessment and Results

Land use impacts may be defined as restrictions on a land use that would result from the construction or operation of the Project, or incompatibility with existing land use plans. Typically, restrictions on a land use would result from right-of-way or easement acquisition across a property. To minimize land use impacts, Project routes were sited to generally follow existing linear features, such as existing transmission lines, roadways, canals, and existing rights-of-way where feasible.

The Preferred Route would be on both private and publicly owned land. It would parallel existing linear features, such as existing canals and the Saddleback FRS, and cross parcels with existing agricultural and vacant land uses. The Preferred Route would cross lands designated by Maricopa County as rural, solar, and transportation, all of which are compatible with high voltage transmission. Therefore, impacts to existing and future land use resulting from the Preferred Route are expected to be minimal.

The Alternative Route would be on both private and publicly owned land. It would parallel existing 500kV transmission lines and cross parcels with existing agricultural and vacant land uses. The Alternative Route would cross lands designated by Maricopa County as rural and solar, both of which are compatible with high voltage transmission. Therefore, impacts to existing and future land use resulting from the Alternative Route are expected to be minimal.

References

Maricopa Association of Governments. 2023. Maricopa Association of Governments Land Use Explorer. Available at: https://geo.azmag.gov/maps/landuse/. Accessed January 2023.

Maricopa County. 2000. *Tonopah/Arlington Area Plan*. Available at: https://mcdot.maricopa.gov/DocumentCenter/View/6625/Tonopah-Arlington-Area-Plan-PDF#:~:text=The%20Tonopah%2FArlington%20Area%20Planprovides%20a%20specific%20guide%20for,a%20reference%20for%20private%20sector%20decision%20making.%20AREAPLANELEMENTS. Accessed January 2023.

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EXHIBIT C. AREAS OF BIOLOGICAL WEALTH

As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, Exhibit 1:

Describe any areas in the vicinity of the proposed site or route which are unique because of biological wealth or because they are habitats for rare and endangered species. Describe the biological wealth or species involved and state effects, if any, the proposed facilities will have thereon.

Introduction

SWCA Environmental Consultants (SWCA) conducted a biotic resource review to identify areas of biological wealth and the rare and endangered species that may occur at or in the vicinity of the Project. SWCA consulted the following data sources:

- Topographical and aerial maps and land use, land cover, and elevation data.
- The U.S. Fish and Wildlife Service (USFWS) species list for the proposed Project obtained from the USFWS online Information for Planning and Consultation (IPaC) system (Exhibit C-1).
- Species information obtained from the USFWS Environmental Conservation Online System, the Arizona Game and Fish Department (AGFD) Online Environmental Review Tool (Exhibit C-2), and other relevant online sources.

The AGFD Online Environmental Review Tool database query establishes a buffer beyond the Study Area to search for occurrence records and the presence of modeled habitat. The size of the buffer depends on the type of project being considered. For this Project, the buffer is 5 miles beyond the Project Area. This buffer fully encompasses the 1-mile radius Study Area.

In addition, an SWCA biologist with expertise in the biology of flora and fauna of the region completed field surveys for the Project.

All plant and wildlife species observed in the Project Area and Study Area during the January 23, 2023, site visit were recorded (see Exhibit D for a complete list). The site was assessed to determine whether habitat features for species protected under the federal, state, or local regulations were present in the Project Area and Study Area.

Laws and Policies

Applicable laws and policies regarding special-status species in Arizona include the following:

- The USFWS administers the **Endangered Species Act of 1973 (ESA), as amended,** which protects wildlife species listed as threatened or endangered from "take" (generally, directly, or indirectly harming or disturbing listed species). However, the ESA does not provide the same take protections for listed plant species, except on federal land. The ESA also allows for the designation of critical habitat for listed species, although designation of critical habitat is not required. Critical habitat is an administrative designation of a defined area with specific characteristics important to the survival and recovery of a listed species. Designation of critical habitat can affect federal actions but not state or private actions without a federal nexus.
- The **Migratory Bird Treaty Act (MBTA)** provides for the protection of migratory birds and prohibits their unlawful take or possession. The act bans "taking" any native birds; "taking" can mean killing a wild bird or possessing parts of a wild bird, including feathers, nests, or eggs.

Exceptions are allowed for hunting game birds and for research purposes, both of which require permits.

- The **Bald and Golden Eagle Protection Act (BGEPA)** prohibits any form of possession or taking of bald eagles (*Haliaeetus leucocephalus*) or golden eagles (*Aquila chrysaetos*). A 1962 amendment to the MBTA created a specific exemption for possession of an eagle or eagle parts (e.g., feathers) for religious purposes of Native American tribes. The amendment provided for not only the preservation of the golden eagle but also the preservation of Native American cultural practices.
- The AGFD manages and conserves wildlife in Arizona. Arizona does not have a counterpart to the federal ESA, but nearly all take of wildlife is regulated in some manner through the **AGFD's hunting and fishing license system**. A list of rare species **(Wildlife Species of Concern [WSC])** was created in 1996 without creating any specific statutory protections for those species (AGFD 1996). Hunting regulations are used to provide some protection, however. While WSC is no longer a valid category, AGFD continues to track these species due to an existing Memorandum of Understanding between the USFWS and AGFD. Generally, no hunting or capture of WSC is allowed, with some exceptions for managed recreational fisheries of native fish (AGFD 2017) and recreational capture of certain reptiles (AGFD 2015).
- Arizona prepared a Comprehensive Wildlife Conservation Strategy in 2006 (AGFD 2006), later renamed to the **Arizona Wildlife Conservation Strategy** (**AWCS**) (2022–2032), through a state–federal partnership and grant program. The AWCS was updated in 2022 (AGFD 2022). The State Wildlife Action Plan identifies **Species of Greatest Conservation Need (SGCN)** in several tiers. Tier 1 species are those that the AGFD has deemed vulnerable and fall into a categorization of either federally listed as endangered or threatened under the ESA; those that have been recently removed from the ESA and require post-delisting monitoring; those specifically covered under a signed agreement such as a Candidate Conservation Agreement, Candidate Conservation Agreement with Assurances, Conservation Strategy and Assessment, or Strategic Conservation Plan; or those for which the AGFD has determined the protection of a closed season is warranted. Tier 2 represents the remainder of the species meeting the AGFD's vulnerability criteria, including species that are not listed but are regionally rare or declining, species with a U.S. range primarily in Arizona that are dependent on conservation efforts within the state, and other species with identified conservation issues that may warrant management action and do not meet the criteria for Tier 1 listing. Tier 3 species are those for which existing data were insufficient to score one or more vulnerability criteria due to substantial data gaps and unknown conservation status, but where conservation concern may be warranted. Species identified as WSC in 1996 are included as SGCNs in the State Wildlife Action Plan and are addressed as SGCNs in Table C-l and the discussion in this exhibit.
- The **AWCS** also denotes **Conservation Opportunity Areas (COAs)** as of December 2022 (AGFD 2022). The COAs were created to help implement the AWCS and should be considered voluntary guidance for specific areas where conservation efforts would be most effective, based on species and habitat expertise, as well as wildlife and spatial data. These COAs are representative of specific areas that show strong potential for substantial improvements for wildlife and associated habitats. COAs are divided into categories of terrestrial and aquatic. Terrestrial COAs focus on geographic areas determined to have high conservation value and strong potential for successful conservation efforts. Aquatic COAs are strictly focused on conservation of aquatic resources, particularly native fish species (AGFD 2023a). COAs reflect the best areas for conservation and were determined without regard to jurisdiction or landownership. In addition, COAs will not be subject to any new regulations, nor do they have any regulatory effect (AGFD 2022).

- Native plants in Arizona are managed by the Arizona Department of Agriculture (ADA) under the **Arizona Native Plant Law** (ANPL) (ARS 3-903, Arizona Administrative Code R3-3-208), which regulates harvest, salvage, and transport of plants. Harvest or salvage of most plant species may be permitted or required, and fees may be assessed on State land. Plants listed in the Highly Safeguarded category may be taken or salvaged only for scientific or conservation purposes. The ANPL identifies a lengthy list of plant species—largely cacti, agaves, yuccas, and desert trees—that are susceptible to removal for collection, landscaping, sale, or other commercial uses. The ANPL states that these plants shall not be taken, transported, or possessed from any land without permission and a permit from the ADA; it also requires notification prior to land clearing even if the plants will be destroyed.
- The ADA administers the **state noxious weed law** under Arizona Administrative Code R3-4-245. Arizona maintains a list of noxious weeds in three categories: Class A, Class B, and Class C (ADA 2023). Class A species are those that are not known to occur in Arizona and are of limited distribution, and are of high priority for quarantine, control, or mitigation. Class B noxious weeds are species known to occur but are of limited distribution in Arizona and may be high-priority pests for quarantine, control, or mitigation if a significant threat to crop, commodity, or habitat exists. Class C noxious weeds are plant species that are widespread but may be recommended for active control based on risk assessment.

Inventory

SWCA biologists with expertise in the biology of flora and fauna of the region surveyed the Study Area on January 23, 2023. All plants and wildlife observed were recorded during the survey efforts.

In addition, the biologist documented existing conditions and noted any habitat features that may be important to special-status species or related to areas of biological wealth in the Project Area and Study Area.

On January 30, 2023, SWCA queried the USFWS IPaC database to generate an unofficial list of ESA-listed species that have the potential to occur in the Study Area (see Exhibit C-1) (USFWS 2023a). In addition, the AGFD Online Environmental Review Tool was queried on January 30, 2023, to generate a list of special-status species with records within 5 miles of the Project Area and a list of SGCNs with modeled suitable habitat intersecting the Project Area (see Exhibit C-2) (AGFD 2023b).

Summary of Occurrence

The USFWS and AGFD identified several endangered, threatened, candidate, and other special-status species that are known to occur or could occur in the region (i.e., within the Study Area for USFWS and within the Project Area plus a 5-mile buffer for AGFD). These special-status species and the likelihood of their being present in the vicinity of the proposed gen-tie lines are addressed below in six sections: 1) Areas of Biological Wealth, 2) Federally Listed Threatened and Endangered Species, 3) Bald and Golden Eagles 4) Other Special-Status Species, 5) State-Protected Native Plants, and 6) Noxious Weeds (AGFD 2023b; USFWS 2023a).

Areas of Biological Wealth

No designated or proposed critical habitat occurs within the Project Area or Study Area (USFWS 2023a).

No Important Bird Areas (IBAs) occur within the Project Area or Study Area. The closest IBA, the Lower Salt and Gila Rivers Ecosystem IBA, is approximately 21 miles southeast of the Study Area along the Gila River (Audubon 2023).

Several areas of biological wealth occur in the vicinity of the Project but outside of the Study Area including Harquahala Plain Conservation Opportunity Area occurring across the majority of the western portion of the Study Area and the Maricopa County Landscape Movement Area #33 (Big Horn Mountains–Burnt Mountains–Saddle Mountain Wildlife Movement Area), Potential Linkage Zone #64 (Big Horn Belmont–Saddle Mountain), and a Wildlife Connectivity Zone occurring within the eastern portion of the Study Area (AGFD 2023a). Interstate 10 occurs within the Study Area and may act as a barrier to wildlife movement.

The Harquahala Plain Conservation Opportunity Area is bound on the west and south by the Eagletail Mountains, the north by the Harquahala Mountains, and the east by the Big Horn Mountains and Saddle Mountain. This area provides valuable sources of foraging and nesting habitat in the Centennial and Tiger washes. The area is also frequently used for outdoor recreational activities including hunting, wildlife viewing, and camping. In addition, the Sonoran pronghorn (*Antilocapra americana sonoriensis*) 10(j) reintroduction area occurs within the southern half of the plain west of Saddle Mountain, which allows the species to use suitable habitat and expand their range within the recovery area.

Potential Linkage Zones, including Linkage #64 (Big Horn Belmont–Saddle Mountain), "represent areas that are important to Arizona's Wildlife and natural ecosystems" (Arizona Wildlife Linkage Workgroup 2006). Species known to use this linkage zone include Arizona chuckwalla (*Sauromalus ater*), banded Gila monster (*Heloderma suspectum cinctum*), big free-tailed bat (*Nyctinomops macrotis*), bighorn sheep (*Ovis canadensis*), bobcat (*Lynx rufus*), California leaf-nosed bat (*Macrotus californicus*), cave myotis (*Myotis velifer*), greater western mastiff bat (*Eumops perotis californicus*), long-legged myotis (*Myotis volans*), mountain lion (*Felis concolor*), pale Townsend's big-eared bat (*Corynorhinus townsendii pallescens*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), and Sonoran desert tortoise (*Gopherus morafkai*). Current threats and barriers to wildlife that occur within the linkage zone include border security, the Central Arizona Project (CAP) canal, Interstate 10, and urbanization throughout the area.

Landscape Movement Area #33 (Big Horn Mountains–Burnt Mountains–Saddle Mountain) acts as a type of wildlife linkage in which animals can move between distinct habitats, whereas Wildlife Connectivity Zones are broadly defined areas considered crucial to maintaining landscape connectivity for species movement as opposed to a distinctive pathway for species movement. Species known to use this movement area include bighorn sheep, kit fox (*Vulpes macrotis*), mountain lion, mule deer (*Odocoileus hemionus*), badger (*Taxidea taxus*), and Sonoran desert tortoise. Current threats and barriers to wildlife movement in this area include urbanization south of Interstate 10, the CAP canal, solar development, roadways, and agricultural development.

Federally Listed Threatened and Endangered Species

Two species listed as endangered, one species listed as threatened, and one candidate species were identified in the USFWS species list for the Study Area (USFWS 2023a). The ESA-listed threatened and endangered species are Sonoran pronghorn, California least tern (*Sterna antillarum browni*), yellow-billed cuckoo (*Coccyzus americanus*) and monarch butterfly (*Danaus plexippus*). The Sonoran pronghorn is listed as an endangered species but also has an experimental non-essential population (EXPN) as the entirety of the Project and Study Areas occur within the 10(j) experimental population area. The candidate species identified in the USFWS species list is monarch butterfly. The species' federal status and potential for occurrence in the vicinity of the Project are presented in Table C-1.

Table C-1. Evaluation of Federally Listed and BGEPA Species within the Study Area

Common Name (*Scientific Name*)	Status*	Range or Habitat Requirements	Occurrence Status
Mammals			
Sonoran pronghorn (*Antilocapra americana sonoriensis*)	E, EXPN	Found in Sonoran desertscrub within broad, intermountain alluvial valleys with creosote bush (*Larrea tridentata*)–bursage (*Ambrosia* spp.) and paloverde (*Parkinsonia* spp.)–mixed cacti associations at elevations between 2,000 and 4,000 feet above mean sea level (amsl). The only extant U.S. population is in southwest Arizona; however, the USFWS has established a 10(j) area for reintroductions. Populations in Arizona include the Cabeza Prieta, Kofa, and Sauceda populations.	May occur. The Project Area and Study Area occur within the non-essential experimental population range. No individuals were observed within the Study Area but they may forage and move through the Study Area.
Birds			
Bald eagle (*Haliaeetus leucocephalus*)	BGEPA	Occur in aquatic habitats with open water or Southwest arid regions with available food and roost sites. Nonbreeding eagles range throughout Arizona except for the south-central portion of the state; breeding eagles occur in limited, fragmented locations of central, east-central, and west-central portions of the state.	May occur. The Project Area and Study Area do not contain preferred breeding or roosting habitats but are within nonbreeding range and eagles may move through the area.
California Least Tern (*Sterna antillarum browni*)	E	Forms nesting colonies on barren to sparsely vegetated areas. Nests in shallow depressions on open sandy beaches, sandbars, gravel pits, or exposed flats along shorelines of inland rivers, lakes, reservoirs, and drainage systems at elevations below 2,000 feet amsl. Found in Maricopa, Mohave, and Pima Counties.	Unlikely to occur. Suitable habitat for species occurrence is not present in the Project Area or the Study Area. The nearest potentially suitable habitat is approximately 18 miles southeast of the Study Area along the Gila River.
Golden eagle (*Aquila chrysaetos*)	BGEPA	Found in mountainous canyon land, rimrock terrain of open desert, grassland, and forested areas. Year-round range includes all of Arizona.	May occur. Although suitable nesting habitat is not present in the Project Area or Study Area, eagles may forage or move through the area.
Yellow-billed cuckoo (*Coccyzus americanus*)	T	Typically found in riparian woodland vegetation (cottonwood [*Populus* sp.], willow [*Salix* sp.], or saltcedar [*Tamarix ramosissima*]) at elevations below 6,600 feet amsl. Dense understory foliage appears to be an important factor in nest site selection. The highest concentrations in Arizona are along the Agua Fria, San Pedro, upper Santa Cruz, and Verde River drainages and Cienega and Sonoita Creeks.	Unlikely to occur. Suitable habitat for this species is not present in the Project Area or Study Area. The nearest potentially suitable habitat is about 18 miles southwest of the Study Area along the Gila River.
Insects			
Monarch butterfly (*Danaus plexippus*)	C	Habitat is complex. Generally, breeding areas are virtually all patches of milkweed (*Asclepias* sp.). The species occurs throughout Arizona during the summer and migrates to winter in Mexico and California, though small numbers do overwinter in the low deserts of southwest Arizona.	May occur. This species may be present as transients during migration or as occasional individuals passing through the Study Area enroute to larval food plants or nectar resources. No milkweed species were observed in the Project Area for larval use, but nectar sources are available for foraging and migration.

Note: This table lists the species named in the USFWS official species list (USFWS 2023a) and the Arizona Online Environmental Review Tool (AGFD 2023b).

Sources: AGFD (2023b); eBird (2023); USFWS (2023b). Notes regarding documentation within 5 miles of the evaluation area are from AGFD (2023b).

C = candidate; E = endangered; T = threatened, EXPN = experimental non-essential population.

Bald Eagles (*Haliaeetus leucocephalus*) and Golden Eagles (*Aquila chrysaetos*)

Bald eagle and golden eagle are protected under both the MBTA and the BGEPA Act of 1940, as amended (16 United States Code 668–668d or 50 Code of Federal Regulations 22).

The bald eagle is protected under the MBTA and BGEPA and is a SGCN Tier 1 species. Nests are generally placed in large deciduous or coniferous trees or cliffs, with a commanding view of the area, less than 1 mile from appropriate aquatic foraging conditions (e.g., perennial rivers or lakes containing fish) (Buehler 2000). The species communally roosts in the winter in large (15–60 meters in height) deciduous or coniferous trees, which tend to be near aquatic foraging sites (<50 meters) but may be more than 6 miles from aquatic foraging sites, particularly in areas sheltered from adverse weather conditions with unusually high prey or carcass availability (Buehler 2000; USFWS 2007, 2013). Wintering/nonbreeding individuals and juveniles are typically associated with breeding habitats; however, they may range widely in search of food, shelter, and reduced human presence (Buehler 2000).

The Project Area and Study Area are within the nonbreeding range of the species, and agricultural fields may provide foraging resources. The Project Area and Study Area do not contain characteristic nesting or roosting habitats. The nearest documented nesting areas are over 80 miles away, east of North Bush Highway along the Salt River (Southwestern Bald Eagle Management Committee 2022).

Golden eagles are protected under the MBTA and BGEPA, and as an SGCN Tier 2 species. They require large, open hunting grounds adjacent to mountainous canyonland and rimrock terrain of open desert, grassland, and forested areas (Katzner et al. 2020; Marzluff et al. 1997). The presence of sizeable shrub (e.g., sagebrush [*Artemisia* spp.], rabbitbrush [*Chrysothamnus* spp.]) patches is an essential component of golden eagle home ranges (Marzluff et al. 1997). Nests are placed in rugged terrain (e.g., cliffs), less often in tall trees and on human-made structures (e.g., transmission towers) (Katzner et al. 2020). Wintering/nonbreeding individuals and juveniles are typically associated with breeding habitats; however, they may range widely in search of food (Katzner et al. 2020). The nearest known breeding area for the golden eagle is in Yuma County in the Mohawk Mountains, approximately 66 miles southwest of the evaluation area (McCarty et al. 2020). Although the Project Area and Study Area do not contain suitable nesting habitat for golden eagle and are outside the species' predicted year-round range (AGFD 2002), individuals may forage or move through.

Other Special-Status Species

Other special-status species include the following:

- Birds of Conservation Concern (BCC), which are bird species, beyond those designated as federally threatened or endangered, that represent the USFWS's highest conservation priorities. The relevant BCC for this analysis are those identified by the USFWS (2021) as occurring in Bird Conservation Region (BCR) 33.
- SGCN in Arizona, which are species identified by the AGFD as warranting heightened attention because of low and declining populations. SGCN are prioritized into tiers. Tier 1 species are those that the AGFD has deemed vulnerable and that are federally listed as either endangered or threatened under the ESA; those that have been recently removed from the ESA and require post-delisting monitoring; those specifically covered under a signed agreement such as a Candidate Conservation Agreement, Candidate Conservation Agreement with Assurances, Conservation Strategy and Assessment, or Strategic Conservation Plan, or those for which the AGFD has determined the protection of a closed season is warranted. Tier 2 represents the remainder of the species meeting the AGFD's vulnerability criteria, including species that are not listed but are regionally rare or declining, species with a U.S. range primarily in Arizona that are dependent on conservation efforts within the state, and other species with identified conservation issues that may warrant management action and do not meet the criteria for Tier 1 listing. Tier 3 species are those

for which existing data were insufficient to score one or more vulnerability criteria due to substantial data gaps and unknown conservation status, but where conservation concern may be warranted.

The species in these categories (other than those also designated as federally threatened or endangered, candidate, EXPN, or BGEPA, which are addressed above) have occurrence records or predicted habitat modeled within 5 miles of the Project Area (AGFD 2023b). These species are discussed and listed below in Table C-2, where they are evaluated for potential occurrence based on the results of Project Area surveys, familiarity with the vicinity, and freely available information sources including the following:

- AGFD's Heritage Data Management System (AGFD 2023c)
- Online field guide *Reptiles and Amphibians of Arizona* (Brennan 2012)
- *The Breeding Bird Atlas* (Corman and Wise-Gervais 2005)
- Online field guide *All About Birds* (Cornell Lab of Ornithology 2023)
- eBird (2023)
- Google Earth (2023)
- USFWS Environmental Conservation Online System website (USFWS 2023b)

Table C-2. Other Special-Status Species with Potential to Occur in the Vicinity of the Study Area

Common Name (*Scientific Name*)	Habitat and Notes	Status*		Occurrence Status	
		Federal	State (Tier)	Project Area	Study Area
Amphibians					
Arizona toad (*Anaxyrus microscaphus*)	Found in rocky streams bordered by willows (*Salix* spp.) and cottonwoods (*Populus* sp.), predominantly within pine (*Pinus* sp.)–oak (*Quercus* spp.) forests. Have been found in irrigation ditches, flooded irrigation fields, and reservoirs. Adults are active at temperatures between 22 and 35 degrees Celsius. Adults are nocturnal, while the young exhibit diurnal activity.	C	SGCN (2)	Unlikely to occur. Suitable habitat is not present within the Project Area.	Unlikely to occur. Suitable habitat is not present within the Study Area.
Lowland leopard frog (*Lithobates yavapaiensis*)	Found in rocky streams, in canyon habitats surrounded by coniferous forests or in ponds and stream pools. Usually found in areas with desertscrub biotic communities. Greatest threats to species continuation include habitat alteration, fragmentation, and introduction of nonnative competitor fish, crayfish, and frogs. Species dispersal has been shown to remain within a few kilometers of aquatic breeding sites.	–	SGCN (1)	Unlikely to occur. Suitable habitat is not present within the Project Area.	Unlikely to occur. Suitable habitat is not present within the Study Area.

Common Name (*Scientific Name*)	Habitat and Notes	Status*		Occurrence Status	
		Federal	State (Tier)	Project Area	Study Area
Sonoran Desert toad (*Incilius alvarius*)	Found in Sonoran desertscrub, semidesert grasslands, oak, and occasionally pine-oak woodland habitats up to about 5,800 feet above mean sea level (amsl). Associated with major rivers and edges of agriculture; though often tied to permanent water, can be found miles from water during summer monsoon season, in some areas.	–	SGCN (2)	May occur. Suitable habitat (i.e., agricultural edge habitat) is present within the Project Area. However, breeding is unlikely as no permanent ponds or streams occur within the Project Area.	May occur. Suitable habitat (i.e., agricultural edge habitat) occurs within the Study Area. However, breeding is unlikely as no permanent ponds or streams occur within the Study Area.
Birds					
American kestrel (*Falco sparverius*)	Found in open and semi-open habitats, frequently found in prairies, deserts, wooded streams, burned forest, and agricultural areas. Known to nest in natural holes in tress, abandoned woodpecker cavities, cavities in buildings or cliffs, and similar sites.	MBTA BCC†	SGCN (2)	May occur. The Project Area contains suitable habitat for foraging; however, no suitable nesting sites are present in the Project Area.	May occur. The Study Area contains suitable habitat for foraging; however, no suitable nesting sites are present in the Study Area.
Bendire's thrasher (*Toxostoma bendirei*)	Found in desert habitats with a mix of relatively large shrubs/cacti and open ground or open woodland with scattered shrubs and trees. Not typically found in riparian woodland areas, the species avoids continuous shrublands and grasslands. Commonly found in areas with desertscrub biotic communities. Nesting is known to occur in low trees, shrubs, and cacti including mesquite (*Prosopis* spp.), cholla (*Cylindropuntia* spp.), yucca (*Yucca* sp.), paloverde (*Parkinsonia* sp.), and saltbush (*Atriplex* sp.).	MBTA BCC	SGCN (2)	May occur. The Project Area contains suitable habitat for foraging and nesting.	May occur. The Study Area contains suitable habitat for foraging and nesting.
Brewer's sparrow (*Spizella breweri*)	A shrub obligate species strongly associated with sagebrush (*Artemisia* sp.) over most of its range. Found in areas with scattered shrubs and short grasses. Known to nest in sagebrush or cacti from a few centimeters to roughly 1 meter from the ground. During its nonbreeding migratory season, frequently found in low desert, arid-adapted vegetation including desertscrub, sagebrush, and creosote bush (*Larrea tridentata*).	MBTA	SGCN (2)	Unlikely to occur. The Project Area does not contain suitable habitat for species occurrence.	May occur. The Study Area does contain suitable habitat for species occurrence and potential nesting sites.

Common Name (*Scientific Name*)	Habitat and Notes	Status*		Occurrence Status	
		Federal	State (Tier)	Project Area	Study Area
Cactus wren (*Campylorhynchus brunneicapillus*)	Non-migratory species often found in arid desert habitat with biotic communities including cholla, mesquite, and sage scrub. Nesting is known to occur in thorny trees and shrubs, though they have been observed nesting in buildings in the past.	MBTA BCC†	SGCN (2)	May occur. The Project Area does contain suitable habitat for species occurrence; however, no suitable nesting sites were observed within the Project Area.	May occur. The Study Area contains suitable habitat for species occurrence, foraging, and potential nesting.
Chestnut-collared longspur (*Calcarius ornatus*)	Found in the Great Plains in native prairie habitat consisting of mixed-grass and shortgrass uplands. Has also been observed in riparian areas in more arid habitats.	MBTA BCC†	SGCN (2)	Unlikely to occur. The Project Area is outside of the species' known range and does not contain suitable habitat for species occurrence.	Unlikely to occur. The Study Area is outside of the species' known range and does not contain suitable habitat for species occurrence.
Costa's hummingbird (*Calypte costae*)	Found in Sonoran and Mojave desertscrub near washes of native desert vegetation or rocky slopes of saguaros (*Carnegiea gigantea*) and creosote bush lowlands.	MBTA BCC	SGCN (2)	May occur. Suitable habitat is present within the Project Area.	May occur. Suitable habitat is present within the Project Area.
Elf owl (*Micrathene whitneyi*)	Known to occupy diverse habitats. In the Sonoran Desert, they are known to use desert ironwood (*Olneya tesota*), ocotillo (*Fouquieria splendens*), paloverde, and saguaro. Nesting most often occurs in saguaro and other columnar cacti, Fremont cottonwood (*Populus fremontii*), honey mesquite (*Prosopis glandulosa*), and Goodding's willow (*Salix gooddingii*).	MBTA	SGCN (3)	May occur. The Project Area contains suitable habitat for foraging and nesting. Saguaros were observed during the site visit.	May occur. The Study Area contains suitable habitat for foraging and nesting. Saguaros were observed during the site visit.
Ferruginous hawk (*Buteo regalis*)	Favors open scrublands, woodlands, and grasslands.	MBTA BCC†	SGCN (2)	May occur. Winter foraging habitat is present in the Project Area.	May occur. Winter foraging habitat is present within the Study Area.
Gila woodpecker (*Melanerpes uropygialis*)	Occurs in Sonoran desertscrub with saguaros present, or riparian woodlands with mature trees.	MBTA BCC	SGCN (2)	May occur. Suitable habitat is present within the Project Area.	May occur. Suitable habitat is present within the Study Area.
Gilded flicker (*Colaptes chrysoides*)	Found in Sonoran desertscrub with saguaros present, or riparian woodlands with mature trees.	MBTA BCC	SGCN (2)	May occur. Suitable habitat is present within the Project Area.	May occur. Suitable habitat is present within the Study Area.
Gray flycatcher (*Empidonax wrightii*)	Commonly found in pinyon- (*Pinus*) juniper (*Juniperus*) woodlands, less frequently observed in open ponderosa pine (*Pinus ponderosa*) or pine-oak (*Quercus*) woodland.	MBTA	SGCN (2)	Unlikely to occur. The Project Area is outside of the species' known range and does not contain habitat suitable for species occurrence.	Unlikely to occur. The Study Area is outside of the species' known range and does not contain habitat suitable for species occurrence.

Common Name (*Scientific Name*)	Habitat and Notes	Status*		Occurrence Status	
		Federal	State (Tier)	Project Area	Study Area
Harris's hawk (*Parabuteo unicinctus*)	Found in savannas, open woodlands, and semidesert habitats. Frequently observed near water sources, both natural and human-made. Often uses saguaro for nesting sites.	MBTA BCC†	SGCN (2)	May occur. The Project Area contains suitable habitat for foraging and potential nesting sites in saguaros.	May occur. The Study Area contains suitable habitat for foraging and potential nesting sites in saguaros.
LeConte's thrasher (*Toxostoma lecontei*)	Occurs in Sonoran desertscrub dominated by creosote bush, with scattered trees used for nesting.	MBTA BCC	SGCN (2)	May occur. Suitable habitat is present within the Project Area.	May occur. Suitable habitat is present within the Study Area.
Lincoln's sparrow (*Melospiza lincolnii*)	Found near bogs, wet meadows, riparian areas, predominantly in northern and montane habitats. Winters in central Arizona; prefers dense, brushy areas, often near water.	MBTA	SGCN (2)	Unlikely to occur. No habitat is present in the Project Area.	Unlikely to occur. No habitat is present in the Study Area.
Loggerhead shrike (*Lanius ludovicianus*)	Found in open areas with scattered trees and shrubs. Frequently observed in savannas and desertscrub biotic communities.	MBTA BCC†	SGCN (2)	Known to occur. Species was observed during the site visit.	Known to occur. Species was observed during the site visit.
Long-eared owl (*Asio otus*)	Found in deciduous forests and riparian areas near permanent water ways.	MBTA BCC	SGCN (2)	Unlikely to occur. No suitable habitat is present in the Project Area.	Unlikely to occur. No suitable habitat is present in the Study Area.
Mountain plover (*Charadrius montanus)*	Non-breeding visitor to Arizona; in winter prefers dry plains and agricultural fields.	MBTA BCC-nb	SGCN (2)	May occur. The Project Area does contain agricultural areas suitable for species occurrence.	May occur. The Study Area does contain agricultural areas suitable for species occurrence.
Prairie falcon (*Falco mexicanus*)	Found in open areas, predominantly in mountainous areas, steppes, plains, or prairies. Non-breeding wintering individuals have been known to forage in agricultural fields.	MBTA BCC†	SGCN (2)	May occur. The Project Area contains agricultural land suitable for winter foraging.	May occur. The Study Area contains agricultural land suitable for winter foraging.
Savannah sparrow (*Passerculus sandwichensis*)	Non-breeding winter visitor to Arizona. Uses fields, pastures, and golf courses.	MBTA BCC†	SGCN (2)	May occur. The Project Area contains suitable habitat for foraging in the form of agricultural fields.	May occur. Suitable habitat in the form of agricultural fields is present within the Study Area.
Sagebrush sparrow (*Artemisiospiza nevadensis*)	Found in shrubby, open flats and sagebrush plains.	MBTA	SGCN (3)	Unlikely to occur. The Project Area does not contain suitable habitat for species occurrence.	Unlikely to occur. The Study Area does not contain suitable habitat for species occurrence.
Sprague's pipit (*Anthus spragueii*)	Prefers open sandy coastal beaches and barren shores of inland saline lakes or river bars.	MBTA BCC	SGCN (2)	Unlikely to occur. No habitat is present in the Project Area.	Unlikely to occur. No habitat is present within the Study Area.

Common Name (*Scientific Name*)	Habitat and Notes	Status*		Occurrence Status	
		Federal	State (Tier)	Project Area	Study Area
Verdin (*Auriparus flaviceps*)	Found in arid, desert habitats, frequently observed in mesquite and creosote bush vegetation. Known to nest in shrubs, small trees, and cacti.	MBTA BCC	SGCN (2)	May occur. The Project Area does contain suitable habitat for species occurrence.	May occur. The Study Area does contain suitable habitat for species occurrence.
Vesper sparrow (*Pooecetes gramineus*)	Found in open areas with short, sparse grass and scattered shrubs. Uncommon wintering occurrence in central and southern Arizona.	MBTA BCC†	SGCN (2)	May occur. The Project Area contains suitable habitat for nonbreeding individuals to occur.	May occur. The Study Area contains suitable habitat for nonbreeding individuals to occur.
Western burrowing owl (*Athene cunicularia hypugaea*)	Found in open areas with low brush cover, including grasslands, agricultural margins and desertscrub. Year-round resident or migratory.	MBTA BCC	SGCN (2)	May occur. Agricultural land provides suitable habitat for species occurrence in the Project Area.	May occur. Agricultural land provides suitable habitat for species occurrence in the Project Area.
Western screech-owl (*Megascops kennicottii*)	Commonly found in broadleaf and riparian woodland, particularly within deciduous forests that border canyons and other drainages.	MBTA BCC†	SGCN (2)	Unlikely to occur. The Project Area does not provide suitable habitat for species occurrence.	Unlikely to occur. The Study Area does not provide suitable habitat for species occurrence.
Reptiles					
Regal horned lizard (*Phrynosoma solare*)	Found in rocky and gravelly habitats throughout arid and semi-arid plains, hills, canyons, and mountain slopes. Commonly associated with sloping terrain and scattered desert vegetation including creosote bush, mesquite, and saguaro.	–	SGCN (2)	May occur. The Project Area contains suitable habitat for species occurrence.	May occur. The Study Area contains suitable habitat for species occurrence.
Sonoran desert tortoise (*Gopherus morafkai*)	Occurs on primarily rocky and often steep hillsides and bajadas of Mohave and Sonoran desertscrub, typically at elevations below 7,800 feet amsl. May occur, but is less likely to occur, in desert grassland, juniper woodland, and interior chaparral habitats and even pine communities.	–	SGCN (1)	May occur. The Project Area does occur within the species' known range. Though no suitable habitat for breeding occurs within the Project Area, the species may still move across the area.	May occur. The Study Area does occur within the species' known range. Though no suitable habitat for breeding is known to occur within the Study Area, breeding potential may exist and the species may move across the area.
Mammals					
Arizona pocket mouse (*Perognathus amplus*)	Burrowing species found in a variety of desertscrub habitats with vegetation including creosote bush, mesquite, paloverde, and cacti.	–	SGCN (2)	May occur. The Project Area contains suitable habitat for species occurrence.	May occur. The Study Area contains suitable habitat for species occurrence.

Common Name (*Scientific Name*)	Habitat and Notes	Status*		Occurrence Status	
		Federal	State (Tier)	Project Area	Study Area
Mexican free-tailed bat (*Tadarida brasiliensis*)	Found in a variety of habitats with ranges across the United States. Often found roosting in caves, mines, and cliff crevices. Known to forage in agricultural land.	–	SGCN (2)	May occur. The Project Area contains suitable foraging habitat. though no suitable roosting habitat was observed in the Project Area.	May occur. The Study Area contains suitable foraging habitat, though no suitable roosting habitat is present in the Study Area.
California leaf-nosed bat (*Macrotus californicus*)	Mostly found in Sonoran desertscrub. Primarily roosts in mines, caves, and rock shelters. Nocturnal roosts include a variety of human-made structures, rock shelters, and mines between elevations of 160 and 3,980 feet amsl.	–	SGCN (2)	May occur. The Project Area is within the range of this species and contains suitable foraging habitat, though no suitable roosting habitat was observed in the Project Area.	May occur. The Study Area is within the range of this species and contains suitable foraging habitat, and potential roosting habitat in the form of abandoned buildings is present in the Study Area.
Cave myotis (*Myotis velifer*)	Typically found in desertscrub with creosote bush, brittlebush (*Encelia* sp.), paloverde, and cacti, but sometimes found up to pine-oak communities, between elevations of 300 and 5,000 feet amsl. Roosts in caves, tunnels, mine shafts, and under bridges, and occasionally in buildings within a few miles of water.	–	SGCN (2)	May occur. The Project Area is within the range of this species and contains suitable foraging habitat, though no suitable habitat for roosting was observed within the Project Area.	May occur. The Study Area is within the range of this species and contains suitable foraging habitat, though no suitable habitat for roosting is present within the Study Area.
Greater western mastiff bat (*Eumops perotis californicus)*	Occurs in lower and upper Sonoran desertscrub near cliffs. Prefers rugged, rocky canyons with abundant crevices at elevations from 240 to 8,475 feet amsl. Prefers crowding into tight crevices at least 1 foot deep by at least 2 inches wide. Colonies prefer deeper crevices, to 10 or more feet. Prefers to forage over large open bodies of water.	–	SGCN (2)	Unlikely to occur. No suitable habitat for roosting or foraging occurs within the Project Area.	Unlikely to occur. No suitable habitat for roosting or foraging occurs within the Study Area.
Harquahala Southern pocket gopher (*Thomomys bottae subsimilis*)	Historically found in habitats throughout Arizona that contain sufficient amounts of tuberous roots and other plant materials. Requires soil suitable for digging tunnels. Now believed to be extirpated from Arizona.	–	SGCN (2)	Unlikely to occur. Although the Project Area occurs in the species' historic range, the species is rare and believed to be extirpated from the area.	Unlikely to occur. Although the Study Area occurs in the species' historic range, the species is rare and believed to be extirpated from the area.
Harris's antelope squirrel (*Ammospermophilus harrisii*)	Burrowing species found in low dry, sparsely vegetated desert.	–	SGCN (2)	May occur. Habitat is present in the Project Area.	May occur. Habitat is present in the Study Area.

Common Name (*Scientific Name*)	Habitat and Notes	Status*		Occurrence Status	
		Federal	State (Tier)	Project Area	Study Area
Hoary bat (*Lasiurus cinereus*)	Found in deciduous and coniferous woodlands. Foraging occurs near open waterways and along riparian corridors.	–	SGCN (2)	Unlikely to occur. Suitable habitat for foraging or roosting is not present in the Project Area.	Unlikely to occur. Suitable habitat for foraging or roosting is not present in the Study Area.
Pale Townsend's big-eared bat (*Corynorhinus townsendii pallescens*)	Found throughout Arizona in a variety of vegetation communities and prefers to use roost sites, such as caves, mines, or abandoned buildings, with open ceilings instead of cracks or crevices. They typically forage no more than 5 miles from the roost site.	–	SGCN (1)	May occur. The species may use the Project Area for foraging. No roosting habitat is present.	May occur. The species could use the Study Area for foraging, and roosting habitat is present in abandoned buildings.
Pocketed free-tailed bat (*Nyctinomops femorosaccus*)	Found in desertscrub. Roosts in rock crevices and caves and in buildings at times.	–	SGCN (2)	May occur. The species may use the Project Area for foraging. No roosting habitat is present.	May occur. The species may use the Study Area for foraging. No roosting habitat is present.
Western yellow bat (*Lasiurus xanthinus*)	Found in arid habitats along riparian corridors. Known to roost in palm trees (Arecaceae), cottonwood, and yucca. Forages over open water.	–	SGCN (2)	Unlikely to occur. The Project Area does not provide suitable roosting or foraging habitat.	Unlikely to occur. The Study Area does not provide suitable roosting or foraging habitat.
Yuma myotis (*Myotis yumanensis*)	Found in a variety of habitats including riparian, desertscrub, moist woodlands, and forests. Prefer cliffs and rocky walls near water. Known to roost in caves, mines, cliff crevices, and buildings. Foraging occurs along forested edges of streams, ponds, and lakes.	–	SGCN (2)	Unlikely to occur. The Project Area does not provide suitable roosting or foraging habitat.	Unlikely to occur. The Study Area does not provide suitable roosting or foraging habitat.

Sources: Range or habitat information is from AGFD (2023b, 2023c); Brennan (2012); Corman and Wise-Gervais (2005); Cornell Lab of Ornithology (2023); eBird (2023); NatureServe (2023); and USFWS (2023a, 2023b).

Note: Notes regarding documented occurrences, other than observations made during SWCA's Project-specific surveys, are from AGFD (2023a, 2023b).

* Federal Status Definitions

BCC = Bird of Conservation Concern

BCC† = Bird of Conservation Concern for regions other than BCR 33. Included in table because they are also Arizona SGCN

BCC-nb = Bird of Conservation Concern with nonbreeding status

BGEPA = Bald and Golden Eagle Protection Act

ESA = Endangered Species Act

MBTA = Migratory Bird Treaty Act

State Status Definitions

SGCN = Species of Greatest Conservation Need; species identified by AGFD (2022) as having conservation priority. Tier 2 species are those categorized as "vulnerable" but not fitting the Tier 1 criteria for highest priority. Tier 3 species are those for which existing data were insufficient to score one or more vulnerability criteria.

Birds of Conservation Concern

The Project Area and Study Area are within BCR 33 (USFWS 2021), for which 27 BCC species are listed. A query of the AGFD Online Environmental Review Tool found modeled habitat for 10 of these species in the Project Area (AGFD 2023b) (see Exhibit C-2). Of these 10 species, eight may occur in the Project and Study Areas but were not observed during field studies: Bendire's thrasher (*Toxostoma bendirei*), Costa's hummingbird (*Calypte costae*), Gila woodpecker (*Melanerpes uropygialis*), gilded flicker (*Colaptes*

chrysoides), LeConte's thrasher (*Toxostoma lecontei*), mountain plover (C*haradrius montanus*), verdin (*Auriparus flaviceps*), and western burrowing owl (*Athene cunicularia hypugaea*) (see Table C-2). Mountain plover would only potentially occur within the Study Area as a nonbreeding species during winter months (see Table C-2). Birds that are BCC for regions other than BCR 33 but that are classified as SGCN in Arizona are considered in the following section. Other birds may be attracted to the agricultural areas in the Study Area for nesting, roosting, foraging, or reproduction.

Species of Greatest Conservation Need

Twenty-seven species categorized as SGCN Tier 1 or 2 (excluding those federally listed species that have already been addressed in the previous section) have the potential to occur within the proposed Study Area (see Table C-2). Of these 27 species, 25 may occur in the Project Area and one is known to occur in the Project and Study Areas. Of the 26 species that may occur or are known to occur within the Project Area and Study Area, 16 are birds, two are reptiles, one is an amphibian, and seven are mammals (see Table C-2). The bird species that may occur are American kestrel (*Falco sparverius*), Bendire's thrasher, cactus wren (*Campylorhynchus brunneicapillus*), Costa's hummingbird, ferruginous hawk (*Buteo regalis*), Gila woodpecker, gilded flicker, Harris's hawk (*Parabuteo unicinctus*), LeConte's thrasher, loggerhead shrike (*Lanius ludovicianus*), mountain plover, prairie falcon (*Falco mexicanus*), savannah sparrow (*Passerculus sandwichensis*), verdin, vesper sparrow (*Pooecetes gramineus*), and western burrowing owl. The reptile species that may occur in the Project Area are the regal horned lizard (*Phrynosoma solare*) and Sonoran desert tortoise. The mammal species that may occur in the Project Area are Arizona pocket mouse (*Perognathus amplus*), Mexican free-tailed bat (*Tadarida brasiliensis*), California leaf-nosed bat, cave myotis, Harris's antelope squirrel (*Ammospermophilus harrisii*), pale Townsend's big-eared bat, and pocketed free-tailed bat. The amphibian species that may occur is Sonoran Desert toad.

In addition, one bird species, Brewer's sparrow (*Spizella breweri*), may occur in the Study Area but is unlikely to occur in the Project Area.

No SGCN fish species are likely to occur within 5 miles of the proposed Project Area.

One species listed as SGCN Tier 3 has the potential to occur within 5 miles of the Project Area: the elf owl (*Micrathene whitneyi*). The elf owl may occur in both the Project Area and Study Area.

State-Protected Native Plants

The ANPL identifies a list of plant species—largely cacti, agaves (*Agave* sp.), yuccas (*Yucca* sp.), and desert trees—that are susceptible to removal for collection, landscaping, sale, or other commercial uses. The ANPL states that these plants shall not be taken, transported, or possessed from any land without permission and a permit from the ADA; it also requires notification prior to land clearing even if the plants will be destroyed. Eight plant species covered under the ANPL were observed in the Study Area during surveys: saguaro (*Carnegiea gigantea*), California barrel cactus (*Ferocactus cylindraceus*), desert ironwood (*Olneya tesota*), blue paloverde (*Parkinsonia florida*), yellow paloverde (*Parkinsonia microphylla*), velvet mesquite (*Prosopis velutina*), and cholla (*Cylindropuntia* sp.).

Noxious Weeds

Arizona maintains a list of noxious weeds in three categories: Class A, Class B, and Class C (ADA 2023). Class A species are those that are not known to occur in Arizona and are of limited distribution, and are of high priority for quarantine, control, or mitigation. Class B noxious weeds are species known to occur but of limited distribution in Arizona and may be high-priority pests for quarantine, control, or mitigation if a significant threat to crop, commodity, or habitat exists. Class C noxious weeds are species of plants that are widespread but may be recommended for active control based on risk assessment. Asian (Saharan) mustard (*Brassica tournefortii*), a Class B noxious weed, was observed in the Study Area during the site visit. Measures will be taken to avoid spreading noxious weeds in the Study Area.

Summary of Potential Effects

Areas of Biological Wealth

The Project and Study Areas intersect the Big Horn Mountains–Burnt Mountain–Saddle Mountain Wildlife Corridors, the Harquahala Plain COA, and a Wildlife Connectivity Zone that may be disturbed as a result of Project activities. These impacts would be localized and would not negatively impact the intersecting areas of biological wealth outside of the Project Area. Furthermore, as the only portion of the Project that overlaps with these wildlife movement areas is a small portion of the eastern end of the gen-tie structure, the overall loss of habitat in these areas would be extremely small compared to the total biological wealth habitat mapped in the vicinity of the Project.

The proposed Project Area and Alternative Route options would result in minimal disturbance to the landscape. However, the small disturbance footprint and relatively short timeframe of construction would limit the migratory habitat loss for those species and would limit the avoidance of the area by migratory species. As such, any loss of vegetation from construction activities would not contribute meaningfully to habitat fragmentation for mammals or decrease connectivity between habitats.

Federally Listed Threatened and Endangered Species

The Project Area and Study Area are within the known range of the monarch butterfly and the experimental population reintroduction area for the Sonoran pronghorn. As such, both species are considered candidate species for listing under the ESA.

Habitat in the Study Area may be suitable for use by monarch butterfly, a candidate species. No milkweed (*Asclepias* spp.) was observed in the Study Area; however, monarch butterflies may use other plants in the Study Area for foraging but not for reproduction (USFWS 2020). As such, any potential Project impacts to the monarch butterfly would be minor. A very small portion of suitable dispersal or foraging habitat would be lost, relative to the total amount of habitat in the vicinity. Individuals may experience injury, mortality, change of behavior, or loss of forage as a result of the Project. Individuals would be expected to largely shift activity to nearby suitable habitat.

Habitat in the Study Area may be suitable for use by Sonoran pronghorn, a non-essential experimental population species within the Project and Study Areas. However, as a very small portion of suitable dispersal or foraging habitat would be lost, relative to the total amount of habitat in the vicinity, any potential impacts to the Sonoran pronghorn would be minor. Individuals may experience injury, mortality, change of behavior, or loss of forage as a result of the Project. Individuals may also encounter vehicles and construction equipment. Individuals would be expected to largely shift activity to nearby suitable habitat, however.

Bald Eagles (Haliaeetus leucocephalus) and Golden Eagles (Aquila chrysaetos)

No suitable bald eagle nesting or foraging habitat (e.g., flowing rivers or lakes containing fish) and no tall trees or cliffs suitable for eagle perching are within the Project Area or Study Area. The Project is within the nonbreeding range of the bald eagle, however, and this species may move through the Project Area and Study Area (see Table C-1). The Project Area does not appear to contain nesting sites for golden eagles (i.e., cliffs) (Google Earth 2023), but individuals may fly over the Project Area and Study Area while foraging (see Table C-1). These species were not documented by SWCA during related surveys in the Study Area during January 2023. No impacts would be expected to bald or golden eagles as a result of this Project.

Other Special-Status Species

The following sections refer to species with special status that are not federally listed or candidates for federal listing.

Special-Status Mammal Species

Species that prefer agricultural fields would be impacted more if the Alternative Gen-Tie were chosen, whereas species that prefer Sonoran desertscrub would be impacted more if either the Preferred Gen-Tie or Preferred Gen-Tie Subroute Option were chosen. No substantial difference in impact is anticipated between options for the Preferred and Alternative Substations as both occur in agricultural fields.

The Project Area is unlikely to support suitable roosting habitat for most bat species. No palm trees (Arecaceae), large riparian trees, or suitable building structures occur in the Project Area, and therefore, no bat roosts would be expected to be removed or destroyed as a result of the Project. Bats using trees or buildings as day roosts within the Study Area have the potential to be negatively impacted by noise, leading to behavior changes or loss of fitness for individuals. Impacts would be minor as no trees used for day roosts are present within at least 600 feet of the Project Area where construction noise would be most prominent. Trees used for day roosts may be present outside the Study Area.

Bat species can collide with human-made structures during long-distance migration. Migrating bats often fly high above ground level and do not actively echolocate. However, during normal foraging activity, bats actively use echolocation and are typically able to detect and avoid features such as overhead transmission lines (Arnett et al. 2015). No information suggests that transmission lines in a setting such as the Study Area would pose a risk to bats.

Any artificial lighting associated with the Project may affect the ability of nocturnal wildlife (e.g., bats or nocturnal mammal species) to navigate (Davies et al. 2013).

Project construction activities could cause death or injury to terrestrial mammal species, particularly individuals that may be sheltering in underground burrows instead of fleeing. Project construction could cause behavior changes, as individuals would be expected to flee from an increase of noise, vibration, and human presence within the Project vicinity. These behavior changes could increase depredation, decrease foraging success, reduce reproductive success, and result in loss of fitness for that individual from increased metabolic output. Noise, vibration, and human presence would be temporary during construction and would cease with completion of construction.

The loss and degradation of mammal habitat from short- and long-term Project activities would be minor as abundant habitat for small mammals occurs in the vicinity of the Project and Study Areas. Similarly, because of the available habitat outside the Project Area, any loss of vegetation from construction activities would not contribute meaningfully to habitat fragmentation for special-status mammals or decrease connectivity between habitat patches. Construction of the Project would result in an increase of fugitive dust. The fugitive dust during construction could change mammal behavior (e.g., reducing the amount of foraging due to area disturbances). The likelihood and severity of impacts from construction would decrease with increasing distance from the Project Area.

Special-Status Bird Species

Golden eagles may forage in the Project and Study Areas, but no nesting habitat is present. Due to the relatively small area of foraging habitat potentially impacted compared with an individual golden eagle's home range and the abundance of similar foraging habitat outside of the Project Area, no significant impacts to golden eagles resulting from the Project would be expected. Bald eagles may occur within the Study Area during the nonbreeding season; however, they would be drawn toward the Gila River riparian areas approximately 18 miles southeast of the Project Area and not toward the Project Area. Thus, no impacts to bald eagles resulting from the Project would be expected.

One bird species (see Table C-2) occurs in the vicinity of the Project only for wintering or migration and therefore has no potential for nesting impacts.

Species that prefer agricultural fields would be impacted more if the Alternative Gen-Tie were the chosen alternative, whereas species that prefer Sonoran desertscrub would be impacted more if either the Preferred Gen-Tie or Preferred Gen-Tie Subroute Option were chosen. No substantial difference in impact is anticipated between options for the Preferred and Alternative Substations as both occur in agricultural fields. Potential impacts to special-status bird species could include changes in behavior due to Project-related noise, vibration, and the presence of workers and equipment; loss of breeding and foraging habitat; and impacts to nesting species. Potential impacts to nesting birds and their eggs covered under the MBTA, including burrow nests of the western burrowing owl, would be avoided and/or minimized either by limiting ground-clearing/vegetation removal activities to outside the breeding season (generally March to September with raptors breeding generally January to June) or through surveys to identify active nests and placement of buffers around those active nests until the young fledge or the nest fails.

Transmission lines can pose a collision risk to birds, including raptors (Avian Power Line Interaction Committee [APLIC] 2012). Many factors influence whether birds are likely to collide with a specific transmission line, however. To minimize that risk, the Applicant will design the Project to incorporate reasonable measures to minimize electrocution of and impacts to avian species. Such measures will be accomplished through incorporation of APLIC guidelines set forth in *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006* (APLIC 2006) and *Reducing Avian Collisions with Power Lines: the State of the Art in 2012* (APLIC 2012).

Transmission and distribution lines can also cause bird electrocution, although the risk is highest with lower-voltage lines. Electrocution occurs when a bird simultaneously contacts energized and grounded electrical components. High-voltage lines require spacing between those components that cannot be spanned even by very large birds so that electrocution risk is precluded almost entirely (APLIC 2012).

Any artificial lighting associated with the project may affect the ability of nocturnal wildlife (e.g., owls) to navigate (Davies et al. 2013).

Special-Status Reptile Species

Species that prefer agricultural fields would be impacted more if the Alternative Gen-Tie were the chosen alternative, whereas species that prefer Sonoran desertscrub would be impacted more if either the Preferred Gen-Tie or Preferred Gen-Tie Subroute Option were chosen. No substantial difference in impact is anticipated between options for the Preferred and Alternative Substations as both occur in agricultural fields. Potential Project-related impacts to special-status reptile species would include changes in behavior due to the presence of workers and equipment, including moving away from sources of noise and vibration; the potential for individuals being crushed or buried during ground-disturbing activities; the loss of habitat; and increased predation due to an increase in perches provided by the additional power poles to be installed. Special-status reptile individuals would be expected to have similar impacts from increased fugitive dust during construction as mammals.

Special-Status Amphibian Species

Two special-status amphibian species may occur within the Study Area: the Sonoran Desert toad and the Sonoran desert tortoise. Potential impacts to Sonoran Desert toad include death, injury, or impacts arising from behavior changes would be similar to those described for terrestrial mammals. Potential impacts from the loss, degradation, and fragmentation of amphibian habitat from Project activities would be the same as those described for terrestrial mammals. As the Alternative Gen-Tie Project Area contains greater water resources (e.g., fields, canals) this alternative would likely lead to more impacts to amphibians. Agricultural fields are abundant in the Study Area and immediate vicinity so the overall loss of habitat would be minor,

however. No substantial difference in impact is anticipated between options for the Preferred and Alternative Substations as both occur in agricultural fields.

Special-status amphibian individuals would be expected to experience similar impacts from increased fugitive dust during construction as mammals.

Special-Status Fish Species

There are currently no special-status fish species known or expected to occur within the Study Area. The Project would not impact special-status fish species because no habitat for special-status fish species is present in the Project Area. Project activities would not impact perennial water outside of the Study Area.

State-Protected Native Plants

Plant species protected under the ANPL could be removed during the Project's vegetation-clearing activities. However, as the gen-tie would occupy a relatively small area compared with that of nearby disturbances (e.g., agriculture and development) the loss of vegetation in the Study Area would result in minor impacts to protected native plants.

Noxious Weeds

Measures will be taken to avoid introducing or spreading noxious weeds in the Project Area, and therefore the Project would be unlikely to contribute to an increase of noxious weeds, in extent or abundance, in the vicinity of the Project.

Mitigation Measures

The following mitigation measures would reduce the potential for impacts to special-status species as a result of the Project:

- Transmission lines pose a risk of collisions and electrocution for birds, particularly raptors. To minimize that risk, the Applicant will design the Project's interconnection facilities to incorporate reasonable measures to minimize electrocution of and impacts to avian species following the guidelines outlined in *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006* (APLIC 2006) and *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC 2012).
- If vegetation-disturbing activities are planned during the migratory bird nesting season (March–September or January–June for raptors), measures to avoid any active bird nests within the Project Area, such as preconstruction surveys for migratory bird nests by a qualified biologist, should be taken to maintain compliance with the MBTA because suitable nesting habitat for migratory bird species is present in the Project Area.
- If a Sonoran desert tortoise is encountered within the Project Area, the AGFD's *Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects* (AGFD 2023d) should be followed.
- To minimize effects to the Sonoran pronghorn, the following mitigation measures should be implemented: provide on-site staff with worker awareness training; limit speeds in the Project Area to 20 miles per hour; and avoid any Sonoran pronghorn that occur in the area, with particular care being given to avoid vehicular collisions, and allow Sonoran pronghorn individuals to leave the area on their own accord.
- If western burrowing owls are identified in the Project Area, measures to avoid any active burrows should be taken. Because some burrowing owls are year-round residents, surveys for this species

should be conducted prior to initiation of ground disturbance and vegetation removal activities. Further the AGFD's *Burrowing Owl Project Clearance Guidance for Landowners* (Arizona Burrowing Owl Working Group 2009) should be followed.

- If trenching is included as part of Project construction, the following should be considered to minimize injury to wildlife: when trenches cannot be backfilled immediately, the escape ramps, which can be short lateral trenches or wooden planks sloping to the surface, should be constructed at least every 90 meters; trench slopes should be less than 45 degrees (1:1); and any trenches left open overnight should be inspected to remove wildlife prior to backfilling.
- The recommendations in AGFD's *Guidelines for Solar Development in Arizona* (AGFD 2009) and the AGFD's *Wildlife Compatible Fencing Guidelines* (AGFD 2023e) should be reviewed and implemented for the Project, as applicable and feasible, to minimize impacts to wildlife and their habitats.
- If native plants listed under the ANPL are present in the Project Area, the ADA Notice of Intent to Clear Land should be submitted prior to ground clearing. The submittal time frame depends on the acreage of the area to be cleared, as noted on the form.
- To minimize the introduction and spread of invasive species and noxious weeds, standard best management practices will be used during construction. These best management practices can include measures such as washing equipment prior to and following mobilization to the Project Area.

Conclusion

The proposed Project is not likely to significantly affect any rare, endangered, or special-status species. No ESA-listed species are present in the Project Area or Study Area, and none would be affected by the proposed Project. The Project and Study Areas do intersect areas of biological wealth; however, as the area of disturbance required for Project construction would be very small in relation to the overall habitat occurring within these areas of biological wealth, any potential impacts would be minimal. No substantial difference in impact is anticipated between options for the Preferred and Alternative Substations as both occur in agricultural fields.

The Project has the potential to have minor impacts on non-ESA-listed special-status amphibian, bird, reptile, and mammal species.

The risk that electrical infrastructure poses to birds would be addressed by following standard guidelines as design features for the Project, and preconstruction surveys for migratory bird nests would aid in compliance with the MBTA.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Maricopa County, Arizona

Local office

Arizona Ecological Services Field Office

(602) 242-0210
(602) 242-2513

Exhibit C-1a. U.S. Fish and Wildlife Service IPaC report.

9828 North 31st Ave
#c3
Phoenix, AZ 85051-2517

Exhibit C-1b. U.S. Fish and Wildlife Service IPaC report.

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

Exhibit C-1c. U.S. Fish and Wildlife Service IPaC report.

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Sonoran Pronghorn Antilocapra americana sonoriensis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4750	EXPN

Birds

NAME	STATUS
California Least Tern Sterna antillarum browni Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Yellow-billed Cuckoo Coccyzus americanus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Exhibit C-1d. U.S. Fish and Wildlife Service IPaC report.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON

Exhibit C-1e. U.S. Fish and Wildlife Service IPaC report.

Bendire's Thrasher Toxostoma bendirei — Breeds Mar 15 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9435

Costa's Hummingbird Calypte costae — Breeds Jan 15 to Jun 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9470

Gila Woodpecker Melanerpes uropygialis — Breeds Apr 1 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/5960

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence

Exhibit C-1f. U.S. Fish and Wildlife Service IPaC report.

at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

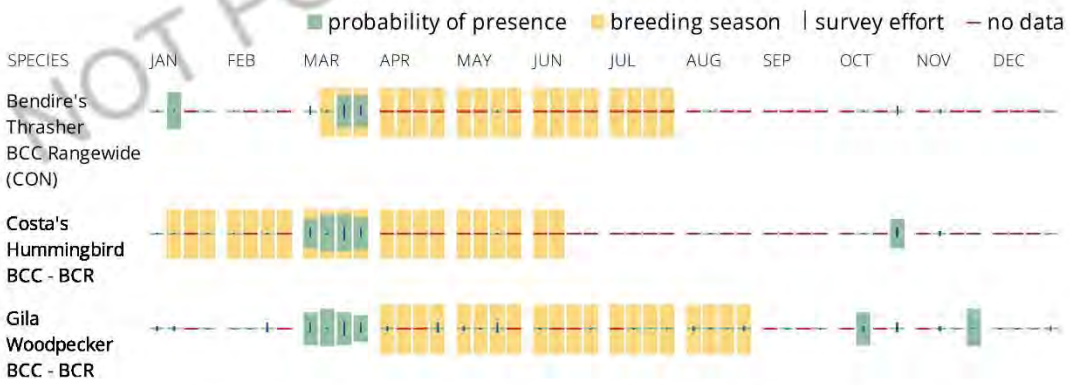
Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying

Exhibit C-1g. U.S. Fish and Wildlife Service IPaC report.

the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);

Exhibit C-1h. U.S. Fish and Wildlife Service IPaC report.

2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your

Exhibit C-1i. U.S. Fish and Wildlife Service IPaC report.

project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

Exhibit C-1j. U.S. Fish and Wildlife Service IPaC report.

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Exhibit C-1k. U.S. Fish and Wildlife Service IPaC report.

Arizona Environmental Online Review Tool Report

Arizona Game and Fish Department Mission
To conserve Arizona's diverse wildlife resources and manage for safe, compatible outdoor recreation opportunities for current and future generations.

Project Name:
Belmont Solar Facility CEC

User Project Number:
78343

Project Description:
Development of the Belmont Solar Facility substation and associated generation tie lines

Project Type:
Energy Storage/Production/Transfer, Energy Production (generation), photovoltaic solar facility (new)

Contact Person:
Lyndsey Bradshaw

Organization:
SWCA Environmental Consultants

On Behalf Of:
PRIVATE

Project ID:
HGIS-18271

Please review the entire report for project type and/or species recommendations for the location information entered. Please retain a copy for future reference.

Exhibit C-2a. Arizona Environmental Online Review Tool report.

Disclaimer:

1. This Environmental Review is based on the project study area that was entered. The report must be updated if the project study area, location, or the type of project changes.
2. This is a preliminary environmental screening tool. It is not a substitute for the potential knowledge gained by having a biologist conduct a field survey of the project area. This review is also not intended to replace environmental consultation (including federal consultation under the Endangered Species Act), land use permitting, or the Departments review of site-specific projects.
3. The Departments Heritage Data Management System (HDMS) data is not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there. HDMS data contains information about species occurrences that have actually been reported to the Department. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity. Such surveys may reveal previously undocumented population of species of special concern.
4. Arizona Wildlife Conservation Strategy (AWCS), specifically Species of Greatest Conservation Need (SGCN), represent potential species distribution models for the State of Arizona which are subject to ongoing change, modification and refinement. The status of a wildlife resource can change quickly, and the availability of new data will necessitate a refined assessment.

Locations Accuracy Disclaimer:
Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

Exhibit C-2b. Arizona Environmental Online Review Tool report.

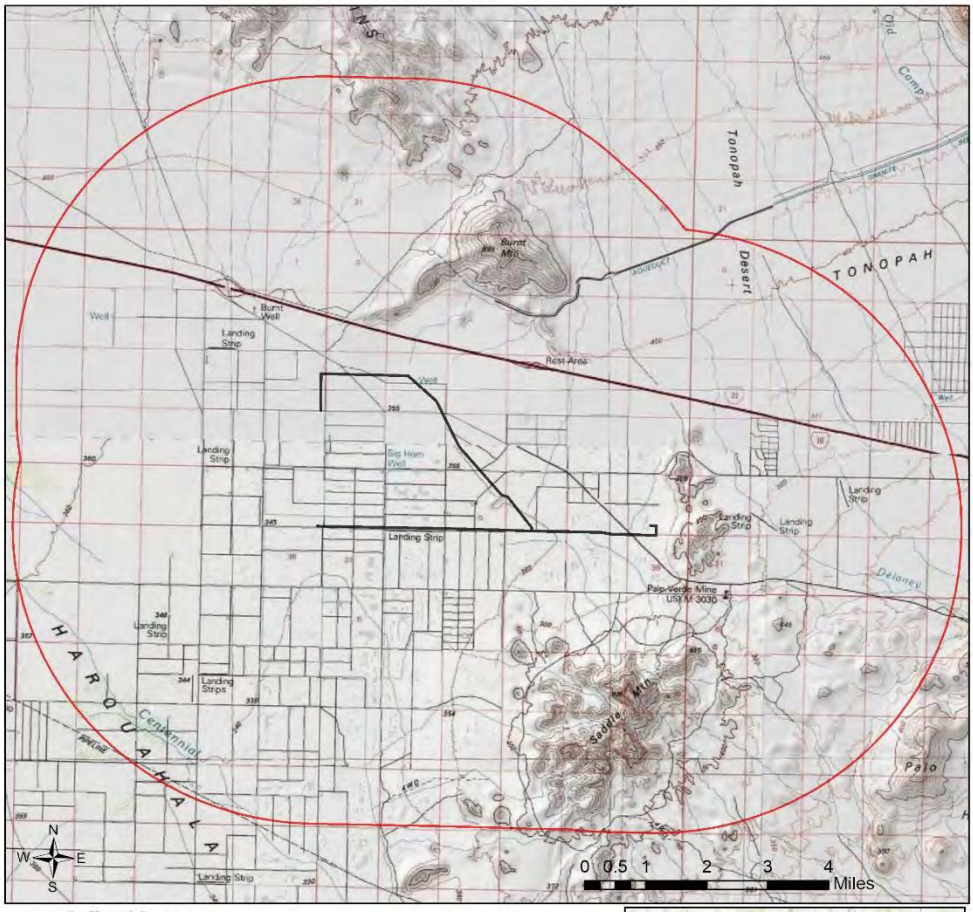
Recommendations Disclaimer:

1. The Department is interested in the conservation of all fish and wildlife resources, including those species listed in this report and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
2. Recommendations have been made by the Department, under authority of Arizona Revised Statutes Title 5 (Amusements and Sports), 17 (Game and Fish), and 28 (Transportation).
3. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project. These recommendations are preliminary in scope, designed to provide early considerations on all species of wildlife.
4. Making this information directly available does not substitute for the Departments review of project proposals, and should not decrease our opportunity to review and evaluate additional project information and/or new project proposals.
5. Further coordination with the Department requires the submittal of this Environmental Review Report with a cover letter and project plans or documentation that includes project narrative, acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map). Once AGFD had received the information, please allow 30 days for completion of project reviews. Send requests to:
   Project Evaluation Program, Habitat Branch
   Arizona Game and Fish Department
   5000 West Carefree Highway
   Phoenix, Arizona 85086-5000
   Phone Number: (623) 236-7600
   Fax Number: (623) 236-7366
   Or
   PEP@azgfd.gov
6. Coordination may also be necessary under the National Environmental Policy Act (NEPA) and/or Endangered Species Act (ESA). Site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies.

Exhibit C-2c. Arizona Environmental Online Review Tool report.

Belmont Solar Facility CEC

USA Topo Basemap With Locator Map



Buffered Project Boundary

Project Boundary

Project Size (acres): 89.20

Lat/Long (DD): 33.4795 / -113.0800

County(s): Maricopa

AGFD Region(s): Yuma

Township/Range(s): T2N, R8W; T2N, R9W

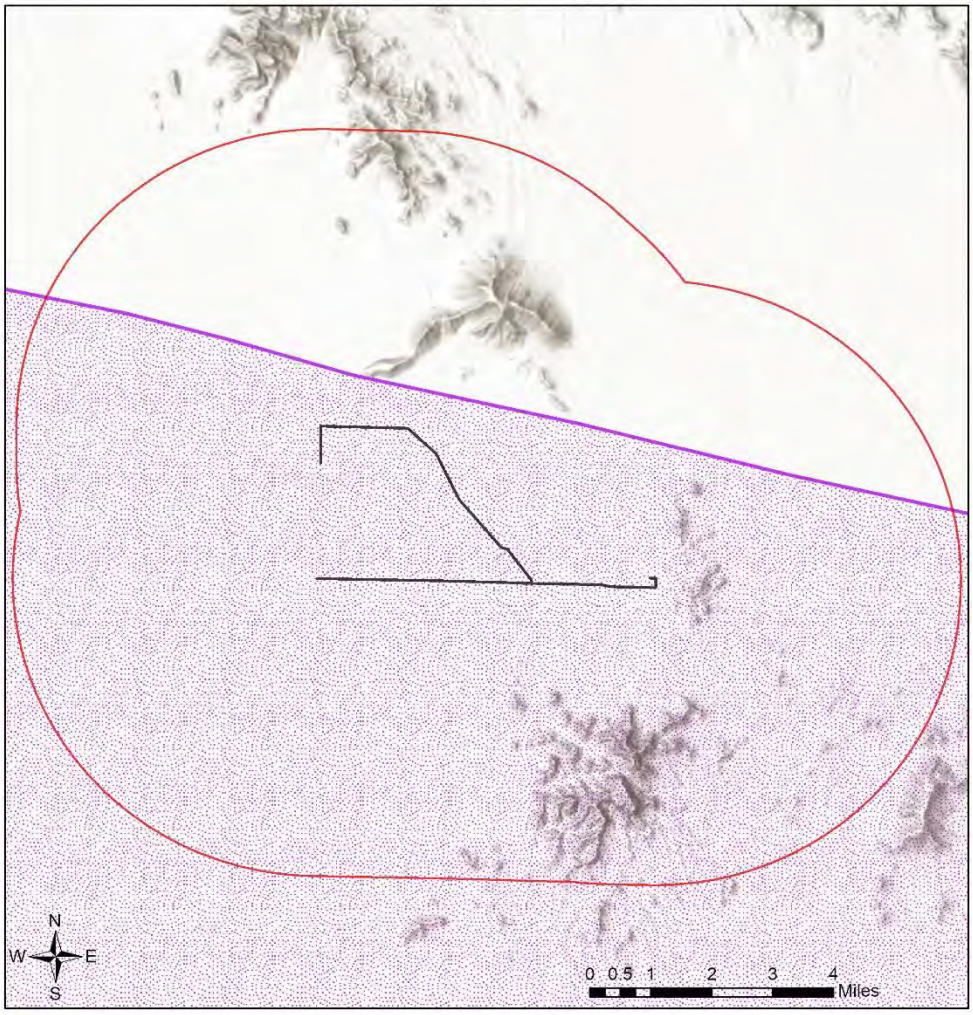
USGS Quad(s): BIG HORN PEAK; BURNT MOUNTAIN +

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Exhibit C-2d. Arizona Environmental Online Review Tool report.

Belmont Solar Facility CEC

Web Map As Submitted By User



Critical Habitat
Important Bird Areas
Special Areas
Buffered Project Boundary
Project Boundary

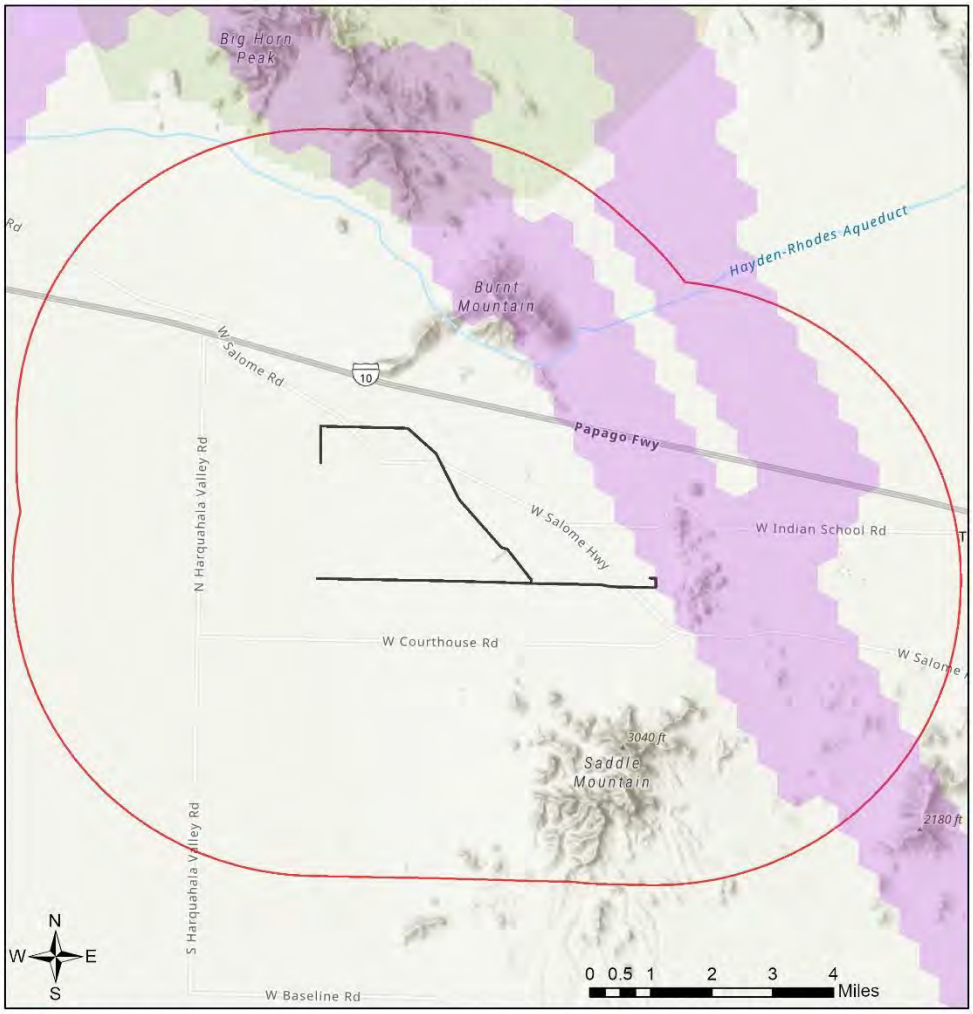
Project Size (acres): 89.20
Lat/Long (DD): 33.4795 / -113.0800
County(s): Maricopa
AGFD Region(s): Yuma
Township/Range(s): T2N, R8W; T2N, R9W
USGS Quad(s): BIG HORN PEAK; BURNT MOUNTAIN +

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Exhibit C-2e. Arizona Environmental Online Review Tool report.

Belmont Solar Facility CEC

Important Areas



- Buffered Project Boundary
- Project Boundary
- Important Bird Areas
- Critical Habitat
- Pinal County Riparian
- Important Connectivity Zones
- Wildlife Connectivity

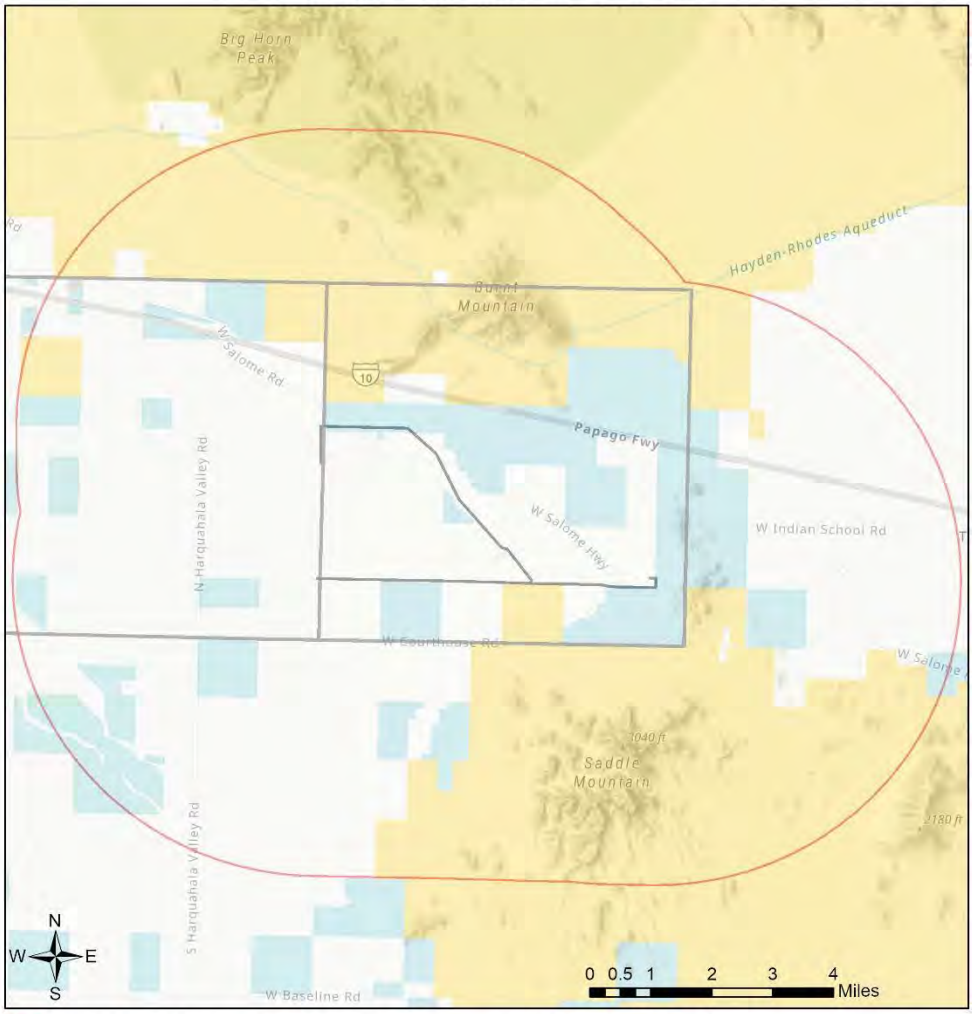
Project Size (acres): 89.20
Lat/Long (DD): 33.4795 / -113.0800
County(s): Maricopa
AGFD Region(s): Yuma
Township/Range(s): T2N, R8W; T2N, R9W
USGS Quad(s): BIG HORN PEAK; BURNT MOUNTAIN +

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community
Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Exhibit C-2f. Arizona Environmental Online Review Tool report.

Belmont Solar Facility CEC

Township/Ranges and Land Ownership



- Buffered Project Boundary
- Project Boundary
- AZ Game & Fish Dept.
- BLM
- BOR
- Indian Res.
- Military
- Mixed/Other
- National Park/Mon.
- Private
- State & Regional Parks
- State Trust
- US Forest Service
- Wildlife Area/Refuge
- Township/Ranges

Project Size (acres): 89.20
Lat/Long (DD): 33.4795 / -113.0800
County(s): Maricopa
AGFD Region(s): Yuma
Township/Range(s): T2N, R8W; T2N, R9W
USGS Quad(s): BIG HORN PEAK; BURNT MOUNTAIN +

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community
Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Exhibit C-2g. Arizona Environmental Online Review Tool report.

Special Status Species Documented within 5 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Antilocapra americana sonoriensis	Sonoran Pronghorn	LE,XN		S		1
Gopherus morafkai	Sonoran Desert Tortoise	CCA	S	S		1

Note: Status code definitions can be found at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/

Special Areas Documented that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Big Horn Mtns - Burnt Mtn - Saddle Mtns	Maricopa County Wildlife Movement Area - Landscape					
Harquahala Plain	Conservation Opportunity Area					
Important Connectivity Zone	Wildlife Connectivity					

Note: Status code definitions can be found at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/

Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Ammospermophilus harrisii	Harris' Antelope Squirrel					
Anaxyrus microscaphus	Arizona Toad	SC		S		2
Anthus spragueii	Sprague's Pipit	SC				2
Antilocapra americana sonoriensis	Sonoran Pronghorn	LE,XN		S		1
Aquila chrysaetos	Golden Eagle			S		2
Artemisiospiza nevadensis	Sagebrush Sparrow					
Asio otus	Long-eared Owl					2
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		2
Auriparus flaviceps	Verdin					2
Buteo regalis	Ferruginous Hawk	SC		S		2
Calcarius ornatus	Chestnut-collared Longspur					2
Calypte costae	Costa's Hummingbird					2
Campylorhynchus brunneicapillus	Cactus Wren					2
Charadrius montanus	Mountain Plover	SC				2
Coccyzus americanus	Yellow-billed Cuckoo (Western DPS)					
Colaptes chrysoides	Gilded Flicker			S		2
Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC	S	S		1
Empidonax wrightii	Gray Flycatcher					2
Eumops perotis californicus	Greater Western Bonneted Bat					
Falco mexicanus	Prairie Falcon					2
Falco sparverius	American Kestrel					2
Gopherus morafkai	Sonoran Desert Tortoise	CCA	S	S		1

Exhibit C-2h. Arizona Environmental Online Review Tool report.

Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Incilius alvarius	Sonoran Desert Toad					2
Lanius ludovicianus	Loggerhead Shrike	SC				2
Lasiurus cinereus	Hoary Bat					2
Lasiurus xanthinus	Western Yellow Bat		S			2
Lithobates yavapaiensis	Lowland Leopard Frog	SC	S	S		1
Macrotus californicus	California Leaf-nosed Bat	SC		S		2
Megascops kennicottii	Western Screech-owl					
Melanerpes uropygialis	Gila Woodpecker					2
Melospiza lincolnii	Lincoln's Sparrow					2
Micrathene whitneyi	Elf Owl					
Myotis velifer	Cave Myotis	SC		S		2
Myotis yumanensis	Yuma Myotis	SC				2
Nyctinomops femorosaccus	Pocketed Free-tailed Bat					2
Parabuteo unicinctus	Harris's Hawk					2
Passerculus sandwichensis	Savannah Sparrow					2
Perognathus amplus	Arizona Pocket Mouse					2
Phrynosoma solare	Regal Horned Lizard					2
Pooecetes gramineus	Vesper Sparrow					2
Spizella breweri	Brewer's Sparrow					2
Tadarida brasiliensis	Brazilian Free-tailed Bat					
Thomomys bottae subsimilis	Harquahala Southern Pocket Gopher	SC				2
Toxostoma bendirei	Bendire's Thrasher					2
Toxostoma lecontei	LeConte's Thrasher			S		2

Species of Economic and Recreation Importance Predicted that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Callipepla gambelii	Gambel's Quail					
Odocoileus hemionus	Mule Deer					
Pecari tajacu	Javelina					
Puma concolor	Mountain Lion					
Zenaida asiatica	White-winged Dove					
Zenaida macroura	Mourning Dove					

Exhibit C-2i. Arizona Environmental Online Review Tool report.

Project Type: Energy Storage/Production/Transfer, Energy Production (generation), photovoltaic solar facility (new)

Project Type Recommendations:
During the planning stages of your project, please consider the local or regional needs of wildlife in regards to movement, connectivity, and access to habitat needs. Loss of this permeability prevents wildlife from accessing resources, finding mates, reduces gene flow, prevents wildlife from re-colonizing areas where local extirpations may have occurred, and ultimately prevents wildlife from contributing to ecosystem functions, such as pollination, seed dispersal, control of prey numbers, and resistance to invasive species. In many cases, streams and washes provide natural movement corridors for wildlife and should be maintained in their natural state. Uplands also support a large diversity of species, and should be contained within important wildlife movement corridors. In addition, maintaining biodiversity and ecosystem functions can be facilitated through improving designs of structures, fences, roadways, and culverts to promote passage for a variety of wildlife. Guidelines for many of these can be found at: https://www.azgfd.com/wildlife/planning/wildlifeguidelines/.

Consider impacts of outdoor lighting on wildlife and develop measures or alternatives that can be taken to increase human safety while minimizing potential impacts to wildlife. Conduct wildlife surveys to determine species within project area, and evaluate proposed activities based on species biology and natural history to determine if artificial lighting may disrupt behavior patterns or habitat use. Use only the minimum amount of light needed for safety. Narrow spectrum bulbs should be used as often as possible to lower the range of species affected by lighting. All lighting should be shielded, canted, or cut to ensure that light reaches only areas needing illumination.

Minimize the potential introduction or spread of exotic invasive species, including aquatic and terrestrial plants, animals, insects and pathogens. Precautions should be taken to wash and/or decontaminate all equipment utilized in the project activities before entering and leaving the site. See the Arizona Department of Agriculture website for a list of prohibited and restricted noxious weeds at https://www.invasivespeciesinfo.gov/unitedstates/az.shtml and the Arizona Native Plant Society https://aznps.com/invas for recommendations on how to control. To view a list of documented invasive species or to report invasive species in or near your project area visit iMapInvasives - a national cloud-based application for tracking and managing invasive species at https://imap.natureserve.org/imap/services/page/map.html.

- To build a list: zoom to your area of interest, use the identify/measure tool to draw a polygon around your area of interest, and select "See What's Here" for a list of reported species. To export the list, you must have an account and be logged in. You can then use the export tool to draw a boundary and export the records in a csv file.

Minimization and mitigation of impacts to wildlife and fish species due to changes in water quality, quantity, chemistry, temperature, and alteration to flow regimes (timing, magnitude, duration, and frequency of floods) should be evaluated. Minimize impacts to springs, in-stream flow, and consider irrigation improvements to decrease water use. If dredging is a project component, consider timing of the project in order to minimize impacts to spawning fish and other aquatic species (include spawning seasons), and to reduce spread of exotic invasive species. We recommend early direct coordination with Project Evaluation Program for projects that could impact water resources, wetlands, streams, springs, and/or riparian habitats.

The Department recommends that wildlife surveys are conducted to determine if noise-sensitive species occur within the project area. Avoidance or minimization measures could include conducting project activities outside of breeding seasons.

Exhibit C-2j. Arizona Environmental Online Review Tool report.

For any powerlines built, proper design and construction of the transmission line is necessary to prevent or minimize risk of electrocution of raptors, owls, vultures, and golden or bald eagles, which are protected under state and federal laws. Limit project activities during the breeding season for birds, generally March through late August, depending on species in the local area (raptors breed in early February through May). Conduct avian surveys to determine bird species that may be utilizing the area and develop a plan to avoid disturbance during the nesting season. For underground powerlines, trenches should be covered or back-filled as soon as possible. Incorporate escape ramps in ditches or fencing along the perimeter to deter small mammals and herpetofauna (snakes, lizards, tortoise) from entering ditches. In addition, indirect affects to wildlife due to construction (timing of activity, clearing of rights-of-way, associated bridges and culverts, affects to wetlands, fences) should also be considered and mitigated.

Based on the project type entered, coordination with State Historic Preservation Office may be required (https://azstateparks.com/).

Based on the project type entered, coordination with U.S. Fish and Wildlife Service (Migratory Bird Treaty Act) may be required (https://www.fws.gov/office/arizona-ecological-services).

Vegetation restoration projects (including treatments of invasive or exotic species) should have a completed site-evaluation plan (identifying environmental conditions necessary to re-establish native vegetation), a revegetation plan (species, density, method of establishment), a short and long-term monitoring plan, including adaptive management guidelines to address needs for replacement vegetation.

The Department requests further coordination to provide project/species specific recommendations, please contact Project Evaluation Program directly at PEP@azgfd.gov.

Project Location and/or Species Recommendations:
Analysis indicates that your project is located in the vicinity of an identified Conservation Opportunity Area (COA). While there are many areas in Arizona that present abundant conservation opportunities, COAs are specific areas on the landscape that the Department identified as having the greatest potential for conservation efforts. COAs were identified using species and habitat data, the presence of unique landscape features, and Departmental expertise. COAs range in size, scope, and focal species and/or habitats and are strictly a non-regulatory conservation tool for the public and our conservation partners to consider. For more information regarding this particular COA near your project area and the Department's suggestions for potential conservation efforts, please visit the COA profile at https://awcs.azgfd.com/conservation-opportunity-areas.

Analysis indicates that your project is located in the vicinity of an identified wildlife habitat connectivity feature. The County-level Stakeholder Assessments contain five categories of data (Barrier/Development, Wildlife Crossing Area, Wildlife Movement Area- Diffuse, Wildlife movement Area- Landscape, Wildlife Movement Area- Riparian/Washes) that provide a context of select anthropogenic barriers, and potential connectivity. The reports provide recommendations for opportunities to preserve or enhance permeability. Project planning and implementation efforts should focus on maintaining and improving opportunities for wildlife permeability. For information pertaining to the linkage assessment and wildlife species that may be affected, please refer to: https://www.azgfd.com/wildlife/planning/habitatconnectivity/identifying-corridors/.
Please contact the Project Evaluation Program (pep@azgfd.gov) for specific project recommendations.

Exhibit C-2k. Arizona Environmental Online Review Tool report.

Arizona Game and Fish Department
Project ID: HGIS-18271

project_report_belmont_solar_facility_cec_57394_59164.pdf
Review Date: 1/30/2023 02:59:51 PM

HDMS records indicate that one or more Listed, Proposed, or Candidate species or Critical Habitat (Designated or Proposed) have been documented in the vicinity of your project. The Endangered Species Act (ESA) gives the US Fish and Wildlife Service (USFWS) regulatory authority over all federally listed species. Please contact USFWS Ecological Services Offices at https://www.fws.gov/office/arizona-ecological-services or:

Phoenix Main Office
9828 North 31st Avenue #C3
Phoenix, AZ 85051-2517
Phone: 602-242-0210
Fax: 602-242-2513

Tucson Sub-Office
201 N. Bonita Suite 141
Tucson, AZ 85745
Phone: 520-670-6144
Fax: 520-670-6155

Flagstaff Sub-Office
SW Forest Science Complex
2500 S. Pine Knoll Dr.
Flagstaff, AZ 86001
Phone: 928-556-2157
Fax: 928-556-2121

HDMS records indicate that Sonoran Desert Tortoise have been documented within the vicinity of your project area. Please review the Tortoise Handling Guidelines found at: https://www.azgfd.com/wildlife/nongamemanagement/tortoise/

Analysis indicates that your project is located in the vicinity of an identified wildlife habitat connectivity feature. The Statewide Wildlife Connectivity Assessment's Important Connectivity Zones (ICZs) represent general areas throughout the landscape which contribute the most to permeability of the whole landscape. ICZs may be used to help identify, in part, areas where more discrete corridor modeling ought to occur. The reports provide recommendations for opportunities to preserve or enhance permeability. Project planning and implementation efforts should focus on maintaining and improving opportunities for wildlife permeability. For information pertaining to the linkage assessment and wildlife species that may be affected, please refer to: https://s3.amazonaws.com/azgfd-portal-wordpress/azgfd.wp/wp-content/uploads/0001/01/23120719/ALIWCA_Final_Report_Perkl_2013_lowres.pdf
Please contact the Project Evaluation Program (pep@azgfd.gov) for specific project recommendations.

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Exhibit C-2l. Arizona Environmental Online Review Tool report.

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EXHIBIT D. BIOLOGICAL RESOURCES

As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, Exhibit 1:

> *List the fish, wildlife, plant life, and associated forms of life in the vicinity of the proposed site or route and describe the effects, if any, the proposed facilities will have thereon.*

Introduction

The Project Area for this review comprises the Preferred Gen-Tie, the Preferred Gen-Tie Subroute, the Alternative Gen-Tie, the Preferred Project Substation, and the Alternative Project Substation. The Study Area comprises the Project Area plus a 1-mile buffer. To identify the plant and wildlife species that may occur in the vicinity of the proposed Project, SWCA Environmental Consultants (SWCA) consulted publicly available data sources, including the following:

- Topographical and aerial maps
- Arizona Game and Fish Department (AGFD) Online Environmental Review Tool (AGFD 2023a)
- *Biotic Communities: Southwestern United States and Northwestern Mexico* (Brown 1994)
- Regional checklists, reports, and publications (e.g., Brennan and Holycross 2006; eBird 2023; Hoffmeister 1986; iNaturalist 2023; Kesner and Marsh 2010)

In addition, an SWCA biologist with expertise in the biology of flora and fauna of the region completed a windshield survey of portions of the Study Area on January 23, 2023. All plant and wildlife species observed in the Study Area during this survey were recorded. The site was assessed to determine whether habitat features for species protected under federal, state, or local regulations were present in the Project Area and Study Area.

Results

Ecological Setting

The Project Area and Study Area are within the Lower Colorado River Valley subdivision of the Sonoran Desertscrub biotic community (Brown 1994) at elevations ranging from approximately 1,115 to 1,760 feet above mean sea level (amsl). The Project Area occurs along the eastern edge of the Harquahala Plain, south of Interstate 10, approximately 2.5 miles north of Saddle Mountain, and approximately 1.8 miles southwest of Burnt Mountain. Land uses in the Study Area include active or inactive agriculture fields with a few residential and agricultural structures, electrical generation infrastructure and substations, and undisturbed desert. The Phoenix metropolitan area lies approximately 35 miles east of the Study Area, and the Gila River lies approximately 19 miles to the southeast. Land uses immediately outside of the Study Area include agriculture and undisturbed desert. The Project Area and Study Area are flat to open topography with the exception that the western portion of the Study Area includes unnamed foothills that extend north from Saddle Mountain and the northern portion of the Study Area includes a portion of Burnt Mountain. The Project Area crosses an unnamed canal and multiple field canals that originate ultimately from the Granite Reef (Hayden-Rhodes) Aqueduct of the Central Arizona Project (CAP), which is approximately 0.8 mile north of the Study Area. The Project Area also crosses the Saddleback Flood Retarding Structure (FRS), and the Study Area additionally overlaps the Saddleback Diversion Channel and the Harquahala FRS.

Unnamed ephemeral drainages occur within the Project Area and Study Area. An evaporation pond associated with the Harquahala Generating Facility occurs within the Study Area, approximately 0.35 mile south of the Project Area.

Vegetation

Portions of the Project Area and Study Area have been disturbed for dirt roads, the West Salome Highway, canals, a levee, and the existing APS Delaney Substation. Other portions of the Project Area and Study Area consist of agricultural fields. The Project Area and Study Area also contain Sonoran desertscrub dominated by white bursage (*Ambrosia dumosa*) and/or creosote bush (*Larrea tridentata*) and velvet mesquite (*Prosopis velutina*). Other native and nonnative species were observed in the portions of the Study Area that were surveyed. Three noxious weed species, Asian mustard (=Saharan mustard) (*Brassica tournefortii*), buffelgrass (*Pennisetum ciliare*), and stinknet (*Oncosiphon piluliferum*) are present in the Study Area. Tamarisk (*Tamarix* sp.) was also observed in the Study Area but could not be identified to species. Only saltcedar (*Tamarix ramosissima*) is listed as a noxious weed species in Arizona. Noxious weed species listed by Arizona Department of Agriculture are discussed in Exhibit C.

No broadleaf deciduous riparian vegetation communities (i.e., communities containing willow [*Salix* sp.], cottonwood [*Populus* sp.], or ash [*Fraxinus* sp.], etc.), were observed during surveys of the Study Area and in the surveyed portion of the Project Area.

Wildlife Species

Bird species observed in the Study Area during surveys included bluebird (*Sialia* sp.), common raven (*Corvus corax*), greater roadrunner (*Geococcyx californianus*), killdeer (*Charadrius vociferus*), loggerhead shrike (*Lanius ludovicianus*), northern harrier (*Circus hudsonius*), red-tail hawk (*Buteo jamaicensis*), Say's phoebe (*Sayornis saya*), white-crowned sparrow (*Zonotrichia leucophrys*), and yellow-rumped warbler (*Setophaga coronata*). Loggerhead shrike is addressed in Exhibit C.

Habitat for bat species or potential bat roost sites (abandoned buildings, or palm trees [Arecaceae]) has the potential to be present in the Study Area but was not observed during surveys.

Species that may occur in the Study Area are listed in Table D-1 (mammals), Table D-2 (birds), Table D-3 (reptiles), and Table D-4 (amphibians). Species were considered for their potential to occur as follows. A list of mammal species typical of Lower Colorado River Valley subdivision of the Sonoran Desertscrub biotic community evaluated for this report included mammals found in Table 4.1 of *Mammals of Arizona* (Hoffmeister 1986). Bird species evaluated in this report include those listed for Sonoran desertscrub in Appendix II of *Biotic Communities Southwestern United States and Northwestern Mexico* (Brown 1994) and a list of Sonoran Desert Birds in iNaturalist (2023). Reptiles and amphibians evaluated in this report were taken from a list of commonly occurring species in the Lower Colorado River Valley subdivision of the Sonoran Desertscrub biotic community in *Amphibians and Reptiles in Arizona* (Brennan and Holycross 2006). Finally, fish species evaluated in this report were taken from the list of species in the Central Arizona Project from the *Central Arizona Project Fish Monitoring Final Annual Report* (Kesner and Marsh 2010).

Some species from these lists of typical species overlap special-status species evaluated in Exhibit C, and these species have been removed from consideration in Exhibit D because they have already been addressed. Occurrence records were obtained from the AGFD Online Environmental Review Tool (AGFD 2023a), *Mammals of Arizona* (Hoffmeister 1986), eBird (2023), and the *Breeding Bird Atlas* (Corman and Wise-Gervais 2005).

Mammals

Small, medium, and large-sized terrestrial mammal species may occur in the Project Area and Study Area. Bat species have the potential to disperse or migrate through or forage within the Project Area and Study

Area. Palm trees and abandoned buildings were not observed in the portions of the Study Area adjacent to the Preferred Gen-Tie alignment; however, these types of potential bat roosts have the potential to occur in the Study Area (Google Earth 2023). Special-status bat species are addressed in Exhibit C.

Table D-1. Mammal Species that May Occur in the Study Area

Common Name (*Scientific Name*)	**Habitat**
Arizona pocket mouse (*Perognathus amplus*)	Found in desertscrub habitats.
Badger (*Taxidea taxus*)	Found in grassland and desertscrub.
Bighorn sheep (*Ovis canadensis*)	Occur in a variety of biotic communities, often in close proximity to cliffs or talus slopes that they can use to escape predation. Often exhibit vertical migration in response to vegetation growth.
Black-tailed jackrabbit (*Lepus californicus*)	Occurs in open habitat with scattered patches of shrubs, including plains, fields, and deserts.
Bobcat (*Lynx rufus*)	Found in various habitats including woodlands, river bottomlands, deserts, and mountains.
Botta's pocket gopher (*Thomomys bottae*)	Found in extremely xeric locations below 11,000 feet above mean sea level (amsl) with variable soils and ground cover ranging from open to grasslands. Occurs in roadsides, valleys, and mountain meadows.
Cactus mouse (*Peromyscus eremicus*)	Found in deserts and pinyon-juniper (*Pinus* spp.–*Juniperus* spp.) woodland, Occurs in rocky, sandy, or loamy soils. Found in rock heaps, stone walls, burrows, woodrat houses, and brush fences.
Coyote (*Canis latrans*)	Occurs in all habitat types, including agricultural, urban, and suburban areas.
Deer mouse (*Peromyscus maniculatus*)	Upland and riparian habitats, including open areas, brushlands, and coniferous and deciduous forests.
Desert cottontail (*Sylvilagus audubonii*)	Found in grasslands, brushlands, edges of foothill woodlands, willow thickets, and occasionally in cultivated fields or under buildings.
Desert kangaroo rat (*Dipodomys deserti*)	Occurs in low deserts, often sandy soil with sparse vegetation including alkali sink, shadscale scrub, and creosote bush (*Larrea tridentata*).
Desert pocket mouse (*Chaetodipus penicillatus*)	Occurs in sparsely vegetated sandy desert floors.
Gray fox (*Urocyon cinereoargenteus*)	Typically occurs in shrubland and avoids open areas. Dens in caves, hollow logs, or debris piles.
Javelina (=collared peccary) (*Dicotyles tajacu*)	Found in deserts, shrublands, cities, and agricultural areas.
Long-legged myotis (*Myotis volans*)	Occurs primarily in wooded mountainous areas but may also occur in riparian desert areas. Hibernacula include caves and mines. Winter habitat is poorly understood. Daytime roosts are in tree hollows, under loose bark, rock crevices, or buildings.
Merriam's kangaroo rat (*Dipodomys merriami*)	Occurs in low deserts in sparsely vegetated areas.
Mountain lion (*Puma concolor*)	Generally prefers mountainous, undisturbed areas. Stream courses and ridgetops used for travel corridors.
Mule deer (*Odocoileus hemionus*)	Occurs in mountains and lowlands, often associated with successional vegetation.
Round-tailed ground squirrel (*Xerospermophilus tereticaudus*)	Found in Sonoran desertscrub, alkali sink, and creosote bush communities in low, flat areas, and avoids rocky hills
Striped skunk (*Mephitis mephitis*)	Usually lives in areas near water, including rivers, streams, and irrigated places. Lives in natural cavities, burrows dug by other species, and human-made structures.

Common Name (*Scientific Name*)	Habitat
Western harvest mouse (*Reithrodontomys megalotis*)	Occurs in a wide variety of habitats in places with adequate cover. Often lives in areas with adequate grass cover, along streams, bottomlands, along fences, or around irrigated areas.
White-throated woodrat (*Neotoma albigula*)	Found in brushlands, rocky cliffs, creosote bush scrub, mesquite-yucca (*Prosopis* spp.–*Yucca* spp.), and pinyon-juniper woodland.
Bat Species	
Big brown bat (*Eptesicus fuscus*)	Occurs in variable habitat, from ponderosa pine (*Pinus ponderosa*) forests, pinyon-juniper woodlands, the lower edge of spruce-fir (*Picea* spp.–*Abies* spp.) forests, and Lower Sonoran zones. Migratory; found throughout the state in summer and in southern Arizona in the winter. Roosts in buildings, bridge joints, mines, hollow trees, and caves.
Big free-tailed bat (*Nyctinomops macrotis*)	Rocky, rugged areas in a wide variety of biotic communities. Roost primarily in crevices, but are occasionally found in in buildings, caves, or tree cavities.
California myotis (*Myotis californicus*)	Found in desert ranges and flatlands; desert shrub-oak (*Quercus* spp.) to ponderosa pine zones. Migratory; winter distribution in southern Arizona, south of the Gila River. Roosts in crevices and cracks in canyon walls, caves, and mine shafts, and under bark in trees or snags.
Canyon bat (*Parastrellus hesperus*)	Occurs in deserts, woodlands, and shrublands. Roosts in boulders, cracks, and crevices.
Pallid bat (*Antrozous pallidus*)	Found in many habitat types, including forests, canyons, open farmland, and deserts. Migratory; occurs throughout Arizona and in the southern part of the state in winter. Roosts in rock crevices, buildings, caves, and mines.

Source: Range or habitat information is from AGFD (2023a and 2023b), Hoffmeister (1986), and NatureServe (2023).

Birds

The Lower Colorado River Valley subdivision of the Sonoran Desertscrub biotic community generally consists of open, sparsely vegetated habitats that do not support a bird community as diverse as those found in other subdivisions of Sonoran desertscrub (Brown 1994). However, the agricultural areas, canals, and settling ponds in the Study Area provide additional habitat. Birds have potential to use the Study Area and Project Area for their life history needs (i.e., foraging, nesting, or perching). Waterfowl and other birds may use the existing evaporation ponds within the Study Area (associated with the Harquahala Generating Facility) as loafing ponds—midday stops where birds rest before feeding or heading back to the roost. Other birds may be attracted to the water in the evaporation pond, but not use the area for nesting, roosting, foraging, or reproduction. Birds that are likely only to be attracted to the existing evaporation pond, as well as those that are just dispersing or migrating through the Study Area, are not included in the following table. Table D-2 lists the bird species that may occur in the Study Area. Loggerhead shrike was observed in the Project Area and is addressed in Exhibit C.

Table D-2. Bird Species that May Occur in the Study Area

Common Name (*Scientific Name*)	Habitat
Anna's hummingbird (*Calypte anna*)	Occurs in chaparral, coastal scrub, oak savannas, and open woodland. Also common in urban and suburban settings.
Ash-throated flycatcher (*Myiarchus cinerascens*)	Occurs in dry scrub, open woodlands, and deserts. Cavity nester that breeds in this part of Arizona.
Brewer's blackbird (*Euphagus cyanocephalus*)	Often occurs near human habitation. Occurs in shrubby and busy areas near water, riparian woodland, cultivated lands, and marshes. Winters south of Mogollon Rim.
Brown-headed cowbird (*Molothrus ater*)	Often associated with human-modified, fragmented landscapes, and are attracted to feedlots, pastures, and fields. Occurs in a variety of habitats including desertscrub, agricultural lands, and residential areas. Migratory, present in Arizona spring through fall.

Common Name (*Scientific Name*)	**Habitat**
Common raven* (*Corvus corax*)	Found in most habitat types in select open areas. Regularly encountered in rural, agricultural, and urbans settings. Year-round resident.
Cliff swallow (*Petrochelidon pyrrhonota*)	Feeds over pastures, fields, towns, and open areas. Nests in colonies that can be on cliffsides, caves, building eave, bridges, culverts, dams, or large trees. Nests are created with mud and dried grass at the juncture of a vertical wall and a horizontal overhang.
Cooper's hawk (*Accipiter cooperii*)	Occurs in woodlands, parks, neighborhoods, and fields, associated with trees.
Curve-billed thrasher (*Toxostoma curvirostre*)	Found in creosote bush desertscrub, grasslands, and residential areas.
European starling† (*Sturnus vulgaris*)	Occurs predominantly near human settlements, in rural, urban, and agricultural fields. Year-round resident.
Gambel's quail (*Callipepla gambelii*)	Typically associated with brushy Sonoran Desert uplands and desert washes. Can also occur in residential areas and along the margins of cultivated lands. Year-round resident.
Great horned owl (*Bubo virginianus*)	Occurs in a wide variety of habitats including agricultural and residential areas as well as woodlands and orchards.
Great-tailed grackle (*Quiscalus mexicanus*)	Occurs in partly open areas with scattered trees around human habitation. Year-round resident.
Greater roadrunner* (*Geococcyx californianus*)	Occurs in open, arid country with scattered shrubs, trees, or cacti. Also common in agricultural areas and urban and suburban settings. Year-round resident.
House finch (*Carpodacus mexicanus*)	Occurs in arid scrub and brush, open woodland, oak-juniper, and pine-oak habitats, and towns and cultivated lands. Year-round resident.
House sparrow† (*Passer domesticus*)	Introduced species that occurs abundantly in cities and towns. Occurs in feedlots, agricultural areas, and urban and rural communities. Year-round resident.
Inca dove (*Columbina inca*)	Found in open country, urban, and agricultural areas. Year-round resident.
Lesser goldfinch (*Spinus psaltria*)	Occurs in patch open habitats, including thickets, weedy fields, woodland, scrubland, and farmlands.
Lesser nighthawk (*Chordeiles acutipennis*)	Found in arid lowlands, deserts, and agricultural areas. Nests on the ground, usually beneath a shrub but sometimes out in the open. Migratory, present in Arizona spring through fall.
Mourning dove (*Zenaida macroura*)	Occurs in a wide variety of habitats, most regularly in desertscrub, shrubby grasslands, and open woodlands. Also found in rural and urban habitats.
Northern cardinal (*Cardinalis cardinalis*)	Occurs in dense shrubby areas including overgrown fields, backyards, mesquite (*Prosopis* spp.), thickets, and ornamental landscaping.
Northern mockingbird (*Mimus polyglottos*)	Prefers open and partly open situations. Occurs in areas of scattered brush or trees to semidesert, and around towns and cultivated areas.
Phainopepla (*Phainopepla nitens*)	Occurs in Arizona during the breeding season. Found in desert washes where they feed heavily on desert mistletoe (*Phoradendron californicum*) berries.
Red-tailed hawk* (*Buteo jamaicensis*)	Occurs in a wide variety of open habitats. Elevated perches are important. Year-round resident.
Red-winged blackbird (*Agelaius phoeniceus*)	Nests near water. During migration and wintering can also occur in cultivated lands, pastures, and prairies. May be year-round or migratory.
Rock pigeon† (*Columba livia*)	Introduced. Closely associated with human settlement, such as towns, parks, and agricultural areas. Year-round resident.
Swainson's hawk (*Buteo swainsoni*)	Occurs in open pine-oak woodland and cultivated lands. Migratory, breeds in Arizona.
Turkey vulture* (*Cathartes aura*)	Widespread, and uses a variety of habitats. Commonly perches on rocky outcrops, cliffs, canyon walls, transmission towers, telephone poles, and tall trees. Migratory.

Common Name (*Scientific Name*)	Habitat
Waterfowl and occasional-use birds	Waterfowl and other birds may use the evaporation pond within the Study Area as loafing ponds—midday stops where birds rest before feeding or heading back to the roost. Other birds may be attracted to the water in the evaporation ponds, but not use the area for nesting, roosting, foraging, or reproduction.
Western kingbird (*Tyrannus verticalis*)	Prefers open areas in many habitat types including desert, rural, and agricultural areas. Migratory.
White-crowned sparrow* (*Zonotrichia leucophrys*)	Occurs in woodlands, shrubland, croplands, suburbs, old fields, and conifer woodlands.
White-winged dove (*Zenaida asiatica*)	Habitat generalist, including desertscrub, riparian, urban, and agricultural areas. Year-round resident.

Source: Range or habitat information is from Corman and Wise-Gervais (2005), eBird (2023), and NatureServe (2023).

*Observed in Project Area during field reconnaissance

†Non-native species

Reptiles

The Lower Colorado River Valley subdivision of the Sonoran Desert biotic community is home to many reptile species (Brown 1994). Species of this biotic community may occur in the portions of the Project Area and Study Area containing native vegetation. Table D-3 lists the reptile species that may occur in the Study Area.

Table D-3. Reptile Species that May Occur in the Study Area

Common Name (*Scientific Name*)	Habitat
Arizona chuckwalla (*Sauromalus ater*)	Occurs in Sonoran and Mohave desertscrub, in rocky habitats including boulder fields, outcroppings on hillsides and slopes, and lava fields.
Banded Gila monster (*Heloderma suspectum cinctum*)	Ranges from desertscrub to lower reaches of Great Basin Conifer Woodland and Madrean Evergreen Woodland. Commonly found above the flats in rocky drainages and rugged terrain.
Coachwhip (*Coluber flagellum*)	Typically occurs in desertscrub and semidesert grasslands. Uses a wide range of habitats including desert, prairie, scrubland, woodland, farmland, and creek valleys, generally in dry, open terrain.
Common side-blotched lizard (*Uta stansburiana*)	Typically occurs in desertscrub, semidesert grasslands, Great Basin grasslands, and interior chaparral.
Desert horned lizard (*Phrynosoma* [*Doliosaurus*] *platyrhinos*)	Occurs in desertscrub communities in flat, open areas with sparse vegetation. Can also be found on rocky bajadas and hillsides.
Desert iguana (*Dipsosaurus dorsalis*)	Primarily found in Mohave desertscrub and Lower Colorado River Subdivision of Sonoran desertscrub, and occasionally in Arizona Upland Subdivision of Sonoran desertscrub. Occurs on flatlands and gently sloping bajadas.
Desert nightsnake (*Hypsiglena chlorophaea*)	Ranges from flat, open sandy deserts to steep, rocky, and wooded slopes.
Desert spiny lizard (*Sceloporus magister*)	Found in Sonoran desertscrub, Great Basin desertscrub, Semidesert grassland, interior chaparral, and woodlands.
Gophersnake (*Pituophis catenifer*)	Found in biotic communities up to Alpine Tundra. Occurs in deserts, forests, and coastal grasslands.
Long-nosed leopard lizard (*Gambelia wislizeni*)	Found in desertscrub and semidesert grasslands.
Long-nosed snake (*Rhinocheilus lecontei*)	Occurs in deserts, dry prairies, arid river valleys, thornbush, and shrubland.

Common Name (*Scientific Name*)	Habitat
Mohave rattlesnake (*Crotalus scutulatus*)	Found in desertscrub and semidesert grassland, usual in relatively level terrain.
Ornate tree lizard (*Urosaurus ornatus*)	Occurs in most biotic communities from desertscrub to subalpine.
Sidewinder (*Crotalus cerastes*)	Typically occurs in flat, open desert with sandy or loamy soils.
Spotted leaf-nosed snake (*Phyllorhynchus decurtatus*)	Found in creosote bush flats and washes in Sonoran desertscrub.
Tiger whiptail (*Aspidoscelis tigris*)	Occurs in a wide variety of habitats including creosote bush flats, sandy wash, canyons, and hillsides. Found in desertscrub, semidesert grasslands, and lower reaches of chaparral.
Western banded gecko (*Coleonyx variegatus*)	Ranges from dry creosote bush (*Larrea tridentata*) flats to rugged, rocky slopes, to barren high desert plateaus.
Western patch nosed snake (*Salvadora hexalepsis*)	Found in flatlands and low valleys from desertscrub to woodlands.
Zebra-tailed lizard (*Callisaurus draconoides*)	Found primarily in desertscrub. Occurs in flatlands and broad, sandy washes.

Range or habitat information is from AGFD (2023a and 2023b), Brennan (2012), and NatureServe (2023).

Amphibians

There are no perennial water sources within the Project Area or Study Area aside from the evaporation pond associated with the Harquahala Generating Facility. Amphibians may occur in the evaporation ponds and have the potential to occur within the Project Area or Study Area in any location that accumulates water, including roadside puddles or depressions following monsoon rains or within fields or canals during irrigation. Amphibians could also occur in mud cracks, mammal burrows, or structures within the Study Area to avoid desiccation. Table D-4 lists the amphibian species that may occur in the Study Area.

Habitat in the Project Area for amphibians is limited to edges of agricultural fields and desertscrub buried underground except for monsoon season.

Table D-4. Amphibian Species that May Occur in the Study Area

Common Name (*Scientific Name*)	Habitat
Amphibians	
American bullfrog* (*Lithobates catesbeianus*)	Introduced in Arizona. Occurs in a wide variety of aquatic habitats from cattle tanks and canals to ponds, reservoirs, and marshes.
Couch's spadefoot (*Scaphiopus couchii*)	In the United States, found in arid and semi-arid shrublands, shortgrass plains, mesquite savanna, creosote bush (*Larrea tridentata*) desert, thorn forest, and cultivated areas. Individuals are typically buried underground except during and for a short time following monsoon rains.
Woodhouse's toad (*Anaxyrus woodhousii*)	Found in areas near ponded permanent water, such as backwaters and slack water of lakes and irrigation ditches and canals but can also be found at cattle tanks and other seasonal wetlands foraging in rural or urban areas near these habitats.

Range or habitat information is from AGFD (2023a), Brennan (2012), and NatureServe (2023).

*Nonnative species

Fish Species

There is no perennial aquatic habitat in or near the Study Area. The Gila River, approximately 19 miles southeast of the Study Area, has perennial and intermittent stretches and is the nearest source of water near the Study Area that is not human made (i.e., a canal or evaporation pond). However, introduced fish have

the potential to occur within the Study Area in the concrete-lined canals. Many of these fish represent invasive species that have been released or sportfish that have been stocked into waterways connected to the canals. No native fish species would be expected to occur.

The CAP canal has the potential to supply water to agricultural portions of the Project Area and Study Area through diversion into the concrete-lined canals. Fish from the larger canals could be swept into the concrete-line canals; however, these canals are unlikely to constitute suitable habitat for any of these species that would support long-term life history functions (e.g., foraging, reproduction). The CAP canal is known to carry fish, though none of the fish caught in a 2005 to 2009 study were native to the Gila River basin (Kesner and Marsh 2010). The following fish were observed in the CAP canal upstream reach (i.e., all pumping stations upstream of the Phoenix, Arizona, area) during the 2005 to 2009 study (Kesner and Marsh 2010): bluegill (*Lepomis macrochirus*), channel catfish (*Ictalurus punctatus*), common carp (*Cyprinus carpio*), flathead catfish (*Pylodictis olivaris*), grass carp (*Ctenopharyngodon idella*), green sunfish (*Lepomis cyanellus*), largemouth bass (*Micropterus salmoides*), redear sunfish (*Lepomis microlophus*), striped bass (*Morone saxatilis*), smallmouth bass (*Micropterus dolomieu*), and sunfish hybrids (Family Centrarchidae).

Summary of Potential Effects

Vegetation

The Project involves work in previously developed and disturbed areas (i.e., existing roadway, existing agricultural fields) as well as in largely undisturbed Sonoran desertscrub dominated by white bursage and/or creosote bush, and velvet mesquite. Vegetation would be removed in areas where power poles would be placed. All alternatives traverse areas that have been disturbed and undisturbed areas. The Alternative Gen-Tie and Alternative Project Substation options occur mostly within agricultural areas, however. Therefore, the alternative options would disturb less acreage of undisturbed Sonoran desertscrub. However, regardless of which Project alternative is chosen, the Project Area would not result in impacts to the Lower Colorado River Valley subdivision of the Sonoran Desert biotic community native vegetation community at the landscape level because of the relatively small amount of disturbance and the abundant Sonoran desertscrub vegetation occurring in the Study Area and vicinity.

Mammal Species

Species that prefer agricultural fields would be impacted more if the Alternative Gen-Tie and Substation were the chosen alternative, whereas species that prefer Sonoran desertscrub would be impacted more if either the Preferred Gen-Tie and Substation or Preferred Gen-Tie Subroute Option were chosen. Project construction activities could cause death or injury to terrestrial mammals that may not be able to flee from heavy equipment or vehicular traffic, with a higher likelihood of these impacts for individuals of species that are small, nocturnal, or fossorial. Project construction could cause behavior changes, as individuals would be expected to flee from an increase of noise, vibration, and human presence within the Project vicinity. Individuals would be expected to flee or hide, depending on the species' life history, which could increase depredation, decrease foraging success, reduce reproductive success, and result in loss of fitness for that individual from increased metabolic output.

Project construction activities would be temporary. The loss and degradation of mammal habitat from short- and long-term Project activities would be minor as the planned disturbance within the Project Area is relatively small, and the Study Area contains abundant agricultural and undisturbed desert habitat outside of the Project Area. The Project Area crosses one wildlife movement corridor (Big Horn Mountains–Burnt Mountain–Saddle Mountain and the Study Area intersects other movement corridors as discussed in Exhibit C). Mammal species that typically occur in the nearby hilly or mountainous areas in the vicinity of the Project may use the Project and Study Areas as movement corridors (for example, bighorn sheep [*Ovis*

canadensis]). The small disturbance footprint and relatively short timeframe of construction would limit the migratory habitat loss for those species, however, and would limit the avoidance of the area by migratory species. As such, any loss of vegetation from construction activities would not contribute meaningfully to habitat fragmentation for mammals or decrease connectivity between habitats.

Bat activity patterns and foraging would be unlikely to be impacted because bats are nocturnal and Project construction would occur during the day. Some roosting habitats may occur in the Study Area, but none are present in the Project Area. The loss of potential foraging habitat in the Project Area is unlikely to have individual or population-level impacts to any bat species because the area of disturbance is relatively small compared with the available foraging habitat in the Study Area.

Construction of the Project would result in an increase of fugitive dust. The fugitive dust during construction could change mammal behavior (e.g., reducing the amount of foraging). The likelihood and severity of impacts from construction would decrease with increasing distance from the Project Area. These impacts would cease with completion of construction activities. Impacts to mammals would be expected to be less severe if the Alternative Gen-Tie is chosen because this alternative is shorter and therefore would disturb fewer acres of potential mammal habitat; however, the difference in impacts would not likely be substantial as either alternative footprint is relatively small compared with the amount of habitat in the Study Area and beyond.

Bird Species

Birds, including raptors, can collide with power lines, resulting in injury or death (Avian Power Line Interaction Committee [APLIC] 2012). Birds that are large-bodied, are fast flyers, have large wing spans, or that have low maneuverability (e.g., many wading birds or waterfowl) or birds that show certain behaviors (e.g., flocking, flying at altitudes at or below power line height, or birds that nest or forage in close proximity to power lines) have a higher risk of impacts from power line collisions (APLIC 2012). Birds generally avoid collision with power lines when they are perceived by the bird, and therefore collision risk is lower in areas where multiple transmission lines are co-located, or transmission lines are placed near other infrastructure (APLIC 2012).

Power lines can also cause electrocution when a bird is able to touch both energized and grounded electrical components at the same time, which is generally more common in birds with large wing spans, birds that use power poles (e.g., perching, foraging, roosting, or nesting), or in situations where electrical configuration include closely spaced energized and grounded components that are easily spanned by birds (APLIC 2006).

Resident, migrating, or dispersing birds would be at risk of collision or electrocution with new power poles or power lines. New infrastructure associated with the Project may increase the risk of collision. There is potential for impacts to nests including death or injury of eggs or nestlings or nest failure from construction disturbance.

The evaporation pond associated with the Harquahala Generating Station would be likely to show a high bird diversity, including native and nonnative songbirds, raptors, and waterfowl. In most cases, however, these species would likely be attracted by water and would not reside permanently at or near these ponds owing to lack of habitat required for life history needs, including foraging, breeding, perching, or escaping predation. The evaporation pond is outside of the Project Area, however, and impacts to any birds using this pond would likely be limited to noise, vibration, or human presence if the Alternative Gen-Tie were the chosen alternative. The Preferred Gen-Tie and Preferred Gen-Tie Subroute Option are distant to the Harquahala Generating Station, and impacts would be unlikely to occur to birds as a result of Project activities.

Species that prefer agricultural fields would be impacted more if the Alternative Gen-Tie and Substation were the chosen alternative, whereas species that prefer Sonoran desertscrub would be impacted more if

either the Preferred Gen-Tie and Substation or Preferred Gen-Tie Subroute Option were chosen. Potential impacts from increased noise, vibration, or human presence in the Project Area and from loss, degradation, and fragmentation would be the same as those described for terrestrial mammals.

The increase in potential perches for hunting from the additional power poles could improve hunting habitat for some species.

Reptile Species

Species that prefer agricultural fields would be impacted more if the Alternative Gen-Tie and Substation were the chosen alternative, whereas species that prefer Sonoran desertscrub would be impacted more if either the Preferred Gen-Tie and Substation or Preferred Gen-Tie Subroute Option were chosen. Potential impacts to reptiles including death, injury, or impacts arising from behavior changes and from the loss, degradation, and fragmentation of habitat would be similar to those described for terrestrial mammals. Fossorial reptiles, reptiles that are inactive due to heat or cold, and small reptiles would have a higher chance of injury or death compared with those individuals that are more mobile. Reptile species near the additional power poles could experience predation due to the increase in available perches for reptile predators.

Amphibian Species

Potential impacts to amphibians including death, injury, or impacts arising from behavior changes and from the loss, degradation, and fragmentation of amphibian habitat would be similar to those described for terrestrial mammals. Because the Alternative Gen-Tie and Substation Project Area contains more water (e.g., fields, canals), this alternative would likely lead to more impacts on amphibians. Agricultural fields are abundant in the Study Area and immediate vicinity, however, so the overall loss of habitat would be minor.

Fish Species

While Project activities could increase the risk of injury or death to any individual fish occurring in the concrete-lined irrigation canals during construction, most or all introduced fish in the canals would likely end up dying in the absence of construction from lack of food, depredation, desiccation, or by being swept into agricultural areas during crop irrigation. The Project would not contribute to the loss of habitat, or any population impacts, because these sportfish and introduced fish have only been accidentally swept into the canals within the Study Area and would not occur there otherwise. Fish would experience no additional impacts owing to increased air emissions, with the exception that fugitive dust may could water where they occur within the Project Area.

Mitigation Measures

The following mitigation measures are designed to reduce the risk of animal injury or spread of invasive species. For mitigation measures specific to special-status species, please see Exhibit C.

- Transmission lines pose a risk of collisions and electrocution for birds, particularly raptors. To minimize that risk, the Applicant will design the Gen-Tie to incorporate reasonable measures to minimize electrocution of and impacts to avian species following the guidelines outlined in *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006* (APLIC 2006) and *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC 2012). Preconstruction surveys for nesting birds should be conducted by qualified biologists if vegetation-clearing activities would occur during bird nesting season (generally March–September with January–June for raptors).

- To minimize the introduction and spread of invasive species and noxious weeds, standard best management practices will be used during construction. These best management practices can include measures such as washing equipment prior to and following mobilization to the Project Area.
- If vegetation-disturbing activities are planned during the migratory bird nesting season (March–September or January–June for raptors), measures to avoid any active bird nests within the Project Area, such as preconstruction surveys for migratory bird nests by a qualified biologist, should be taken to maintain compliance with the MBTA because suitable nesting habitat for migratory bird species is present in the Project Area.
- The recommendations in AGFD's *Guidelines for Solar Development in Arizona* (AGFD 2009) and the AGFD's *Wildlife Compatible Fencing Guidelines* (AGFD 2023c) should be reviewed and implemented for the Project as applicable and feasible to minimize impacts to wildlife and their habitats.

Conclusion

Portions of the Project Area and Study Area occur within previously disturbed and developed areas with existing roads, residences, and agriculture. Existing distribution lines occur in the Project Area. Because the Project would disturb minimal vegetation within the Project Area, and there is abundant habitat in the Study Area and vicinity, impacts to general plants and wildlife would be minimal and restricted to individuals. While fewer wildlife species would be expected to occur in the disturbed, developed, and in-use agricultural areas than would be expected in native desert habitat, irrigation canals likely draw animals from surrounding areas owing to the increase of water or prey species, and some wildlife species are specifically attracted to agricultural fields owing to the open space or higher moisture. Disturbance within the Project Area would be minimally disturbed, however, and active agricultural land occurs within the Study Area outside of the Project Area. At a landscape level, the gen-tie and substation, regardless of the alternative chosen), would not significantly reduce the amount of vegetation available for wildlife use, increase habitat fragmentation, or impact any likely wildlife dispersal or migration corridors. Therefore, the proposed Project may impact individuals (both wildlife and plant), but would be unlikely to result in impacts at the population level for any species.

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EXHIBIT E. SCENIC AREAS, HISTORIC SITES AND STRUCTURES, AND ARCHAEOLOGICAL SITES

As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, Exhibit 1:

> *Describe any existing scenic areas, historic sites and structures or archaeological sites in the vicinity of the proposed facilities and state the effects, if any, the proposed facilities will have thereon.*

Scenic Areas and Visual Resources

Overview

This section of Exhibit E addresses the inventory of and potential impacts to scenic or visual resources in relation to construction and operation of the Project by producing a visual resource assessment (VRA). The methodology for this VRA is identified below and includes separate discussions with regard to scenery (i.e., scenic quality) and sensitive viewers. The methodology is followed by the results of the inventory and the impact assessment, both of which include separate discussions for scenery and sensitive viewers within the context of the analysis area. The Project does not occur on land managed by the Bureau of Land Management (BLM), U.S. Forest Service, or any other agency that requires conformance with visual resource management objectives or guidelines. The visual Study Area includes pockets of BLM controlled areas and is reflected in the methodology, however.

Methodology

The purpose of the VRA is to identify and characterize the level of visual modification in the landscape that would result from the construction and operation of the Project. Landscape modification is typically described in the degree of visual contrast, which can potentially affect both scenic quality and sensitive viewers. While scenic quality refers to the general characteristics and inherent aesthetic value of the landscape as a resource regardless of specific viewers, the term "sensitive viewer" refers to specific viewers and/or groups of viewers whose views could be affected by potential changes to the landscape. This assessment employed the following steps to assess the potential impacts to the visual environment:

- Define a visual analysis area.
- Perform a desktop review to find designated scenic areas, identify existing land uses and future land use plans, and assess aerial imagery.
- Describe the affected environment by evaluating the existing landscape character within the analysis area to identify impacts from the introduction of Project components within the landscape.
- Identify Key Observation Points (KOPs) from where the Project may be viewed, and simulations created.
- Perform a field survey by visiting each KOP, collecting site photographs, and noting existing conditions.
- Prepare visual simulations of the Project using the KOP photographs.
- Assess the potential visual impacts of Project development based on the existing conditions observed during the field survey in concert with the visual simulations.

The analysis area for the VRA is defined as a 1-mile-wide buffer from Project (i.e., areas from which viewers could potentially see the Project). Visual resource information and data for this assessment were developed based on research, available geographic information system (GIS) data, aerial photography, and on-site field verification and photographic documentation. These data were collected for all land, regardless of jurisdiction, and used to develop a comprehensive understanding of the existing landscape and associated visual resources. The analysis area consists of a patchwork of privately owned, state, and BLM lands. Private land in the analysis area is either in active agricultural development or vacant and represents the majority of the analysis area, with a few residential properties included. The remainder of the analysis area consists of vacant State Trust and public land (BLM managed). Private land in the analysis area is generally not open to dispersed recreation (e.g., hunting, hiking, bird watching) but may be used for such activities through agreements with the landowner.

Impacts to both scenic quality and sensitive viewers are determined, in part, by evaluating the visual contrast the proposed facilities would have with the existing landscape. Visual contrast refers to the degree that the Project features would either match/repeat existing features in the landscape or contrast with existing landscape features. The degree of visual contrast considers the existing landforms, vegetation, and built features present in the landscape and is described in terms or the degree of perceptible change in the basic design elements of form, line, color, and texture that would be evident by the introduction of the Project in the landscape.

The impact thresholds for this assessment are categorized as follows:

- **High:** Project features would result in a strong degree of contrast and would appear as dominant features within the existing landscape.
- **Moderate:** Project features would result in a moderate degree of contrast and would appear as co-dominant features within the existing landscape.
- **Low:** Project features would result in a weak degree of contrast and would be subordinate to the features of the existing landscape.

Scenery

Scenery is a measure, or the inherent aesthetic value of, the landscape based on the appearance of existing landscape features. This includes unique landforms, variable vegetation, and built features. In general terms, the scenic quality is based on the premise that landscapes with greater diversity and visual variety in landforms and vegetation are more aesthetically pleasing and therefore hold greater value. For this analysis, impacts to scenic quality were based on comparing the inventoried quality of the scenery to the anticipated quality considering any contrast introduced because of the construction and operation of the Project.

Sensitive Viewers

The concept of sensitive viewers refers to members of the public who have potential views of the Project and may be sensitive to potential changes in the surrounding scenery. Regarding sensitive viewers, the Project contrast is dependent on several factors, including viewing distance, duration of view, viewing condition, and degree of visibility. When combined, these factors indicate the overall visual dominance of the Project within the landscape.

Sensitive viewing locations around the analysis area are limited and of primarily short duration (recreation or vehicular travelers). Static viewing locations where viewers would experience the site for long durations, such as scenic overlooks or residences, are not present within the analysis area. Sensitive viewers or viewing locations that would be potentially affected by this Project include:

- Recreational areas – Hunters, off-highway vehicle riders, and hikers.

- Vehicular travelers – Limited to local travel on a few maintained dirt roads. The only heavily traveled roadway is Interstate 10 (I-10).
- Residences – Low-density residential, around intersection of Indian School Road and 491st Avenue. Also includes residences just outside of the analysis area along the south side of West Courthouse Road.

The term "viewing distance" refers to the viewer's physical distance from the Project components and is predicated on the fact that one's ability to discern details dissipates over distance. Distance zones are used to separate an analysis area into distinct classifications based on the various levels of landscape detail available to the viewer and type of project infrastructure. SWCA reviewed established agency protocols, including those published by the U.S. Forest Service, BLM, and U.S. Department of Transportation, to determine an appropriate area for each distance zone for the analysis area. The standard BLM distance zones of foreground–middle ground (0–5 miles), background (5–15 miles), and seldom seen (>15 miles) were used as a starting point. Due to the characteristics of the specific landscape and equipment being evaluated, SWCA used the following distance zone, as measured from the boundary of the Project to represent available views from within the analysis area (Table E-1). Note that because of the identified analysis area, middle ground and background distance zones are not available to viewers and are therefore not included.

Table E-1 Distance Zones

Name	Distance	Explanation
Foreground	0 to 1.0 miles	At this distance, a viewer can perceive details of an object with clarity. Surface textures, small features, and the full intensity and value of color can be seen on foreground objects. Large-scale landscape features remain recognizable and distinguishable as landscape patterns, colors, and textures.

The duration of view refers to the length of time and associated angle of view that the Project would be visible and is based on the idea that viewer attention is attracted to a higher degree as the duration of view increases. Viewing conditions refer to whether the viewer is looking down at the Project from a superior position, looking up at the Project from an inferior position, or viewing the Project from an elevation that is similar to that of the Project (i.e., a neutral view). The term "degree of visibility" refers to whether views of the Project would be either open and unobstructed or partially to fully obstructed by other features in the existing landscape (i.e., topography, vegetation, or built features). The degree of visibility also refers to whether the Project would be viewed against the sky (i.e., skylined) or a backdrop of landforms, vegetation, and/or built features.

Anticipated viewer sensitivities to visual changes are also discussed within the analysis, including brief discussions regarding the potential sensitivities of different types of identified viewer groups within the vicinity of the Project. Residential and recreational viewer groups are typically considered to have high sensitivities to visual changes in the landscape, while viewers moving along travel routes are considered to have low to moderate sensitivities to visual changes (unless traveling along a designated scenic travel route or more natural appearing areas).

Inventory Results

Scenery

The Project is in a rural setting within the Sonoran Basin and Range Level III ecoregion and, more specifically, within the Gila/Salt Intermediate Basins Level IV ecoregion (U.S. Geological Survey 2014). The Sonoran Basin and Range Level III ecoregion consists of generally broad, open landscapes with scattered mountains and vegetation comprising paloverde (*Parkinsonia* sp.), saguaro (*Carnegiea* sp.), and

other various Sonoran Desert plants. A small number of residences are dispersed through active agricultural land, which dominates the developed portion of the analysis area. Undeveloped land represents the majority of the analysis area, aside from several transmission line corridors within the vacant areas. I-10, a busy travel corridor, passes through the northern portion of the analysis area for approximately 2.5 miles. Scenic views from the analysis area are mostly open and panoramic and include those of the adjacent mountains to the southwest associated with the Eagle Mountain Wilderness area and southeast to Saddle Mountain, existing transmission infrastructure, and agricultural operations. Human development within the analysis area and throughout the ecoregion is characterized as agricultural and supporting infrastructure development.

The scenic quality within the analysis area is considered low based on the general lack of visually interesting landforms and vegetation, visually sensitive resources, or the prominence of existing built features and development that contrasts with the appearance of the natural landscape.

KOPs were chosen to represent potential views of the Project from major and minor roadways, an agricultural area, a utility area (substation), and a BLM recreation area (Saddle Mountain Extensive Recreation Management Area). Five KOPs representing typical viewing conditions of prominent Project views were selected. SWCA conducted in-field assessments in January 2023 at each of the KOPs and collected associated photography, notes on the site's visual aspects, and pertinent location information. Below is a table of the identified KOPs and associated viewer type and reason for inclusion in the VRA.

Table E-2. Selected KOP Locations and Sensitive Viewer Type

KOP	Location (Latitude, Longitude)	Sensitive Viewer Group / Distance from Viewer	Reason for Inclusion
1	View facing south from the Burnt Well Rest Area along the eastbound lane of I-10. 33.519984°, –113.070928°	Vehicular travelers Preferred: 1.8 miles Alternative: 2.7 miles	Representative of views while traveling along I-10. Rest area location also represents longer duration views that are available to viewers adjacent to the analysis area.
2	View facing south from intersection of west Salome Highway, North 475th Avenue, and West Campbell Avenue. 33.500840°, –113.075251°	Vehicular travelers, recreational areas Preferred: 0.7 mile Alternative: 1.5 miles	Representative of views from vacant land, along a local road with access to recreational and agricultural areas.
3	View facing northwest from intersection of west Salome Highway, and Arizona Public Service Delaney Substation access road. 33.473385°, –113.032162°	Vehicular travelers, recreational areas Option A: 0.4 mile Option B: 0.5 mile	Representative of views from vacant land, along a local road with access to recreational and agricultural areas.
4	View facing northeast from residence at West Courthouse Avenue and 481st Avenue. 33.464517°, –113.084154°	Residences Preferred: 1.4 miles Alternative: 1.0 mile	Representative of views from residences within and adjacent to the analysis area.
5	View facing north from base of Saddle Mountain. 33.452216°, –113.050250°	Recreational areas Preferred: 1.9 miles Alternative:1.9 miles	Representative of views from recreational areas adjacent to the analysis area.

Sensitive Viewers

A small number of individual ranches, including residences, are within, and immediately south of, the analysis area. The nearest residential viewers are approximately 0.7 mile from the Project oriented centrally in the analysis area. Existing transmission line infrastructure traversing the analysis area is also visible from the identified residences. The height of these existing features, along with the repetitive pattern of structure

and conductor, make them highly visible and dominant features in many portions of the landscape as they bisect the landscape. Views from residences are mostly open and panoramic in nature and include distant views of the surrounding mountains, agricultural fields, and existing transmission infrastructure. Residential viewers are assumed to have a relatively long duration of view and relatively high sensitivities to visual changes within the analysis area.

Recreation Areas

The analysis area does not include any identified recreational uses. A portion of the Saddle Mountain Extensive Recreation Management Area is within the southern portion of the analysis area, but the closest associated amenities including a parking/camping area and a trail to the summit are outside of the analysis area to the southeast.

Travel Routes

The primary travel route crossing the analysis area and within proximity of the analysis area is I-10. Collector routes that support access to local residence areas are within the proximity of the Project and include West Salome Highway, West Courthouse Road, Thomas Road, Indian School Road, and additional numbered road corridors (see Figure 1). Views from travel routes within the analysis area typically active agricultural land in the foreground interspersed with vacant land in the middle ground moving to the dominant background mountain ranges. Existing transmission infrastructure within the analysis area is also visible to users due to its dominating height and highly visible features within the foreground. Similar to residential views, the views from travel routes are mostly open and panoramic in nature and include the distant views to the mountains and existing transmission infrastructure and agricultural operations. Viewers moving along travel routes are expected to have relatively short durations of view based on travel speeds and low sensitivities to visual changes as a result of the existing visible development and infrastructure.

Impact Assessment Results

Below is a general description of the potential impacts to scenic quality and sensitive viewers based on the construction and operation of the Project. Overall, impacts associated with the Project would be low because the Project components would appear similar to the existing transmission lines and existing substation infrastructure that are adjacent to the Project, and the visually dominant features in the foreground landscape.

Scenery

The Project would introduce a transmission line corridor (structures and conductors) and associated substation facilities. The lines, forms, colors, textures, and scale of the Project facilities would be similar in appearance to other transmission line infrastructure within the landscape. The existing patchwork of operation agricultural fields and vacant land would not be interrupted by the additional Project equipment. The foreground colors would match the various hues of green and beige in the patchwork pattern. The Project is expected to create minor impacts to the existing, relatively low scenic quality within the analysis area. Project components could be seen but would not attract attention and would be similar to other built features within the landscape, which would result in a weak degree of contrast.

Sensitive Viewers

The following is a summary of anticipated impacts to sensitive viewers resulting from the construction and operation of the Project.

Residences

Views from residences within, or adjacent to the analysis area would vary based on location from unobstructed to partially obstructed, depending on foreground vegetation and associated out buildings/built features within the landscape. Based on the generally flat landforms of the surrounding landscape, views from residences would generally be from a neutral position and would include skylined views of the transmission line interconnection and structures within the substation, where visible.

The nearest group of residences would have partially obstructed views of the Project, as illustrated by KOP 4 (see Exhibits G-12 and G-13), approximately 1.0 mile south of the Preferred Gen-Tie and 1.9 miles from the Alternative Gen-Tie. Foreground color patterns are just visible from this vantage point and do not change with the introduction of the Project. Structures remain below the middle ground mountains and protrude into the sky against the background landforms. The lines, forms, colors, textures, and scale of the Project components are similar to those found within the existing visual setting. Despite the relatively close proximity of these residences and the anticipated long duration of view, the Project could be seen but would not attract attention and would be subordinate to other features within the landscape, resulting in a weak degree of contrast and low impacts.

Recreation Areas

As there are no identified recreational areas or amenities within the analysis area, visual impacts related to recreation would be negligible. Based on field review and understanding of the landscape and features adjacent to the analysis area, an analysis and visual simulations were included to represent the base area associated with Saddle Mountain and the accompanying summit trail. As illustrated by KOP 5 (see Exhibits G-14 and G-15), approximately 1.9 miles south of both Interconnection Option A and Option B, various vegetation dominates the foreground, remaining low against the background mountains. Color patterns associated with the agricultural patchwork are not visible in this view. Additional equipment would be difficult to discern from this vantage point and would not change the scenic quality or viewer enjoyment. All structures would remain below the middle ground and background mountains interacting with the vertical cacti. The lines, forms, colors, textures, and scale of the Project components would be similar to those within the existing visual setting. Despite the anticipated long duration of view, the Project could be seen but would not attract attention and would be subordinate to other features within the landscape, resulting in a weak degree of contrast and low impacts.

Travel Routes

Views from travel routes within the analysis area would vary based on location, but typically include unobstructed views of the existing landscape and Project. Most views from travel routes would generally be from a neutral position and would include skylined views of the transmission lines and substation infrastructure, where visible.

I-10 is an east–west-oriented primary travel route, represented by KOP 1 (see Exhibits G-5 and G-6) and intersects the analysis area. The lines, forms, colors, textures, and scale of the Project features would be similar to those of the existing transmission line infrastructure in the area. Based on the orientation of travelers along I-10 in the eastbound and westbound directions, the Project would be viewed peripherally and for a short duration of time based on travel speeds. The visual simulation from KOP 1 was taken from the associated I-10 Burnt Well Rest Area and, therefore, not only represents a view that travelers along the roadway would have but also a potential static view as well. Intervening vegetation planted in concert with the rest area dominate the foreground view, screening much of the middle ground where the Project is located, at approximately 1.8 miles north for the Preferred Gen-Tie and 2.7 miles for the Alternative Gen-Tie. Dark green vegetation leads to blueish-hued background mountains, limiting the contrast of the tan vacant lands. The additional Project equipment would be difficult to discern from this vantage point and would not change the scenic quality or viewer enjoyment. All structures would remain below the middle

ground and background mountains and would be mostly screened by the foreground vegetation. The lines, forms, colors, textures, and scale of the Project components would be similar to those found within the existing visual setting. Despite the anticipated long duration of view from the rest area, or the fleeting view from the travel lane, the Project could be seen but would not attract attention and would be subordinate to other features within the landscape, resulting in a weak degree of contrast and low impacts.

West Salome Highway runs along the eastern edge of the Project and is the nearest roadway, funneling local traffic into and out of the area. Potential views of the Project were also considered from KOP 2 (see Exhibits G-7–G-9), approximately 0.7 mile north of the Preferred Gen-Tie and 1.5 miles from the Alternative Gen-Tie. Foreground vegetation, although opaque, screens a large portion of the background colors and patterns. Available views would be less fleeting than from I-10, based on the lower speed limit of the roadway. Viewer sensitivity remains low as well, with little scenic quality in the adjacent foreground landscape. From this vantage point, Project structures would remain below the background mountains on the lefthand side of the frame and protrude into the sky against the background landforms on the right side. The lines, forms, colors, textures, and scale of the Project components would be similar to those within the existing visual setting. Despite the relative proximity of this road, the Project could be seen but would not attract attention and would be subordinate to other features within the landscape, resulting in a weak degree of contrast and low impacts.

The APS Delaney Substation access road heads north from West Salome Highway and runs for a short distance (approximately 0.5 mile) to the existing substation facility. Views of the Project are illustrated by KOP 3 (see Exhibits G-10 and G-11) approximately 0.4 mile south of Interconnection Option A and 0.5 mile of Interconnection Option B. Foreground electrical transmission infrastructure dominates the foreground and middle ground of the view. Lattice structures raise from the dark green vegetation and push through the mountains into the sky. Users to this area are limited and views would be fleeting. Viewer sensitivity remains low as well, with little scenic quality in the adjacent foreground landscape. From this vantage point, Project structures appear co-located with existing equipment and blend into the overall view. The lines, forms, colors, textures, and scale of the Project components are like those found within the existing visual setting. Despite the relative proximity of this road, the Project could be seen but would not attract attention and would be subordinate to other features within the landscape, resulting in a weak degree of contrast and low impacts.

Conclusion

Overall, the Project would be similar in form, line, color, and texture compared with other transmission infrastructure in the analysis area, which would result in low impacts to scenery. Similarly, impacts to sensitive viewers overall would be low as a result of perceived contrast due to intervening visual elements, existing infrastructure, composition of views of the Project, and low number of resources within the analysis area.

Historic Sites and Structures, and Archaeological Sites

As required by the Arizona Corporation Commission *Rules of Practice and Procedure* R14-3-219, the potential effects of the proposed Project on historic sites and structures and archaeological sites were assessed. The assessment also was prepared to support Arizona Corporation Commission compliance with the State Historic Preservation Act (ARS 41–861 through 41–864), which requires state agencies to consider impacts of their programs on historic properties listed in or eligible for listing in the Arizona Register of Historic Places (ARHP) and to provide the Arizona State Historic Preservation Office (SHPO) an opportunity to review and comment on the actions that affect such historic properties.

To be eligible for the ARHP, a property must be at least 50 years old (less if it has special significance) and have national, state, or local significance in American history, architecture, archaeology, engineering, or

culture. It should also possess integrity of location, design, setting, materials, workmanship, feeling, and association, and meet at least one of the four following criteria:

- Criterion (a): be associated with significant historical events or trends
- Criterion (b): be associated with historically significant persons
- Criterion (c): have distinctive characteristics of a style or a type, or have artistic value, or represent a significant entity whose components may lack individual distinction
- Criterion (d): have yielded or have the potential to yield important information concerning history or prehistory

Methodology

The Study Area for the purpose of assessing potential impacts to historic sites and structures, as well as archaeological sites, is defined as a 1-mile-radius buffer from the gen-tie route options, Project Substation options, and interconnection options. SWCA reviewed archival records to identify such properties within the Study Area. Data sources searched include the AZSITE, Arizona's statewide cultural resources database, which includes records from the Arizona State Museum (ASM), Arizona State University, SHPO, and the BLM; the National Register of Historic Places database; General Land Office (GLO) plat maps; and historic-era topographic maps.

Previous Cultural Resources Projects

The records review identified 32 prior cultural resources surveys that have taken place within 1-mile of the Study Area and Project Area. These projects took place from 1976 to 2022 in support of irrigation improvements, transportation improvements, electrical transmission lines, pipeline utilities, and solar utilities. Of these, 16 cultural surveys intersect and cover approximately 115.6 acres (26%) of the proposed Project Area (Table E-3).

The SHPO has provided guidance for the reliance on survey data that is 10 years or older (SHPO 2004). Surveys conducted before 1995 did not use the current ASM site definition criteria (ASM 1995). Of the remaining 10 surveys, only one (200-723.ASM) did not use a survey strategy that meets current methodological standards for full coverage in Arizona. The principal investigators meet current state and federal professional qualification standards. Lastly, it is unlikely that there are additional resources present in the current area of potential effects that have become at least 50 years old since the previous surveys. SWCA believes these nine surveys can be relied on for current inventory purposes; they cover approximately 108.1 acres (24%) of the proposed Project Area.

Table E-3. Previous Cultural Resource Projects Intersecting the Project Area

Agency Number	Project Name	Organization	Year
1981-177.ASM	SCE/Palo Verde to Devers Transmission Line	WESTEC Services, Inc.	1980
1983-197.ASM	Harquahala Valley Irrigation District	Northland Research, Inc.	1983
1987-250.ASM	Devers-Palo Verde Survey	Institute for American Research, Inc.	1987
BLM-020-10-192	U.S. Telecom Fiber-optic Cable Project, San Timontee Canyon, CA to Socorro, TX	Dames & Moore	1987
BLM-020-10-230	Palen Pipeline	BLM	1992
1999-542.ASM	Harquahala Generating Project	Dames & Moore	2000

Agency Number	Project Name	Organization	Year
2000-723.ASM	AT&T NexGen/Core Project Link Class 3 Survey	Western Cultural Resource Management, Inc.	2000
2004-243.ASM	MCDOT-Salome Road, ASDL ROW Acquisition	Soil Systems, Inc.	2000
2004-679.ASM	AT&T NexGen/Core Project	Western Cultural Resource Management, Inc.	2002
2003-1366.ASM	Palo Verde to Devers Line 2 Project	Environmental Planning Group, LLC.	2003
2004-404.ASM	Palo Verde Hub to TS5 Transmission Project	Environmental Planning Group, LLC.	2004
2009-200.ASM	APS M-107 Buckeye- Harquahala 69-kV Transmission Line	Logan Simpson Design	2009
2011-347.ASM	Saddleback Flood Retarding Structure Inventory	Scientific Archeological Services	2011
2011-537.ASM	Capitol Power Solar	Archeological Consulting Services, Ltd.	2011
2022-236.ASM	Maricopa Solar and Storage Project	WestLand Engineering and Environmental Services	2022

Note: Shading indicates SWCA believes these surveys can be relied on for current inventory purposes.

Historic-era Sites

The records review identified 22 historic-era sites, three of which intersect the proposed Gen-Tie corridor (Table E-4). The sites AZ S:12:37(ASM) and AZ S:12:46(ASM) are refuse scatters, and site AZ S:12:83(ASM) is an open dump. All three sites were determined or recommended not eligible for listing in the ARHP. The remaining historic-era sites are refuse scatters, mining prospects, temporary and permanent habitations, and an abandoned dirt road. In 2021, the ASM issued a policy exempting historic-era waste piles (a type of refuse scatter) from the definition of cultural resource sites (ASM 2021). It is likely that the 14 refuse scatters listed in the table below no longer qualify as sites.

Table E-4. Previously Recorded Historic-era Sites within 1 Mile of the Project Area

Site Number	Cultural/Temporal Affiliation	Site Type	ARHP Eligibility Status	Associated Reference(s)	Distance from Project Area (miles)
AZ S:8:1(ASU)	Euro-American / 1900–1950s	House and outbuildings	Unknown	Unknown	0.52
AZ S:8:36(ASM)	Euro-American / ca. 1900–1950s	Refuse scatter	Determined not eligible	Fangmeier and Tactikos (2012)	0.85
AZ S:8:37(ASM)	Euro-American / ca. 1900–1950s	Refuse scatter	Determined not eligible	Fangmeier and Tactikos (2012)	0.68
AZ S:8:38(ASM)	Euro-American / ca. 1900–1950s	Refuse scatter	Determined not eligible	Fangmeier and Tactikos (2012)	0.63
AZ S:8:39(ASM)	Euro-American / ca. 1900–1950s	Abandoned dirt road	Determined not eligible	Fangmeier and Tactikos (2012)	0.92
AZ S:12:46(ASM)	Euro-American / ca. 1930s–1980s	Homestead and refuse scatter	Recommended not eligible	Wygant (2022)	0.45
AZ S:12:32(ASM)	Euro-American / ca. 1500–present	Mining prospect	Determined not eligible	Luhnow and Dickinson (2007)	0.95
AZ S:12:36(ASM)	Euro-American / ca.1900–1950s	Mining prospect	Determined eligible (Criteria A and D)	Fangmeier and Tactikos (2012)	0.73

Site Number	Cultural/Temporal Affiliation	Site Type	ARHP Eligibility Status	Associated Reference(s)	Distance from Project Area (miles)
AZ S:12:37(ASM)	Euro-American / ca.1900–1950s	Refuse scatter	Determined not eligible	Luhnow and Darrington (2004)	Interconnection Option A
AZ S:12:41(ASM)	Euro-American / ca. 1900–1950s	Refuse scatter	Not evaluated	Fangmeier and Tactikos (2012)	0.85
AZ S:12:42(ASM)	Euro-American / ca. 1900–1950s	Refuse scatter	Not evaluated	Fangmeier and Tactikos (2012)	0.53
AZ S:12:43(ASM)	Euro-American / ca. 1900–1950s	Refuse scatter	Not evaluated	Fangmeier and Tactikos (2012)	0.50
AZ S:12:44(ASM)	Euro-American / ca. 1900–1950s	Refuse scatter	Not evaluated	Fangmeier and Tactikos (2012)	0.23
AZ S:12:46(ASM)	Euro-American / ca. 1900–1950s	Refuse scatter	Determined not eligible	Fangmeier and Tactikos (2012)	Preferred Gen-Tie right-of-way
AZ S:12:47(ASM)	Euro-American / ca.1900–1950s	Refuse scatter	Determined not eligible	Fangmeier and Tactikos (2012)	0.79
AZ S:12:48(ASM)	Euro-American / ca. 1900–1950s	Refuse scatter	Determined not eligible	Fangmeier and Tactikos (2012)	0.87
AZ S:12:49(ASM)	Euro-American / ca.1900–1950s	Refuse scatter	Determined not eligible	Fangmeier and Tactikos (2012)	0.45
AZ S:12:51(ASM)	Euro-American / ca.1900–1950s	Refuse scatter	Determined not eligible	Fangmeier and Tactikos (2012)	0.52
AZ S:12:52(ASM)	Euro-American / ca.1900–1950s	Temporary habitation	Determined not eligible	Fangmeier and Tactikos (2012)	0.63
AZ S:12:53(ASM)	Euro-American / ca.1900–1950s	Temporary habitation	Determined not eligible	Fangmeier and Tactikos (2012)	0.55
AZ S:12:60(ASM)	Euro-American / ca.1900–1950s	Refuse scatter	Recommended not eligible	Klebacha and Garcia (2015)	0.35
AZ S:12:83(ASM)	Euro-American/ ca. 1950s–1970s	Refuse dump	Recommended not eligible	Wygant (2022)	Preferred Gen-Tie right-of-way

Note: Shading indicates site intersects the proposed Project Area.

Historic Structures

The records review identified five historic-era structures within the Study Area (Table E-3). Two of these structures intersect the Project Area: the Buckeye-Salome Road and the Buckeye to Harquahala Transmission Line (Table E-5). The Buckeye-Salome Road (AZ S:8:29[ASM]) is an in-use structure that has been determined not eligible for listing in the ARHP. The APS M-107 Buckeye to Harquahala 69-kV transmission line (AZ S:8:35[ASM]) is also an in-use structure and is recommended eligible for listing in the AHRP under Criterion A.

Table E-5. Previously Recorded Historic-era Structures within 1 Mile of the Project Site

Site Number	Cultural/Temporal Affiliation	Site Type	ARHP Eligibility Status	Associated Reference(s)	Distance from Project Area (miles)
AZ S:8:29(ASM)	Euro-American/ ca. 1900–1950s	Buckeye-Salome Road	Determined not eligible	Courtright and Rowe (2011)	Preferred Gen-Tie and Subroute Option rights-of-way

Site Number	Cultural/Temporal Affiliation	Site Type	ARHP Eligibility Status	Associated Reference(s)	Distance from Project Area (miles)
AZ S:8:35(ASM)	Euro-American / 1950s–present	Buckeye to Harquahala Transmission Line	Recommended eligible (Criterion A)	Courtright and Rowe (2011)	Preferred Gen-Tie and Subroute Option rights-of-way
AZ S:12:39(ASM)	Euro-American/ ca. 1900–1950s	Transmission line	Determined not eligible	Garcia (2015)	0.85
AZ S:12:50(ASM)	Euro-American / ca.1900–1950s	In-use dirt road	Determined not eligible	Fangmeier and Tactikos (2012)	0.46
AZ T:9:83(ASM)	Euro-American / ca. 1900–1950s	Indian School Road	Recommended not eligible	Garcia (2015)	0.52

Note: Shading indicates site intersects the proposed Project Area.

The GLO plat of Township 2 North, Range 7 West, approved in 1870, does not depict any historical resources within the Study Area. The GLO plat of Township 2 North, Range 7 West, filed in 1916, depicts a road from PHOENIX TO HARRISBURG and an unnamed road in the Study Area. The GLO plat of Township 2 North, Range 8 West, filed in 1916, depicts a road crossing Interconnection Option A; a continuation of the road from PHOENIX TO HARRISBURG intersecting the Preferred Gen-Tie in Section 18, the Preferred Gen-Tie and Subroute in Section 21, and the Preferred and Alternative Gen-Tie Options in Section 26; and an unnamed road in the Study Area. The GLO plat of Township 2 North, Range 9 West, filed in 1916, continues to depict the road from PHOENIX TO HARRISBURG in the Study Area

The 1942 U.S. Geological Survey (USGS) Vicksburg, Arizona, 1:250,000 scale topographic map depicts the same road from "Phoenix to Harrisburg" as shown on the GLO plats, but the road is named PARKER PHOENIX ROAD, as well as another unnamed road intersecting the Preferred Gen-Tie Option. Additionally, it depicts Big Horn Well and a road in the Study Area. The 1954 USGS Phoenix, Arizona, 1:250,000 scale topographic map additionally depicts an underground cable that intersects the Preferred Gen-Tie and Subroute options. In the Study Area, it depicts a beacon and a road. The 1961 USGS Big Horn Mountain, Arizona, 1:62,500 scale topographic map depicts Buckeye-Salome Road, three unimproved roads, and a structure intersecting the Project Area; and 12 unimproved roads, five irrigation ditches, a fence, six wells, four structures, and Blecha Ranch within the Study Area. The 1962 USGS Cortez Peak, Arizona, 1:62,500 scale topographic map also depicts Buckeye-Salome Road, seven unimproved roads, five irrigation ditches, an improved road, two structures, and a windmill in the Project Area. Within the Study Area, it depicts Courthouse Road, Big Horn Well, 27 unimproved roads, 28 irrigation ditches, a fence, 19 structures, eight wells, and an airstrip.

Archaeological Sites

There are six previously recorded archaeological sites within the Study Area (Table E-6). None of these sites intersect the Project Area. They consist of indeterminate prehistoric artifact scatters, a Patayan camp, and two sites with no further information available.

Table E-6. Previously Recorded Archaeological Sites within 1 Mile of the Project

Site Number	Cultural/Temporal Affiliation	Site Type	ARHP Eligibility Status	Associated Reference(s)	Distance from Project Area (miles)
AZ S:8:2(ASU)	Indeterminate prehistoric	Artifact scatter	Unknown	Unknown	0.25
AZ S:8:44(ASM)	Unknown	Unknown	Unknown	Unknown	0.62
AZ S:12:5(ASM)	Indeterminate prehistoric	Artifact scatter	Unknown	Unknown	0.98
AZ S:12:6(ASU)	Indeterminate prehistoric	Artifact scatter	Unknown	Unknown	0.10

Site Number	Cultural/Temporal Affiliation	Site Type	ARHP Eligibility Status	Associated Reference(s)	Distance from Project Area (miles)
AZ S:12:31(ASM)	Patayan I / A.D. 700–1000	Short-term camp	Recommended eligible (Criterion D)	McClellan et al. 1980	0.04
AZ S:12:82(ASM)	Unknown	Unknown	Unknown	Unknown	0.72

Note: Shading indicates site is within the proposed Project Area.

Assessment of Effects

A project can have direct and/or indirect effects on historic sites and structures and archaeological sites when it alters the characteristics that qualify it for listing in the ARHP. Effects are adverse when they diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties include, but are not limited to:

- Physical destruction of or damage to all or part of the property
- Removal of the property from its historic location
- Change of the character of the property's use of physical features within the property's setting that contribute to its historic significance
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic characteristics
- Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe
- Transfer, lease, or sale of a property out of government ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance

Direct Effects

The records review identified two historic-era refuse scatters (AZ S:12:37[ASM] and AZ S:12:46[ASM]), a historic-era open dump (AZ S:12:83[ASM]), the Buckeye-Salome Road (AZ S:8:29[ASM]), and the Buckeye to Harquahala Transmission Line (AZ S:8:35[ASM]), all of which have the potential to be directly affected by the Project. The historical map research additionally identified an abandoned previous alignment of the Buckeye-Salome Road as well as various types of unnamed tertiary municipal and agricultural infrastructure that may intersect the Project Area.

The Buckeye to Harquahala Transmission Line (AZ S:8:35[ASM]) is recommended eligible for listing in the ARHP under Criteria A and is the only resource in the Project Area that has been recommended or determined eligible. Given the transmission line is in-use, the Project would avoid directly impacting the structure. The remaining resources known in the Project Area have been determined or recommended not eligible for listing in the ARHP.

Indirect Effects

The records review identified one site, AZ S:12:32(ASM), that was determined eligible under Criteria A and D. This is a mining site in the Saddle Mountain area of the Harquahala Plains during the early to mid-1900s (Luhnow and Dickinson 2007). Construction of the Project is unlikely to introduce a visual element that would diminish the integrity of the characteristics of this historic property for which it is eligible for the ARHP.

Conclusion

The records review identified that approximately 24% of the Project Area has been previously and adequately surveyed for cultural resources. The available records indicated that there is unlikely to be any direct or indirect effects on known historic properties. To ensure that additional potential historic properties would not be impacted within the Project Area, however, the Applicant would complete a cultural resources inventory of the portions of the Project Area that have not been previously adequately surveyed to identify and evaluate the cultural resources that may be present. SHPO concurs with this recommendation for a Class III cultural resources inventory (see Exhibit H). If any historic properties are encountered, the inventory would provide recommendations on how to mitigate any adverse effects on those historic properties.

References

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State Historic Preservation Office (SHPO). 2004. *SHPO Position on Relying on Old Archaeological Survey Data.* SHPO Guidance Point No. 5. Phoenix: Arizona State Parks.

U.S. Geological Survey. 2014. USGS Ecoregions of Arizona. Available at: https://pubs.usgs.gov/of/2014/1141/. Accessed January 2023.

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EXHIBIT F. RECREATION

As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, Exhibit 1, the intent of this exhibit is to:

> *State the extent, if any, the proposed site or route will be available to the public for recreational purposes, consistent with safety considerations and regulations and attach any plans the applicant may have concerning the development of the recreational aspects of the proposed site or route.*

Recreation information for the Study Area and vicinity was obtained from Maricopa County, Arizona State Land Department, and Bureau of Land Management (BLM). Currently, there are no dedicated open spaces or community parks within the Project Area (Maricopa County 2016). Saddle Mountain Extensive Recreation Management Area (ERMA) is within the Study Area with the northernmost boundary abutting the Alternative Gen-Tie (Exhibit A-1). The Big Horn Mountains and Hummingbird Springs Wilderness are approximately 6.5 miles north of the Project boundaries, and the Eagletail Mountains Wilderness is approximately 11.5 miles southwest of the Project boundaries (Maricopa County 2000). These wilderness areas are on BLM-administered land (BLM 2005). One access route to the Saddle Mountain ERMA is via Salome Highway, which is within the Project Area (Exhibit A-1).

Maricopa County's Comprehensive Plan does not identify any proposed dedicated recreation or open space areas within 1 mile of the Project boundaries (Maricopa County 2016). BLM does not have any plans to designate additional recreation facilities (Maricopa County 2000). Similarly, there are no identified plans to add recreation facilities on State land.

Current land uses in the Project Area include agriculture and vacant land, which currently provide limited recreational opportunities. Recreational users may occasionally use public roadways for walking, biking, and general transportation, as well as incidental uses such as bird watching. Within the Study Area and surrounding region, recreational opportunities such as off-road vehicle use, hiking, camping, bird watching, rockhounding, and horseback riding are available, primarily within BLM-administered land such as the Saddle Mountain ERMA. Generally, all State lands, which would provide similar recreation opportunities, can be accessed by the public with a Special Use Permit.

The proposed solar facilities, including the Project Substation and infrastructure associated with the interconnection, would be fenced and would not be open to the general public. The majority of the proposed gen-tie route (both the Preferred and Alternative Routes) would not be fenced, and those facilities parallel and cross public roadways. Implementation of the Project would have minimal impact to existing recreational use in the Project Area because there is currently limited use of the area (primarily travel along public roadways), and such access would continue to be available following Project construction. Similarly, implementation would have minimal to no impact to recreation in the Study Area or surrounding region because implementation would not block access to recreation areas.

References

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Maricopa County. 2000. *Maricopa County 2020 Eye To The Future: Tonopah / Arlington Area Plan.* Available at: https://mcdot.maricopa.gov/DocumentCenter/View/6625/Tonopah-Arlington-Area-Plan-PDF#:~:text=The%20Tonopah%2FArlington%20Area%20Planprovides%20a%20specific%20guide%20for,a%20reference%20for%20private%20sector%20decision%20making.%20AREAPLANELEMENTS. Accessed January 2023.

Maricopa County. 2016. *Comprehensive Plan Vision 2030*. Available at: https://www.maricopa.gov/DocumentCenter/View/6756/Comprehensive-Plan---Vision-2030-Plan-PDF?bidId=. Accessed January 2023.

EXHIBIT G. CONCEPTUAL DRAWINGS OF TRANSMISSION FACILITIES

As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, Exhibit 1:

> *Attach any artist's or architect's conception of the proposed plan or transmission line structures and switchyards, which applicant believes may be informative to the committee.*

Exhibit G-1 – Typical 500-kV Tangent Self-Supporting Steel Monopole

Exhibit G-2 – Typical 500-kV Medium Angle Self-Supporting Steel Monopole

Exhibit G-3 – Typical 500-kV Large Angle Self-Supporting Steel Monopole

Exhibit G-4 – Typical 500-kV Dead-end Self-Supporting Steel Three-Pole

Exhibit G-5 – Photosimulation of Project from Key Observation Point (KOP) 1 showing Preferred Gen-Tie

Exhibit G-6 – Photosimulation of Project from KOP 1 showing Alternative Gen-Tie

Exhibit G-7 – Photosimulation of Project from KOP 2 showing Preferred Gen-Tie

Exhibit G-8 – Photosimulation of Project from KOP 2 showing Preferred Gen-Tie Subroute Option

Exhibit G-9 – Photosimulation of Project from KOP 2 showing Alternative Gen-Tie

Exhibit G-10 – Photosimulation of Project from KOP 3 showing Interconnection Option A

Exhibit G-11 – Photosimulation of Project from KOP 3 showing Interconnection Option B

Exhibit G-12 – Photosimulation of Project from KOP 4 showing Preferred Gen-Tie

Exhibit G-13 – Photosimulation of Project from KOP 4 showing Alternative Gen-Tie

Exhibit G-14 – Photosimulation of Project from KOP 5 showing Preferred Gen-Tie with Interconnection Option A

Exhibit G-15 – Photosimulation of Project from KOP 5 showing Preferred Gen-Tie with Interconnection Option B

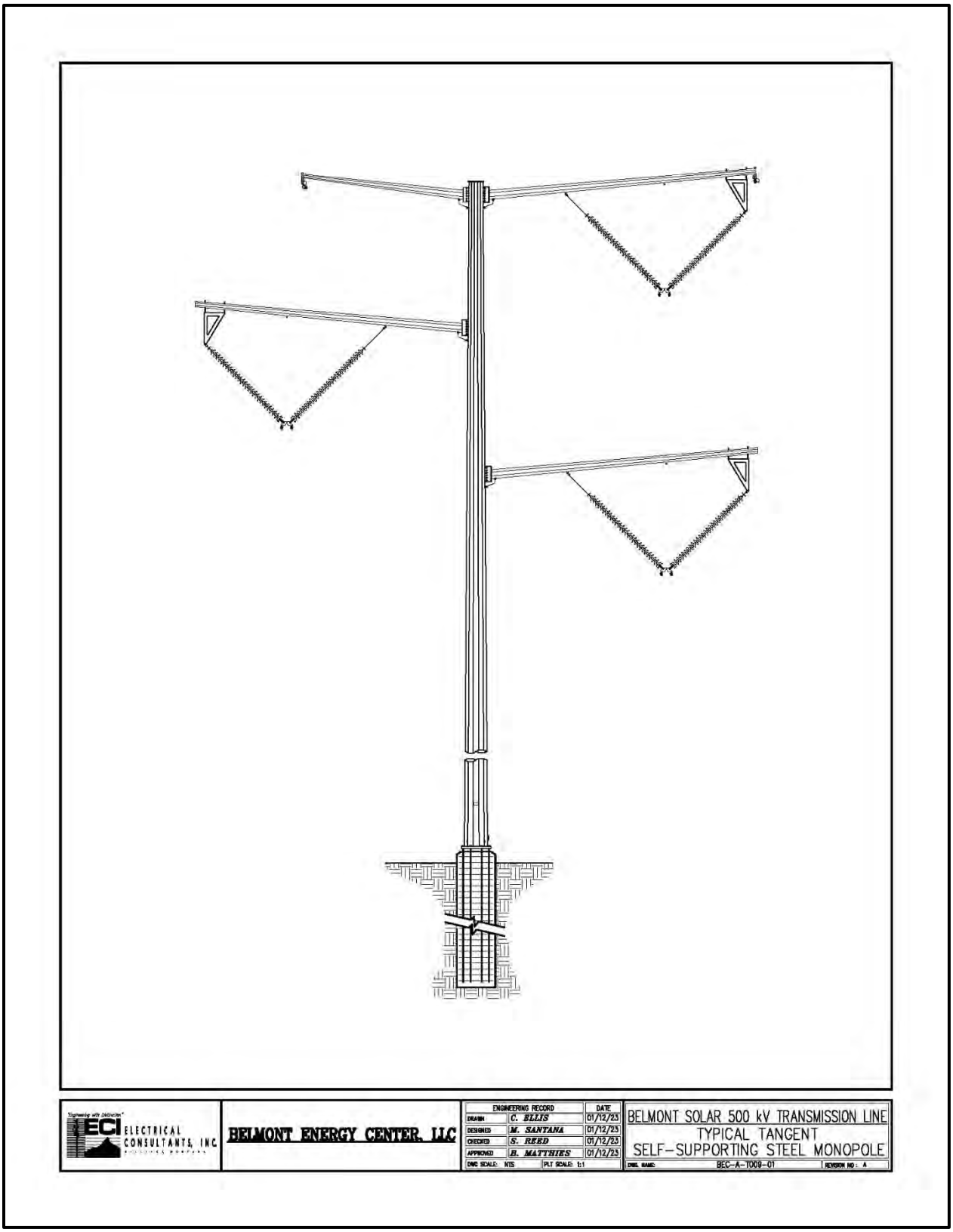

Exhibit G-1. Typical 500-kV tangent self-supporting steel monopole.

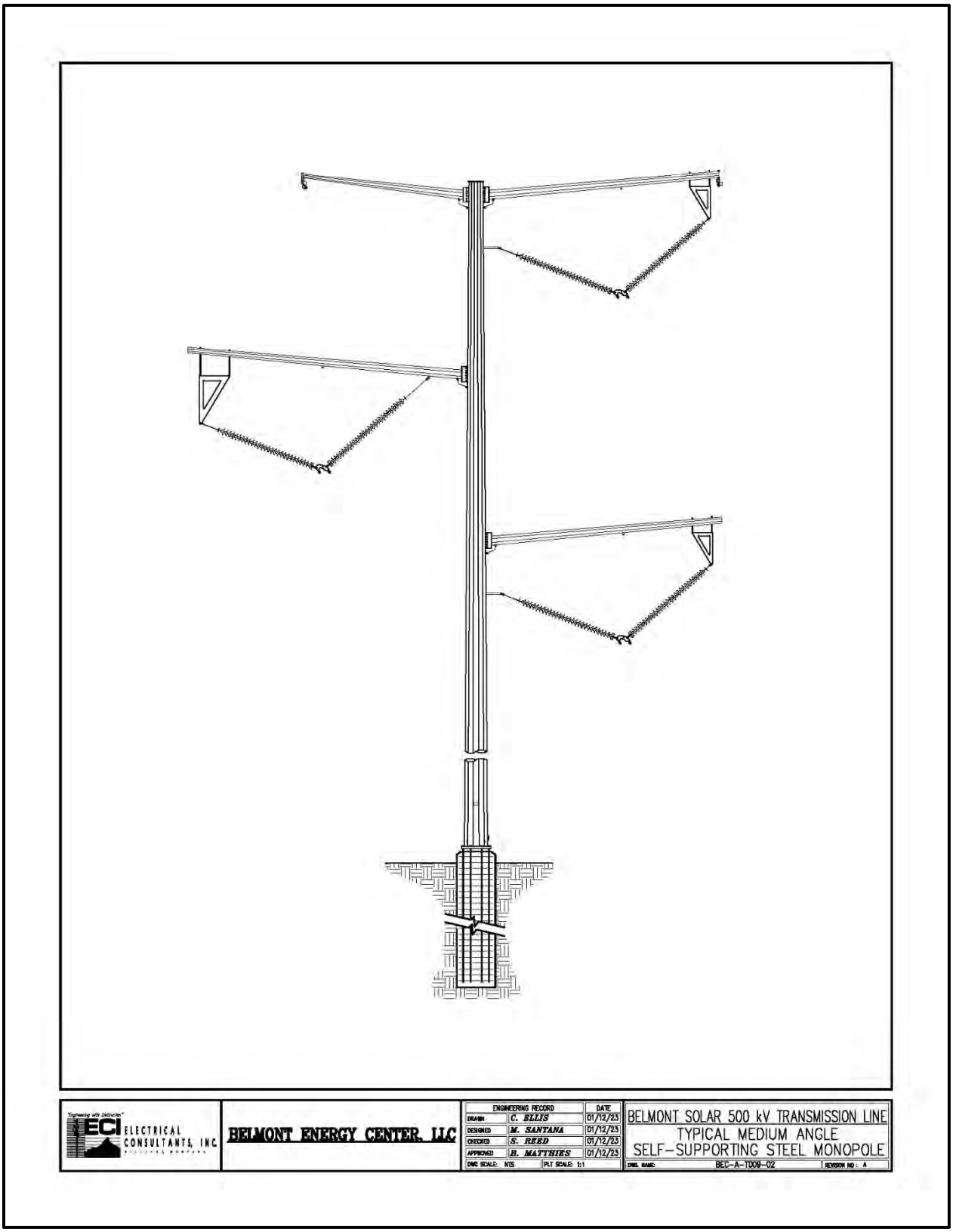

Exhibit G-2. Typical 500-kV medium-angle self-supporting steel monopole.

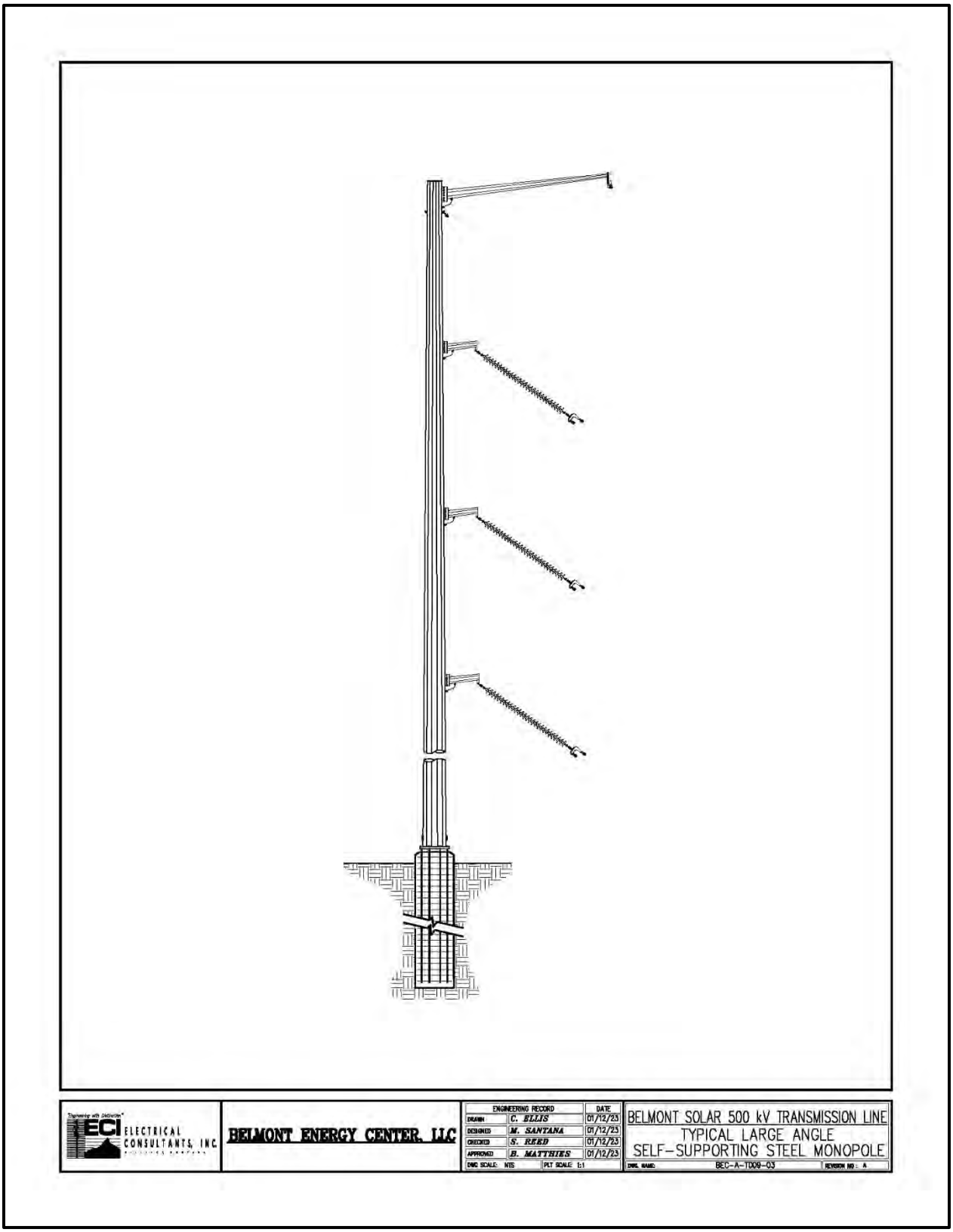

Exhibit G-3. Typical 500-kV large-angle self-supporting steel monopole.

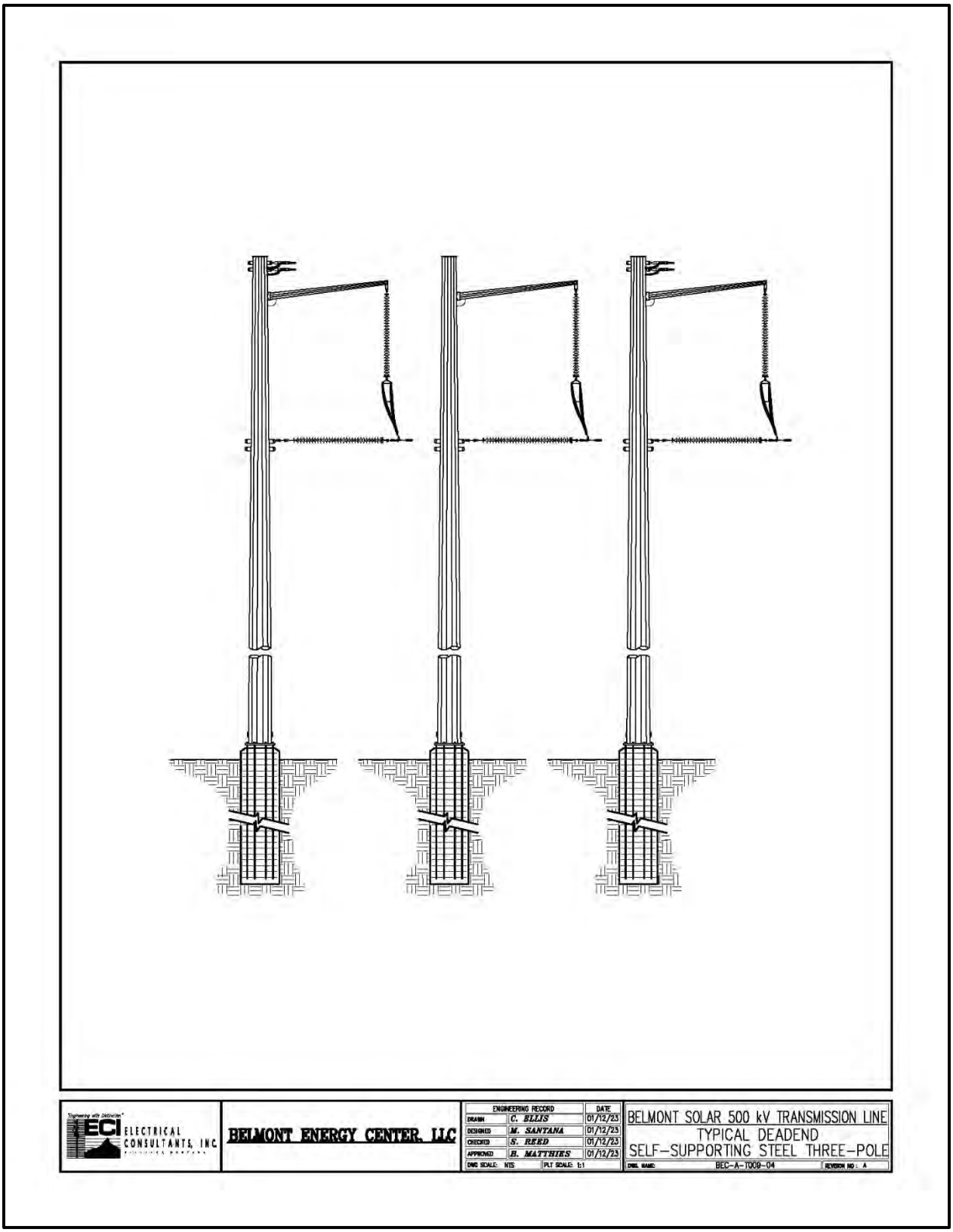

Exhibit G-4. Typical 500-kV dead-end self-supporting steel three-pole.

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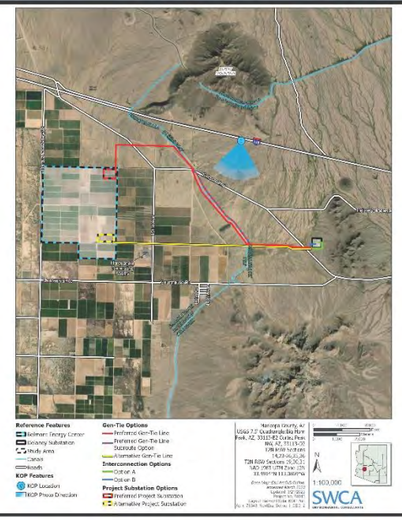
Existing Condition KOP 1: View from Burnt Well Rest Area Eastbound along Interstate 10 looking south

Simulated Condition KOP 1: View from Burnt Well Rest Area Eastbound along Interstate 10 looking south showing Preferred Gen-Tie Line

Belmont Energy Center Generation-Tie Project | February 2023

Simulation from KOP 1: View from Burnt Well Rest Area Eastbound along Interstate 10 showing Preferred Gen-Tie Line

Viewing Location



Typical 500kV Structures

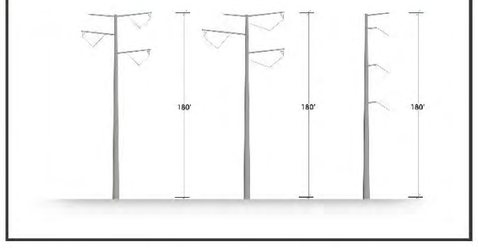


Photo Date and Time: January 23, 2023, 2:05 pm

View Location: Approximate distance to nearest new structure from photo location is 1.8 miles.

Simulations were prepared using information provided by NextEra. Structure locations, colors, and heights may be different based on final engineering and design.

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Exhibit G-5. Photosimulation of Project from KOP 1 showing Preferred Gen-Tie.

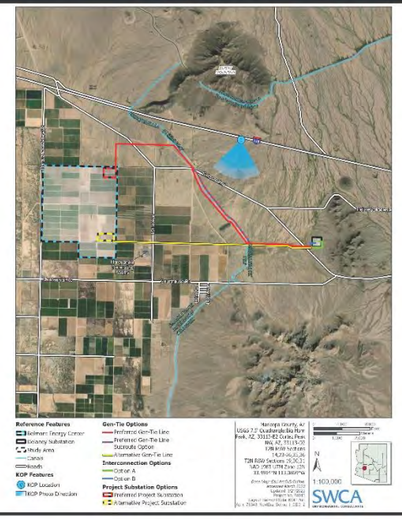
Existing Condition KOP 1: View from Burnt Well Rest Area Eastbound along Interstate 10 looking south

Simulated Condition KOP 1: View from Burnt Well Rest Area Eastbound along Interstate 10 looking south showing Alternative Gen-Tie Line

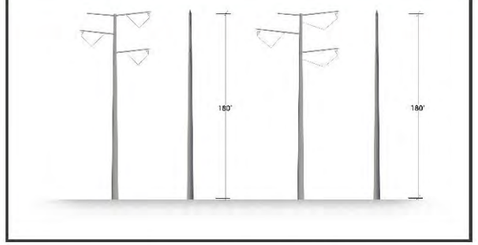
Belmont Energy Center Generation-Tie Project | February 2023

Simulation from KOP 1: View from Burnt Well Rest Area Eastbound along Interstate 10 showing Alternative Gen-Tie Line

Viewing Location



Typical 500kV Structures



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View Location: Approximate distance to nearest new structure from photo location is 2.7 miles.

Simulations were prepared using information provided by NextEra. Structure locations, colors, and heights may be different based on final engineering and design.

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Exhibit G-6. Photosimulation of Project from KOP 1 showing Alternative Gen-Tie.

Existing Condition

KOP 2: View from intersection of West Salome Highway, North 475th Avenue, and West Campbell Avenue looking south

Simulated Condition

KOP 2: View from intersection of West Salome Highway, North 475th Avenue, and West Campbell Avenue looking south showing Preferred Gen-Tie Line

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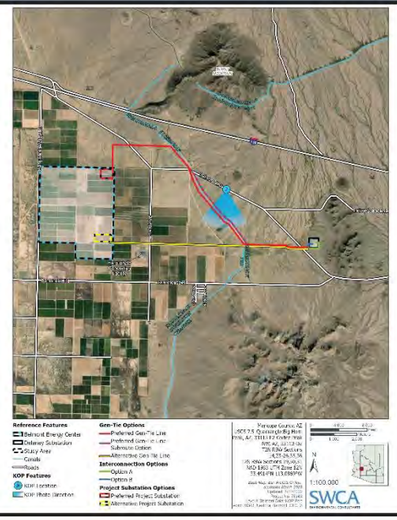
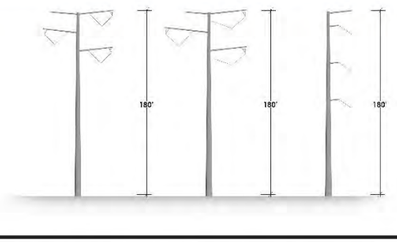
Simulation from KOP 2: View from West Salome Highway, North 47th Avenue, and West Campbell Avenue showing Preferred Gen-Tie Line

Viewing Location



Typical 500kV Structures



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View Location: Approximate distance to nearest new structure from photo location is 0.7 miles.

Simulations were prepared using information provided by NextEra. Structure locations, colors, and heights may be different based on final engineering and design.

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Exhibit G-7. Photosimulation of Project from KOP 2 showing Preferred Gen-Tie.

Existing Condition

KOP 2: View from intersection of West Salome Highway, North 475th Avenue, and West Campbell Avenue looking south

Simulated Condition

KOP 2: View from intersection of West Salome Highway, North 475th Avenue, and West Campbell Avenue looking south showing Preferred Gen-Tie Line Subroute Option

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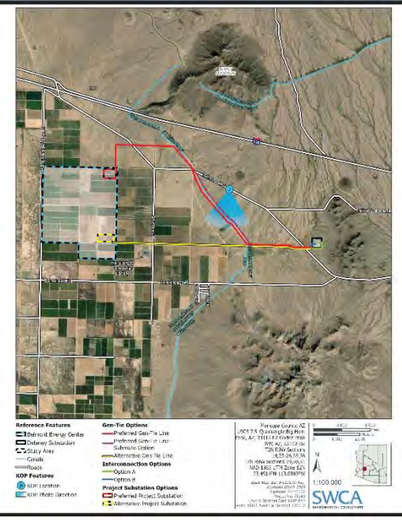
Simulation from KOP 2: View from West Salome Highway, North 47th Avenue, and West Campbell Avenue showing Preferred Gen-Tie Line Subroute Option

Viewing Location



Typical 500kV Structures

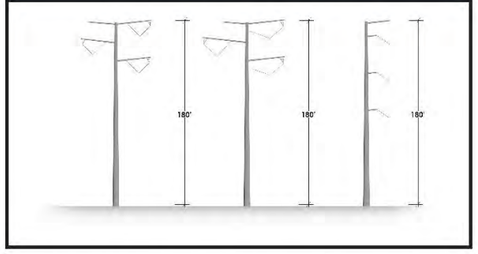


Photo Date and Time: January 23, 2023, 1:15 pm

View Location: Approximate distance to nearest new structure from photo location is 0.6 miles.

Simulations were prepared using information provided by NextEra. Structure locations, colors, and heights may be different based on final engineering and design.

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Exhibit G-8. Photosimulation of Project from KOP 2 showing Preferred Gen-Tie Subroute Option.

Existing Condition

KOP 2: View from intersection of West Salome Highway, North 475th Avenue, and West Campbell Avenue looking south

Simulated Condition

KOP 2: View from intersection of West Salome Highway, North 475th Avenue, and West Campbell Avenue looking south showing Alternative Gen-Tie Line

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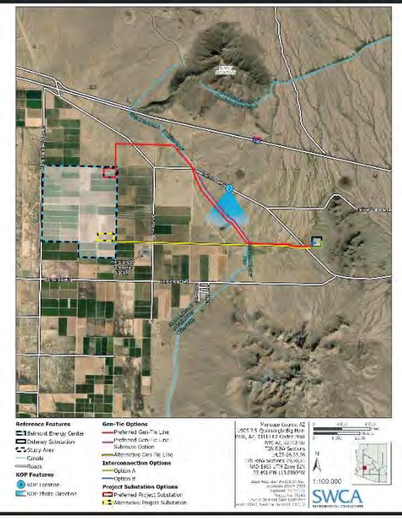
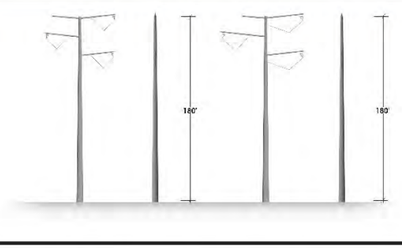
Simulation from KOP 2: View from West Salome Highway, North 47th Avenue, and West Campbell Avenue showing Alternative Gen-Tie Line

Viewing Location



Typical 500kV Structures



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View Location: Approximate distance to nearest new structure from photo location is 1.5 miles.

Simulations were prepared using information provided by NextEra. Structure locations, colors, and heights may be different based on final engineering and design.

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Exhibit G-9. Photosimulation of Project from KOP 2 showing Alternative Gen-Tie.

Existing Condition

KOP 3: View from intersection of West Salome Highway and APS Delaney Substation access road looking northwest

Simulated Condition

KOP 3: View from intersection of West Salome Highway and APS Delaney Substation access road looking northwest showing Interconnection Option A

Viewing Location

Typical 500kV Structures

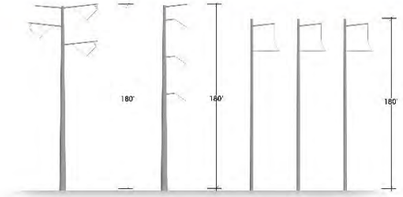

Photo Date and Time: January 23, 2023, 12:50 pm

View Location: Approximate distance to nearest new structure from photo location is 0.4 miles.

Simulations were prepared using information provided by NextEra. Structure locations, colors, and heights may be different based on final engineering and design.

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Simulation from KOP 3: View from West Salome Highway and APS Delaney Substation access road showing Interconnection Option A

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Exhibit G-10. Photosimulation of Project from KOP 3 showing interconnection Option A.

Existing Condition

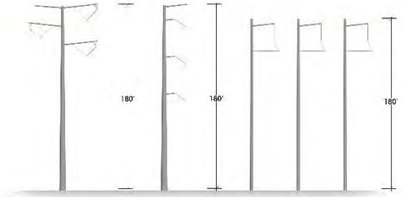
KOP 3: View from intersection of West Salome Highway and APS Delaney Substation access road looking northwest

Simulated Condition

KOP 3: View from intersection of West Salome Highway and APS Delaney Substation access road looking northwest showing Interconnection Option B

Viewing Location

Typical 500kV Structures



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View Location: Approximate distance to nearest new structure from photo location is 0.5 miles.

Simulations were prepared using information provided by NextEra. Structure locations, colors, and heights may be different based on final engineering and design.

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Simulation from KOP 3: View from West Salome Highway and APS Delaney Substation access road showing Interconnection Option B

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Exhibit G-11. Photosimulation of Project from KOP 3 showing Interconnection Option B.

Existing Condition

KOP 4: View from residence at West Courthouse Avenue and 481st Avenue looking northeast

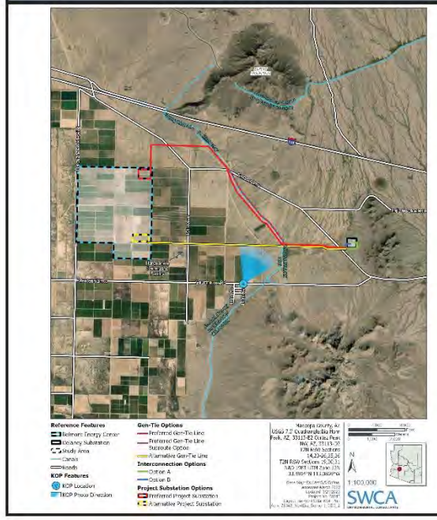
Simulated Condition

KOP 4: View from residence at West Courthouse Avenue and 481st Avenue looking northeast showing Preferred Gen-Tie Line

Belmont Energy Center Generation-Tie Project | February 2023

Simulation from KOP 4: View from residence at West Courthouse Avenue and 481st Avenue showing Preferred Gen-Tie Line

Viewing Location



Typical 500kV Structures

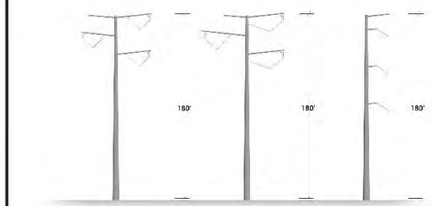


Photo Date and Time: January 23, 2023, 12:05 pm

View Location: Approximate distance to nearest new structure from photo location is 1.4 miles.

Simulations were prepared using information provided by NextEra. Structure locations, colors, and heights may be different based on final engineering and design.

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Exhibit G-12. Photosimulation of Project from KOP 4 showing Preferred Gen-Tie.

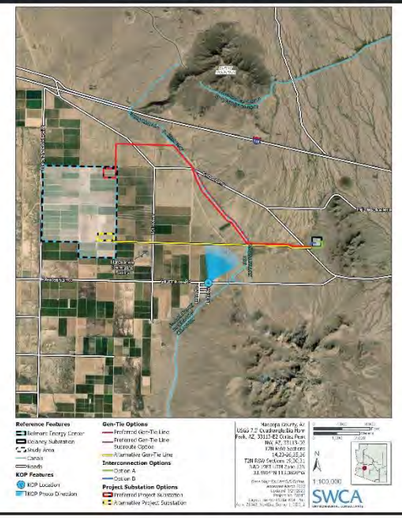
Existing Condition

KOP 4: View from residence at West Courthouse Avenue and 481st Avenue looking northeast

Simulated Condition

KOP 4: View from residence at West Courthouse Avenue and 481st Avenue looking northeast showing Alternative Gen-Tie Line

Viewing Location



Typical 500kV Structures

Photo Date and Time: January 23, 2023, 12:05 pm

View Location: Approximate distance to nearest new structure from photo location is 1 mile.

Simulations were prepared using information provided by NextEra. Structure locations, colors, and heights may be different based on final engineering and design.

Belmont Energy Center Generation-Tie Project | February 2023

Simulation from KOP 4: View from residence at West Courthouse Avenue and 481st Avenue showing Alternative Gen-Tie Line

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Exhibit G-13. Photosimulation of Project from KOP 4 showing Alternative Gen-Tie.

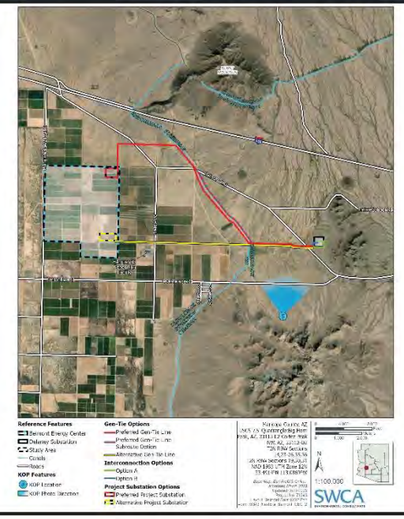
Existing Condition KOP 5: View from Saddle Mountain looking north

Simulated Condition KOP 5: View from Saddle Mountain looking north showing Preferred Gen-Tie Line with Interconnection Option A

Belmont Energy Center Generation-Tie Project | February 2023

Simulation from KOP 5: View from Saddle Mountain showing Preferred Gen-Tie Line with Interconnection Option A

Viewing Location



Typical 500kV Structures

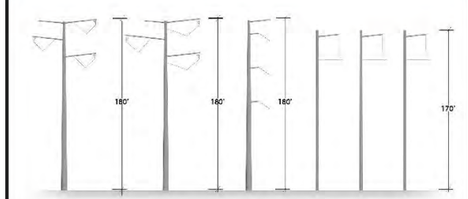


Photo Date and Time: January 23, 2023, 12:40 pm

View Location: Approximate distance to nearest new structure from photo location is 1.9 miles.

Simulations were prepared using information provided by NextEra. Structure locations, colors, and heights may be different based on final engineering and design.

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Exhibit G-14. Photosimulation of Project from KOP 5 showing Preferred Gen-Tie with Interconnection Option A.

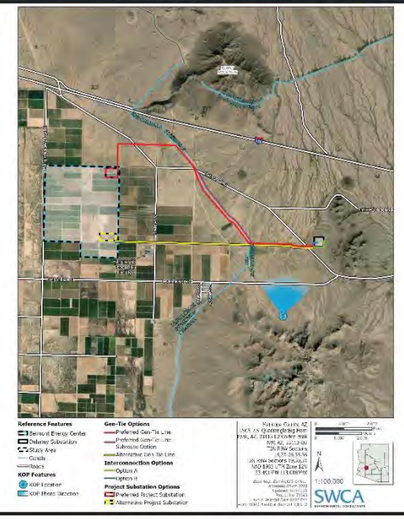
Existing Condition KOP 5: View from Saddle Mountain looking north

Simulated Condition KOP 5: View from Saddle Mountain looking north showing Preferred Gen-Tie Line with Interconnection Option B

Belmont Energy Center Generation-Tie Project | February 2023

Simulation from KOP 5: View from Saddle Mountain showing Preferred Gen-Tie Line with Interconnection Option B

Viewing Location



Typical 500kV Structures

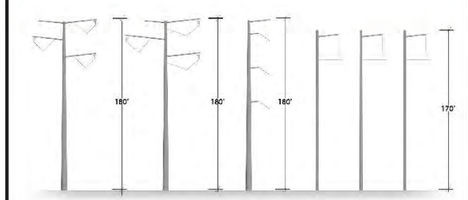


Photo Date and Time: January 23, 2023, 12:40 pm

View Location: Approximate distance to nearest new structure from photo location is 1.9 miles.

Simulations were prepared using information provided by NextEra. Structure locations, colors, and heights may be different based on final engineering and design.

NEXTera ENERGY

SWCA® ENVIRONMENTAL CONSULTANTS

Exhibit G-15. Photosimulation of Project from KOP 5 showing Preferred Gen-Tie with Interconnection Option B.

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EXHIBIT H. EXISTING PLANS

As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, Exhibit 1:

> *To the extent applicant is able to determine, state the existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed site or route.*

Existing and future land uses are discussed in Exhibit B and mapped in Exhibits A-2 and A-3. The Maricopa County Comprehensive Plan and online web mapper were evaluated as part of the land use study, and development plans were reviewed and verified with the Maricopa County Planning and Development Department.

In February 2023, letters were sent to the jurisdictions (listed in Table H-1) to provide Project information and request new or additional information on planned developments within the Study Area. Exhibit H-1 provides a copy of the letter and subsequent Exhibits H-1 through H-6 include written responses and other correspondence from relevant jurisdictions.

Table H-1. Entities that Received Letters with Project Information

Contact Name	Title	Agency/Organization
Bruce Fenske	District Administrator, Southwest District	Arizona Department of Transportation
Jonathan Fell	Assistant District Engineer	Arizona Department of Transportation
Ginger Ritter	Project Evaluation Supervisor	Arizona Game and Fish Department
Kathryn Leonard	State Historic Preservation Officer	Arizona State Historic Preservation Office
Ruben Ojeda	Section Manager, Rights-of-Way Section	Arizona State Land Department
Joy Rich	Maricopa County Manager	Maricopa County
Jeff McMenemy	Harquahala Fire District Fire Chief	Harquahala Fire District
Michael Fulton	Agency Director, Flood Control District	Flood Control District of Maricopa County
Brian Buzard	Director, Operations, Power, and Engineering	Central Arizona Project
Lisa Atkins	Commissioner	Arizona State Land Department
Thomas Buschatzke	Director, Arizona Department of Water Resources	Arizona Department of Water Resources
Raymond Suazo	State Director, Arizona State Office	Bureau of Land Management
Dolores Garcia	Acting Yuma Field Manager, Yuma Field Office	Bureau of Land Management
William Mack, Jr.	District Manager, Colorado River District Office	Bureau of Land Management
Jack Sellers	Maricopa County Board of Supervisors, District 1	Vice Chairman
Thomas Galvin	Maricopa County Board of Supervisors, District 2	Supervisor
Bill Gates	Maricopa County Board of Supervisors, District 3	Supervisor
Clint Hickman	Maricopa County Board of Supervisors, District 4	Chairman
Steve Gallardo	Maricopa County Board of Supervisors, District 5	Supervisor
Scott Saline	District Manager	Harquahala Valley Irrigation District
Jennifer Toth, P.E.	Transportation Director / County Engineer	Maricopa County
Karla Petty	Division Administrator	Federal Highway Administration
Matt Holm	Planning and Development Manager	Maricopa County Planning and Development
Jason Spitzkoff	Manager, Transmission Engineering	Arizona Public Service

Contact Name	Title	Agency/Organization
Eduardo Uribe	Electrical Engineer	Western Area Power Administration, Desert Southwest Region
Sean Berry	Environmental Manager	Western Area Power Administration, Desert Southwest Region
Josh Robertson	Director of Regulatory Policy	Salt River Project
Anna M. Garcia	Project Manager	Tucson Electric Power
Brian Pugh	TEP Supervisor of Environmental & Land Use Planning	Tucson Electric Power

February 10, 2023

Bruce Fenske
Arizona Department of Transportation
2243 E. Gila Ridge Rd.
Yuma, AZ 85365

Re: Belmont Energy Center Generation Tie Line Project

Dear Bruce Fenske,

Belmont Energy Center, LLC. plans to file an application for a Certificate of Environmental Compatibility (CEC) for the Belmont Energy Center Generation Tie Line Project (Gen-Tie Project) with the Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) in March 2023. The Gen-Tie Project involves the development of a new 500kV electrical generation intertie transmission line (gen-tie) that will connect the future Belmont Energy Center, a 450 MW photovoltaic solar generation and battery storage facility, with the nearby existing APS Delaney Substation.

Belmont Energy Center, LLC. and its consultant, SWCA Environmental Consultants (SWCA), is completing environmental studies to evaluate the proposed location of the project. SWCA's environmental studies support the proposed route identified for the Project, which will be brought before the Siting Committee (see attached map). Belmont Energy Center, LLC. will request Siting Committee approval for a CEC for the Gen-Tie Project.

Arizona Administrative Code Rule R14-3-219 directs an applicant to include in its CEC application an Exhibit H addressing the following: "To the extent the applicant is able to determine, state the existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed site or route."

This letter is an opportunity for your department to provide any information or comments regarding development plans for inclusion in the CEC application. We respectfully request your response in writing; specifically, please advise us of any relevant existing or future development plans that you can identify at this time.

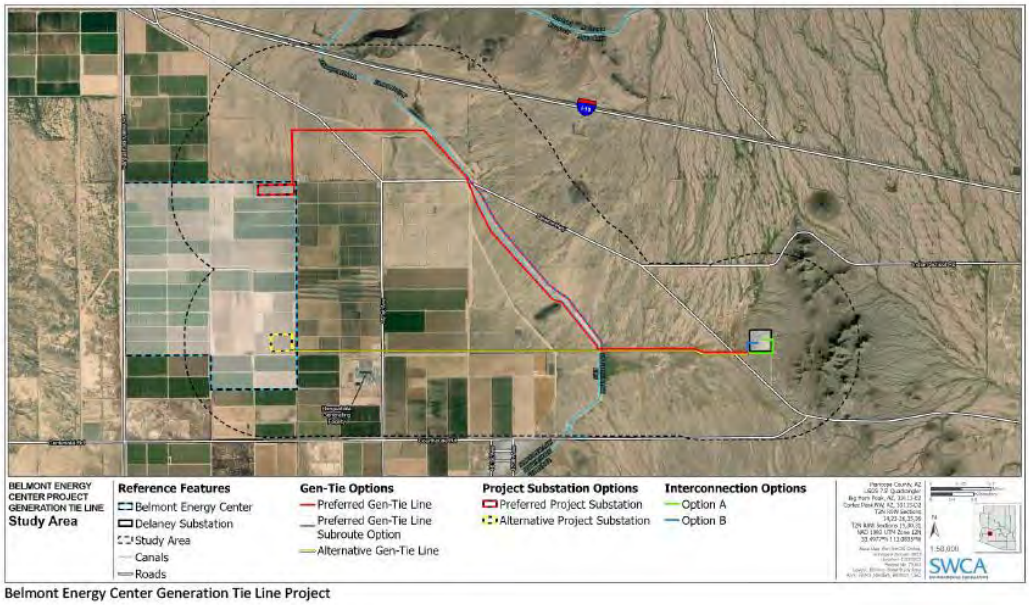
To allow your information to be included in the CEC application, please forward it to me by March 2, 2023, via email at devin.petry@swca.com, or by physical mail: Attn: Devin Petry, SWCA, 20 East Thomas Road, Suite 1700, Phoenix, AZ 85012.

Thank you for your cooperation.

Respectfully,

Devin Petry, Environmental Project Manager
SWCA Environmental Consultants
C: Alex Simons and Clinton Spencer, Belmont Energy Center, LLC

Exhibit H-1a. Example February 2023 Exhibit H letter.



Belmont Energy Center Generation Tie Line Project

Exhibit H-1b. Example February 2023 Exhibit H letter.

From: Martinez, Celina R
To: Devin Petry
Cc: Morberg, Mark D; Mack Jr, William; Eysenbach, Derek W; Alex Simons; Spencer, Clinton
Subject: Belmont Energy Center Generation Tie Line Project Letter - BLM Response
Date: Wednesday, February 15, 2023 1:11:39 PM
Attachments: Belmont Energy Center GenTie Notification Letter.pdf

Good afternoon Mr. Petry,

This email is in response to letters received by the BLM Arizona State Office and Colorado River District regarding the Belmont Energy Gen-tie project.

There has been some conflicting information received by BLM about the proposed route for this gen-tie that I'm hoping you can provide clarification on.

The Tribes in AZ first contacted BLM after receiving an outreach letter regarding Belmont Energy on 12/19/22. The letter suggested that the associated gen-tie alignment crossed BLM land, however we had not received an application for this proposed action. Our renewable energy lead, Derek Eysenbach, reached out to Alex Simons on 1/4/23 to inquire about the project, Alex responded the following day stating that the route had been recently adjusted to eliminate crossing BLM land and no ROW authorization would be needed from BLM.

This week letters were received by BLM offices (dated 2/10/23) about the upcoming CEC application that would be filed with the AZ Line Siting Committee (attached). The map included shows an alternative gen-tie alignment that appears to cross a section of BLM land.

Can you please provide some clarification about the proposed alignment(s) of this gen-tie and whether or not NextEra is considering a route crossing BLM land?

Thank you,

Celina

~~~~~~~~~~~~~~~~~~~~
Celina Martinez (she/her)
Project Manager
Bureau of Land Management
Arizona State Office
(505)280-0592 - cell phone

Education means communication, communication is the exchange of ideas

Exhibit H-2. February 2023 BLM response letter.
~~~~~~~~~~~~~~~~~~~~

From: Devin Petry
To: Martinez, Celina R
Cc: Morberg, Mark D; Mack Jr, William; Eysenbach, Derek W; Alex Simons; Spencer, Clinton; Colin Agner
Subject: RE: Belmont Energy Center Generation Tie Line Project Letter - BLM Response
Date: Wednesday, February 15, 2023 4:16:00 PM
Attachments: image001.png

Good afternoon, Ms. Martinez.

Thank you for your response regarding the Belmont Gen-Tie Project CEC mailing. As you know, we at SWCA are assisting Belmont Energy Center, LLC in the environmental studies related to the Gen-Tie CEC. The alignments proposed for the Belmont Gen-tie Project do not cross BLM land. One of the identified gen-tie options does pass to the north of BLM land, near T2N, R8W, Section 34, but is not proposed to cross any BLM lands.

We appreciate your inquiry, and should you have any further questions please don't hesitate to contact either myself or Alex Simons.

Thank you.

Devin Petry
Southwest Client Services Director /
Senior Environmental Project Manager

SWCA Environmental Consultants
20 E Thomas Rd, Ste 1700
Phoenix, AZ 85012
P 480.581.5217

SWCA | 100% Employee OWNED

From: Martinez, Celina R <crmartin@blm.gov>
Sent: Wednesday, February 15, 2023 1:10 PM
To: Devin Petry <devin.petry@swca.com>
Cc: Morberg, Mark D <mmorberg@blm.gov>; Mack Jr, William <wmack@blm.gov>; Eysenbach, Derek W <deysenbach@blm.gov>; Alex Simons <alex.simons@nexteraenergy.com>; Spencer, Clinton <clinton.spencer@nexteraenergy.com>
Subject: Belmont Energy Center Generation Tie Line Project Letter - BLM Response

Good afternoon Mr. Petry,

Exhibit H-3a. February 2023 SWCA response to BLM.

This email is in response to letters received by the BLM Arizona State Office and Colorado River District regarding the Belmont Energy Gen-tie project.

There has been some conflicting information received by BLM about the proposed route for this gen-tie that I'm hoping you can provide clarification on.

The Tribes in AZ first contacted BLM after receiving an outreach letter regarding Belmont Energy on 12/19/22. The letter suggested that the associated gen-tie alignment crossed BLM land, however we had not received an application for this proposed action. Our renewable energy lead, Derek Eysenbach, reached out to Alex Simons on 1/4/23 to inquire about the project, Alex responded the following day stating that the route had been recently adjusted to eliminate crossing BLM land and no ROW authorization would be needed from BLM.

This week letters were received by BLM offices (dated 2/10/23) about the upcoming CEC application that would be filed with the AZ Line Siting Committee (attached). The map included shows an alternative gen-tie alignment that appears to cross a section of BLM land.

Can you please provide some clarification about the proposed alignment(s) of this gen-tie and whether or not NextEra is considering a route crossing BLM land?

Thank you,

Celina

~~~~~~~~~~~~~~~~~~~
Celina Martinez (she/her)
Project Manager
Bureau of Land Management
Arizona State Office
(505)280-0592 - cell phone

> *Education means communication, communication is the exchange of ideas*

Exhibit H-3b. February 2023 SWCA response to BLM.
~~~~~~~~~~~~~~~~~~~

MARICOPA COUNTY
TRANSPORTATION

February 28, 2023

Attn: Devin Petry
SWCA
20 East Thomas Road, Suite 1700
Phoenix, Arizona 85012

Re: Belmont Energy Center Generation Tie Line Project

Delivered via email: devin.petry@swca.com and BelmontSolar@nexteraenergy.com

To Whom It May Concern:

Maricopa County Department of Transportation (MCDOT) has reviewed the provided notice on the above referenced project. Any work connecting to, or which may impact, county right-of-way will require a review of the project's Traffic Study and may require a MCDOT Right-of-Way Permit.

- MCDOT owns and maintains the following roadways within the study area. Any work connecting to, or which may impact, County Right of Way may require a MCDOT Right of Way Permit. The following establishes right of way preservation requirements for specific roadways.
  - Salome Highway is classified as a future Principal Arterial roadway requiring 65' half-street.
  - 491st Avenue is classified as future Minor Arterial roadway requiring 65' half-street.
  - Courthouse Road is classified as a Minor Arterial roadway requiring 65' half-street.
  - Indian School Road is classified as a future Principal Arterial roadway requiring 65' half-street.
- Utilities and utility lines must be located outside of existing and future Maricopa County Department of Transportation reserved Right of Way including Section or Mid-Section Lines outlined in the Maricopa County Zoning Ordinance 1105.
- The above comments do not include identification of utilities or underground facilities within or adjacent to the required right-of-way that may have prior rights and/or require relocation.
- Notify Arizona Department of Transportation through the Red Letter Process, RedLetter@azdot.gov, due to the proximity to I-10.

Engineering Division
2901 W. Durango Street
Phoenix, Arizona 85009

P: 602.506.4889
F: 602.506.5969

Exhibit H-4a. February 2023 Maricopa County Department of Transportation letter.

If you have any questions, please contact me directly at 602-506-7223 or Drew.Sigado@maricopa.gov.

Sincerely,

Drew Sigado

Drew Sigado
Planner
MCDOT Planning Branch

Engineering Division
2901 W. Durango Street
Phoenix, Arizona 85009

P: 602.506.4889
F: 602.506.5969

Exhibit H-4b. Example February 2023 Maricopa County Department of Transportation letter.

From: Tom Hanson (FCD)
To: Devin Petry; BelmontSolar@nexteraenergy.com
Cc: Scott Vogel (FCD); Edward Raleigh (FCD); Michael Fulton (FCD)
Subject: Request for Comments for the Belmont Energy Center Generation Tie Line Project
Date: Thursday, March 2, 2023 11:55:48 AM
Attachments: image001.png

EXTERNAL: This email originated from outside SWCA. Please use caution when replying.

Good Afternoon,

I am responding to your February 10, 2023 letter to the Flood Control District Director, Mike Fulton, requesting comments on the Belmont Energy Center Generation Tie Line Project. The two alternative alignments that are proposed appear to encroach on the land that the Flood Control District owns for our Saddleback Flood Retarding Structure. About a month ago our office was contacted by Mr. Clinton Spencer with NextEra Energy Resources who filled out an application to start our permitting process. A meeting is scheduled between Mr. Spencer and our office for March 14, 2023, to discuss the details of the project, the impact on our land and structure, and constraints that may be imposed by our office before the project may be considered on our property. In the past three years at least three other entities have started applications with our office for permits for new power lines that may conflict with the alignments in your proposal. To date those other applications are still open and have not resulted in a permit for construction. You may already be aware of the other proposed projects. Their names are Maricopa Solar and Storage Project, RE Papago Solar Project, and HV Sunrise Transmission Line. Similar to your project, each of those projects currently has information and maps on a public page that can be found with a web search. Before we would consider allowing encroachment on our property, detailed engineered plans must be submitted for review so that we can ensure that there will be no impact to the function and maintainability of our flood retarding structure now or in the future. Additionally, arrangements must be made for the use of our land which will be part of our permitting process. Contact with our office should be directed to me or my permitting staff who you have already engaged with. Please let me know if you have any questions.

Thank you,

MARICOPA COUNTY

Tom Hanson
Right-of-Way Use Permitting Branch Manager
Flood Control District
Engineering Division
2801 W Durango St Phoenix, AZ 85009
O: 602-506-2916 C: 480-253-0543
E: tom.hanson@maricopa.gov
[Maricopa.Gov]
Facebook | Instagram | Twitter | YouTube | LinkedIn

Exhibit H-5. February 2023 Flood Control District of Maricopa County letter.

From: Andrew Vorsanger
To: Colin Agner
Subject: FW: Request for Consultation – Belmont Solar Facility Project, Application for a Certificate of Environmental Compatibility
Date: Monday, March 20, 2023 12:59:01 PM
Attachments: image001.png

Andrew Vorsanger
Cultural Resources Team Lead - Phoenix
SWCA Environmental Consultants

From: Caroline Klebacha <cklebacha@azstateparks.gov>
Sent: Thursday, March 16, 2023 10:55 AM
To: Andrew Vorsanger <Andrew.Vorsanger@swca.com>
Subject: Re: Request for Consultation – Belmont Solar Facility Project, Application for a Certificate of Environmental Compatibility

EXTERNAL: This email originated from outside SWCA. Please use caution when replying.

Good morning, Andrew,

Thank you for submitting this project for review. We have the following comments regarding the submission.

- SHPO has 30 days to review projects. Please keep this in mind when requesting dates for comments or concurrence.
- We recognize that the Belmont Energy will complete a Class III cultural resources inventory prior to the commencement of the project. We look forward to reviewing the results of survey when completed.
- In the future, please review the Previous Research maps for clarity. There are a couple places where the lead lines cross each other, labels are on top of the project area or on top of sites, or the placement of labels make it hard to see what they are indicating.

No revisions are required at this time. Please submit the Class III report for further review when complete.

Thank you,

Caroline

Caroline Klebacha, M.A.
Archaeological Compliance Specialist
State Historic Preservation Office
A Division of Arizona State Parks & Trails

Exhibit H-6a. March 2023 Arizona State Historic Preservation Office response.

Please use azshpo@azstateparks.gov for all consultation!

1110 West Washington Street, Suite 100
Phoenix, AZ 85007-2957
Phone: 602-542-7140
Email: cklebacha@azstateparks.gov
Web: http://AZStateParks.com/SHPO

On Thu, Feb 16, 2023 at 10:46 AM AZSHPO - AZPARKS <azshpo@azstateparks.gov> wrote:

SHPO-2023-0217 (167840)

---------- Forwarded message ---------
From: **Andrew Vorsanger** <Andrew.Vorsanger@swca.com>
Date: Wed, Feb 15, 2023 at 9:04 AM
Subject: Request for Consultation – Belmont Solar Facility Project, Application for a Certificate of Environmental Compatibility
To: azshpo@azstateparks.gov <azshpo@azstateparks.gov>
Cc: Caroline Klebacha <cklebacha@azstateparks.gov>, Devin Petry <devin.petry@swca.com>, Colin Agner <cagner@swca.com>

Good Morning,

On behalf of Belmont Energy Center, LLC., we respectfully request that the State Historic Preservation Office (SHPO) review and provide comment on the Belmont Solar Facility Project to support the Arizona Corporation Commission's compliance with the State Historic Preservation Act (Arizona Revised Statutes 41-861 through 41-864). Please find attached the letter that contains information about the Project in accordance with the SHPO's September 2022 "ACC-SHPO Consultation Checklist for Compliance with the State Historic Preservation Act." Also included are the project location and Class I results maps. We look forward to consulting with your office on this project, and please do not hesitate to contact us with any questions.
Thank you.

Andrew Vorsanger | he, him, his
Cultural Resources Team Lead - Phoenix

SWCA Environmental Consultants
20 E. Thomas Road, Suite 1700
Phoenix, Arizona, 85012
P 602.887.8104 | C 917.816.3517
Andrew.Vorsanger@swca.com

Exhibit H-6b. March 2023 Arizona State Historic Preservation Office response.

Exhibit H-6c. March 2023 Arizona State Historic Preservation Office response.

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EXHIBIT I. NOISE

As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, Exhibit 1:

> *Describe the anticipated noise emission levels and any interference with communication signals which will emanate from the proposed facilities.*

The following analysis describes typical audible noise emissions and radio noise levels during construction and operation of the Project, and generally acceptable thresholds for emissions and radio noise levels. Typical television broadcast level (in megahertz [MHz]) compatibility is also evaluated.

Existing Sound Levels

Ambient noise in the Study Area is typical of rural areas where agricultural activities are the most common use. Existing land use within the Study Area is primarily agriculture. Other land uses in the Study Area include the Harquahala Generating Station and the Delaney Substation and associated high-voltage transmission lines.

Typical sound levels in rural areas range from 30 to 50 decibels (daytime averages) (Arizona Department of Transportation 2008). Noise-producing activities in the Study Area include the operation of agricultural equipment, traffic along Interstate 10 and Salome Road, and noise emissions from the existing Harquahala Generating Station, Delaney Substation, and transmission lines.

Table I-1 contains definitions of acoustic terms used in this report, and Table I-2 provides example sound levels that a human may encounter.

Table I-1. Definitions of Acoustical Terms

Term	Definitions
Sound	Wave-like variations in air pressure that occur at frequencies that can stimulate receptors in the inner ear and, if sufficiently powerful, be appreciated at a conscious level.
Noise	Implies the presence of sound but also a response to sound; noise is often defined as unwanted sound.
Ambient noise level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Decibel	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the measured pressure to the reference pressure, which is 20 micropascals.
A-weighted sound pressure level	The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighted filter de-emphasizes the very low- and the very high-frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Hertz (Hz)	A unit of measure of frequency; the number of cycles per second of a periodic waveform.
Infrasound	Acoustic oscillations whose frequency is below the low-frequency limit of audible sound (about 16 Hz). This definition is incomplete as infrasound at high enough levels is audible at frequencies below 16 Hz (International Electrotechnical Commission 1994).
Low-frequency sound	Sound in the frequency range that overlaps the higher infrasound frequencies and the lower audible frequencies; it is typically considered as 10 Hz to 200 Hz, but is not precisely defined.

Table I-2. Typical Sound Pressure Levels Measured in the Environment and Industry

Noise Source at a Given Distance	A-Weighted Sound Level in Decibels	Qualitative Description
Carrier deck jet operation	140	–
	130	Pain threshold
Jet takeoff (200 feet)	120	–
Auto horn (3 feet)	110	Maximum vocal effort
Jet takeoff (1,000 feet) Shout (0.5 foot)	100	–
N.Y. subway station Heavy truck (50 feet)	90	Very annoying Hearing damage (8-hour, continuous exposure)
Pneumatic drill (50 feet)	80	Annoying
Freight train (50 feet) Freeway traffic (50 feet)	70 to 80	–
	70	Intrusive (Telephone use difficult)
Air conditioning unit (20 feet)	60	–
Light auto traffic (50 feet)	50	Quiet
Living room Bedroom	40	–
Library Soft whisper (5 feet)	30	Very quiet
Broadcasting/Recording studio	20	–
	10	Just audible

Source: Adapted from New York State Department of Environmental Conservation (2001:Table E).

Anticipated Noise during Construction and Operation

During construction, equipment used for the assembly and erection of structures, and wire pulling and splicing, would generate noise. Noise from construction activities would be audible to nearby users; however, because the Project is surrounded by private property, users in the area are limited to a small number of people, and because construction would occur during daytime hours when tolerance to noise is higher, it would not be considered a major impact. Noise from construction would be temporary, lasting only a few months between the start of construction and operation.

Anticipated noise associated with the Project Substation and gen-tie would primarily be temporary and construction related. Certain electromagnetic effects are inherently associated with substations and overhead transmission facilities, however. The primary effect of electric and magnetic fields is corona discharge. Corona effects manifest as audible noise, radio interference, and television interference. These particular effects are minimized by line location, line design, and construction practices.

Corona

Under certain conditions, the localized electric field near an energized conductor can be sufficiently concentrated to produce a tiny electric discharge that can ionize air close to the conductors (Electric Power Research Institute [EPRI] 1982). This partial discharge of electrical energy is called corona discharge, or corona. This physical manifestation can transform and discharge energy into very small amounts of sound,

radio noise, heat, and chemical reactions of the air components. Several factors, including conductor voltage, shape, diameter, and surface irregularities such as scratches, nicks, and dust, can affect a conductor's electrical surface gradient and its corona performance.

Audible Noise

Audible noise would be created by corona discharge at the Project Substation and along the gen-tie. As a result, the amount of audible noise is directly related to the amount of corona, which is in turn affected by meteorological conditions (most notably precipitation). Transmission line audible noise is categorized into broadband high-frequency sounds, which can be described as hissing or sputtering, and low-frequency tones, which are best described as humming sounds.

Because power loss is uneconomical and noise is undesirable, corona on transmission lines has been studied by engineers since the early part of the twentieth century. Historical measurements along transmission corridors of similar makeup (open desert) have shown typical ambient audible noise levels in the range of 43 to 52 A-weighted sound pressure level (dBA) with an average value of 50 dBA. References exist on the subject of transmission line corona (e.g., EPRI 1982). Consequently, corona is well understood by engineers, and steps to minimize it are one of the major factors in transmission line design for extra high–voltage transmission lines (345–765 kilovolts [kV]) (Pacific Gas and Electric Company 2005; Parmar 2014).

Radio Interference

Overhead transmission lines do not, as a general rule, interfere with normal radio or television reception. There are two potential sources for interference: corona and gap discharges. Gap discharges cause short pulses of voltage and current to be propagated along the transmission line, resulting in radio frequency noise in the vicinity of the line. Gap discharges are different from corona and can occur on low-voltage distribution lines. Gap discharges are most commonly caused by loose hardware. Gap discharges comprise a large percentage of all interference problems and are easily remedied.

Corona-caused radio interference is dependent on various factors, including distance from the line to the receiver, radio signal strength, ambient radio noise level, receiving antenna orientation, and weather conditions. Even though radio reception quality is reduced near transmission lines during periods of rainy weather, the impact is expected to be minimal based on the low frequency of inclement weather in the Study Area.

Television Interference

Traditional television broadcasts occur in three ranges: 54 to 88 MHz (Channels 2–6); 174 to 216 MHz (Channels 7–13); and 470 to 890 MHz (Channels 14–83). Transmission line interference reduces with increasing frequency above 100 MHz. Consequently, television interference affects only the lower very high-frequency band (Channels 2–6), and no interference would be experienced in the upper very high-frequency band (Channels 7–13) and ultra-high-frequency bands (Channels 14–83), even during foul weather. Where transmission line–generated television interference has been found to be a problem, it is generally the result of induced voltage on fences, conductors, and hardware that are adjacent to the right-of-way. In these situations, the interference can be easily corrected by grounding the objects, or by realigning, relocating, or providing higher-gain television antennas. With the increasing popularity of newer technologies such as cable, satellite, and digital television, however, transmission line television interference problems warranting any sort of corrective action are especially unlikely.

Electric and Magnetic Fields

Electric fields can be found occurring naturally in the world and typically occur in the range of 12 to 150 kV/meter (m). Electric fields created by televisions and other video display units typically occur in the range of 20 kV/m. Electric fields directly under a 500-kV transmission line are typically in the range of 10 kV/m. Magnetic fields naturally occur and are typically in the range of 0.01 nanotesla. Magnetic fields that occur under a transmission line typically occur in the range of 3 to 9 microtesla, or 30 to 90 milligauss. These electromagnetic fields (EMFs) reduce quickly the further removed from the source. Exhibit I-1 shows typical EMF levels and dissipation of this energy the further removed from a transmission facility.

Potential Effects

Construction

Table I-3 presents typical noise levels of construction equipment at a distance of 45 feet (15 m) (Crocker and Kessler 1982). These values assume that the equipment is operating at full power.

Table I-3. Typical Noise Levels of Construction Equipment

Equipment Category	Noise Level at 45 feet (15 m) (dBA)
Dump truck	88
Portable rock drill	88
Concrete mixer truck	85
Pneumatic tool	85
Grader	85
Backhoe	81
Dozer	78

Source: Crocker and Kessler (1982)

The data in Table I-3 indicate a temporary increase in ambient noise within 45 feet of construction activities occurring within the Project footprint. The nearest residences to the proposed facilities are approximately 1.25 miles from the Preferred Gen-Tie and approximately 1 mile from the Alternative Gen-Tie. Many environmental factors must be considered when determining the distance that noise travels, such as terrain, density of vegetation, temperature, and the amount of moisture in the air. Based on the distance to residences and the intervening vegetation, construction noise from over 1 mile away would negligibly increase sound levels outside or within the nearest residence. These impacts would be limited to daytime hours and cease after construction, which is approximately 16 months long.

Operation

Exhibit I-1 presents EMF levels associated with transmission lines. Interference levels for power lines, both in fair weather and in rain, dissipate quickly and are typically non-detectible at the right-of-way edge, and will usually meet or exceed Federal Communications Commission reception guidelines (Pacific Gas and Electric Company 2005). Because this is a typical 500-kV transmission line, interference levels would be non-detectable, and the proposed facilities would not cause operational impacts to communication systems that may be in the Study Area.

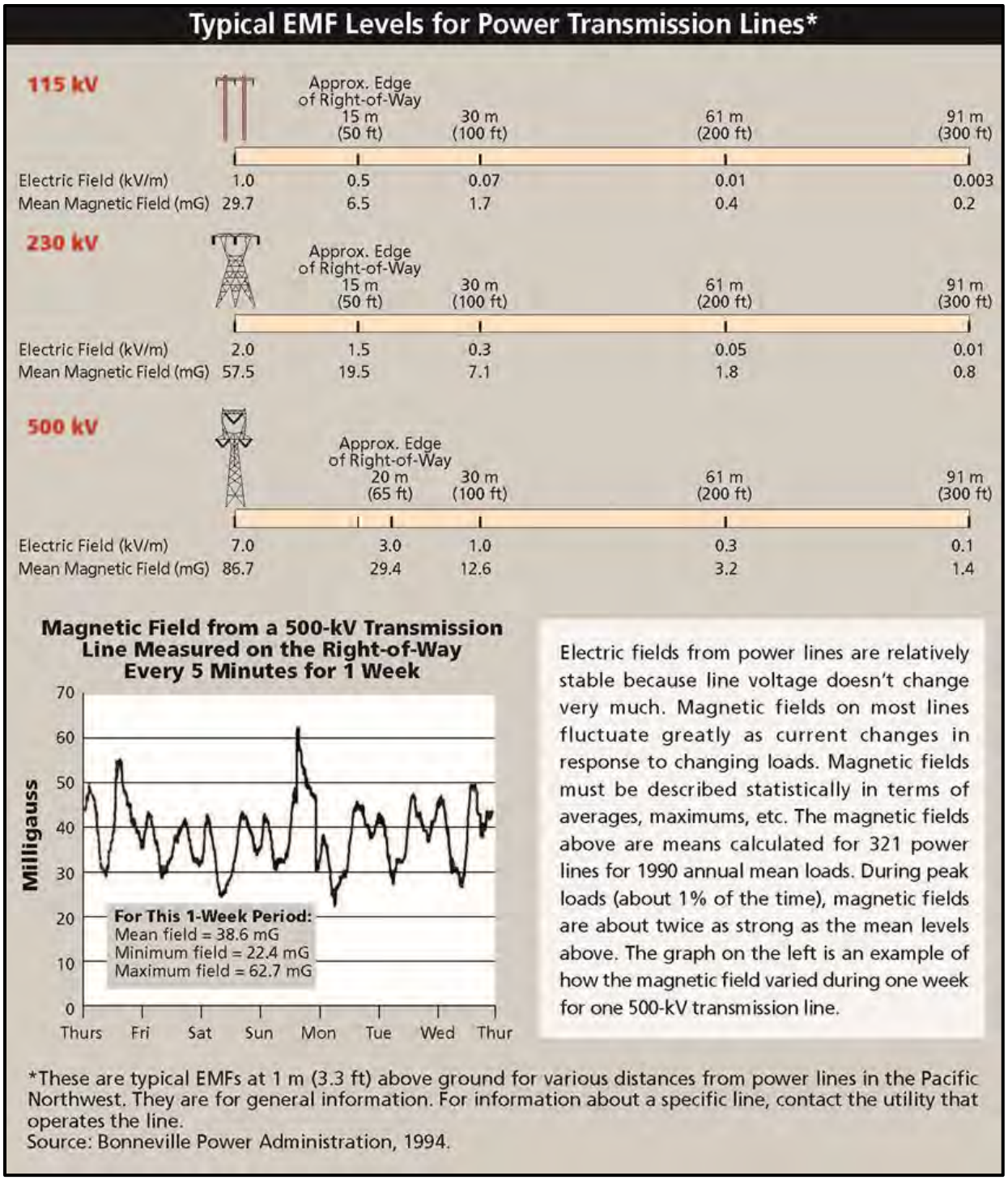

Exhibit I-1. Typical EMF Levels for power transmission lines.

In addition to impacts to communication systems, coronas also produce an audible noise. The audible noise levels for a typical 500-kV transmission line during foul weather (rain) may reach 56 decibels measured on an A-weighted (dBA) scale at the edge of the transmission line's right-of-way (San Diego Gas and Electric Company 2010). Heavy rain would serve to mask the noise. During fair weather, the audible noise emitted by the line would be reduced by approximately 20 dBA to a value of around 36 dBA. As previously mentioned, the nearest residences to the proposed facilities are more than 1 mile away, and existing

transmission lines already traverse the Study Area. Noise from operation of the gen-tie would negligibly increase noise levels and would not be noticeable either outside or within the nearest residence; therefore, no impacts to nearby residences are anticipated from operation of these facilities.

Corona-generated radio interference is most likely to affect the amplitude modulation (AM) broadcast band (535–1,605 kilohertz); frequency modulation (FM) radio is rarely affected. Only AM receivers very near transmission lines have the potential to be affected by radio interference.

Satellite television signals are of much higher frequency than transmission line frequencies and are not affected by transmission line operation or corona. Cable television service is likewise unaffected. Specific instances of broadcast television reception interference are nearly always related to spark-gap discharges due to loose, worn, or defective hardware. No significant impacts to radio or television reception are anticipated as a result of constructing and operating the Project Substation and gen-tie. Cellular phone antennae and microwave receivers are commonly mounted on transmission structures to take advantage of the added height afforded by the structures, which demonstrates that transmission lines do not interfere with cellular phone tower operations or microwave communication paths.

For the aforementioned reasons, noise and communication signal interference associated with operation of the Project is not anticipated.

References

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EXHIBIT J. SPECIAL FACTORS

As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219, Exhibit 1:

> *Describe any special factors not previously covered herein, which applicant believes to be relevant to an informed decision on its application.*

Public Involvement

Informational Letters

The Applicant sent public notification letters to approximately 197 landowners, residents, and relevant stakeholders within 1 mile of the Project as part of the Certificate of Environmental Compatibility (CEC) public involvement process. The first notification letter was mailed on February 11, 2023 (Exhibits J-1a and J-1b). This letter introduced the Project and announced opportunities for comment, including a virtual open house that was launched February 15, 2023, and an in-person open house at Tonopah Valley High School on March 1, 2023. The second letter will announce the filing of the CEC application as well as the dates of the Project's Arizona Power Plant and Transmission Line Siting Committee public hearings.

Website and Social Media

A Project website hosted at www.BelmontEnergyCenter.com served as a central location to provide stakeholders and interested parties with Project information and opportunities for public comment. The website included general information of the solar facilities and the Project in its entirety. The website was advertised through informational letters, newspaper advertisements, the telephone information line, the virtual open house, and the public in-person open house. Screenshots of the Project website are in Exhibits J-2a, J-2b, and J-2c.

A Facebook page was created to provide additional information to the public, available at www.facebook.com/BelmontEnergyCenter. A screenshot of the social media page is included in Exhibit J-3.

Virtual Open House

An online virtual open house was hosted at BelmontSolarOpenHouse.com to provide general information on the Project, including information on the associated gen-tie and Project Substation. The virtual open house was announced in the informational letter and paid newspaper advertisements, the Project website, and through the telephone information line.

The virtual open house format entailed an interactive website with Project information provided in clickable modules, which allowed interested parties to visit and review the materials at their convenience, and to ask questions, request information, or provide comment through embedded comment forms. The clickable modules included large maps and text displays with highlighted details of the Project and associated gen-tie, and images simulating the appearance of the facilities after construction. Following the online publishing of the virtual open house, Belmont Energy initiated a 1-month comment period, requesting that stakeholder comments or questions be provided by March 9th, 2023. During this period, 129 viewers attended the virtual open house meeting. No comments were submitted through the website during the formal comment period, but comments will continue to be accepted throughout the duration of the Project. Screenshots of the virtual open house website and informational display boards are included in Exhibit J-4a through J-4d.

In-Person Open House Meeting

An in-person public open house meeting was held for the Project on March 1, 2023, from 4:30 p.m. to 6:30 p.m. at Tonopah Valley High School (38201 West Indian School Road, Tonopah, Arizona 85354). The format of the meeting was an informal open house arrangement, allowing community members to attend at their convenience, review informational displays, and communicate with members of the Project team. A sign-in sheet and an example comment form from the meeting are included in Exhibit J-5. Information relayed at the meeting can be found in Exhibits J-6a through J-6p. At the open house, there were five people who signed in, none of whom provided a formal comment.

Newspaper Advertisements

Belmont placed advertisements in the *West Valley View* on February 15 and February 22, 2023 (Exhibits J-7a and J-7b). These advertisements provided general information regarding the Project and associated solar facilities while announcing the virtual open house and additional opportunities for comment through the telephone information line, postal mail, the Project website, and the virtual open house.

Telephone Line

The Applicant created a telephone information line to provide additional opportunity for members of the public to learn about the Project and express questions or comments.

The telephone number was provided in the informational letters, social media advertisements, and newspaper advertisements as well as at the virtual and in-person open house meetings. Initially, the telephone line gave a summary of the Project and announced the Project virtual open house and associated 30-day comment period. Following the completion of the comment period, the telephone line was updated to inform callers that Belmont was in the process of reviewing comments and developing a CEC application. The telephone line continued to provide callers with the opportunity to comment or request information throughout the entirety of the Project.

Public comments received are shown in Table J-1.

Public Comment

Table J-1. Comments Received

Comment number	Comment	Response
1	"Hello, my name is XXXXX address XXXXX. I received the letter regarding proposed new project close to my address, thank you for keeping us informed. the map I received shows the west most line of the xx."	"Hi Mr. XXXXX, Thank you for writing to us. The project will not fence off X Rd. It will remain open for public use since it is a City maintained road. We may improve the road for vehicular access. Let me know if you have any more questions!
2	Are you looking for staff to support your Maricopa projects? I'm an Engineering and Program Manager with a great interest in sustainable energy. I am also a licensed Electrical Contractor here in Arizona. Regards, XXXXX XXXXX XXX-XXX-XXXX	Staffing information was provided to the commentor.

Comment number	Comment	Response
3	"Yeah, can you tell me the exact location of this? So I know how close my 10 acres are to it. This is XXXXXX XXXXX. (XXX) XXX-XXXX. Thank you. "	Project representatives provided information on the location of the Project relative to the commentor's parcel. No concerns were expressed by the commentor.
4	"I am land owner in Arizona. many of your projects are near my properties. Want to chat with you about 3 different things 1: me and my investors have 320 acres, in XXXXXX if that interest you for solar project. Let me know I can send you further information with parcel# 2: I was inquired for 20 acres of land on XXXXXX and XXXXX in XXXXX for solar storage facility by your company. Definitely can talk further 3: also i received letter about proposed Belmont Energy Center Generation-Tie Line Project that you are working on .I am unable to figure it out location from map attached, no street names mentioned. what are crossing streets?	Thank you for reaching out, we really appreciate your interest in the project. I am copying a few other people who are helping us with the Belmont Energy Center Project you mentioned. 1. I would appreciate any information you can provide about the parcels you and your investors own in XXXXX. 2. I'm not sure what storage project you are referencing in XXXXXX, but if you have the information of who reached out to you from NextEra Energy we can track that down. 3. Project representatives provided information on the location of the Project relative to the commentor's parcel. No concerns were expressed by the commentor.

Belmont Energy Center, LLC

Feb. 10, 2023

Invitation to learn about proposed Belmont Energy Center Generation Tie Line Project

Dear Interested Party,

This letter provides notice of the Belmont Solar Generation Tie Line Project public open house meeting on March 1, 2023, from 4:30-6.30 p.m. at Tonopah Valley High School Cafeteria, 38201 W Indian School Road, Tonopah, AZ 85354.

Belmont Energy Center, LLC (Belmont Energy) is planning to build a 500-kilovolt (kV) alternating current generation intertie transmission line (gen-tie) and associated substation facilities (Project). The proposed gen-tie would connect the future Belmont Energy Center, a 450-megawatt (MW) photovoltaic solar generation and battery storage facility, to the electrical grid via the existing APS Delaney Substation. The Project would be located southwest of the community of Tonopah in unincorporated Maricopa County (Figure 1).

The Arizona Corporation Commission and Arizona Power Plant and Transmission Line Siting Committee are permitting authorities for the Project. Belmont Energy will be applying for a Certificate of Environmental Compatibility (CEC) through the Committee to allow for construction and operation of the Project gen-tie.

Belmont Energy is in the process of analyzing gen-tie alternatives for the Project (Figure 1). As part of this analysis, the project team is soliciting public and stakeholder input. If you would like to learn more about the Project or have questions or comments, you may talk with a project member at the in-person open house meeting or submit a comment via writing, email or voicemail through the forums listed below:

Mail: Clinton Spencer
Senior Project Manager
NextEra Energy Resources, LLC
700 Universe Blvd.
Juno Beach, FL 33408
Email: BelmontSolar@nexteraenergy.com
Voicemail: 1 (623) 335-6315
Project Website: www.BelmontEnergyCenter.com

In addition to an in-person public open house meeting, Belmont Energy is hosting an online virtual public open house at the website address listed below. The comment period for the Project will extend from Feb. 15, 2023, to March 9, 2023. We look forward to receiving your input.

Project Virtual Open House: BelmontSolarOpenHouse.com

Sincerely,

Clinton Spencer, Senior Project Manager
Belmont Energy Center, LLC

a NextEra Energy, Inc. company

700 Universe Boulevard, Juno Beach, FL 33408

Exhibit J-1a. Project information letter (1 of 2).

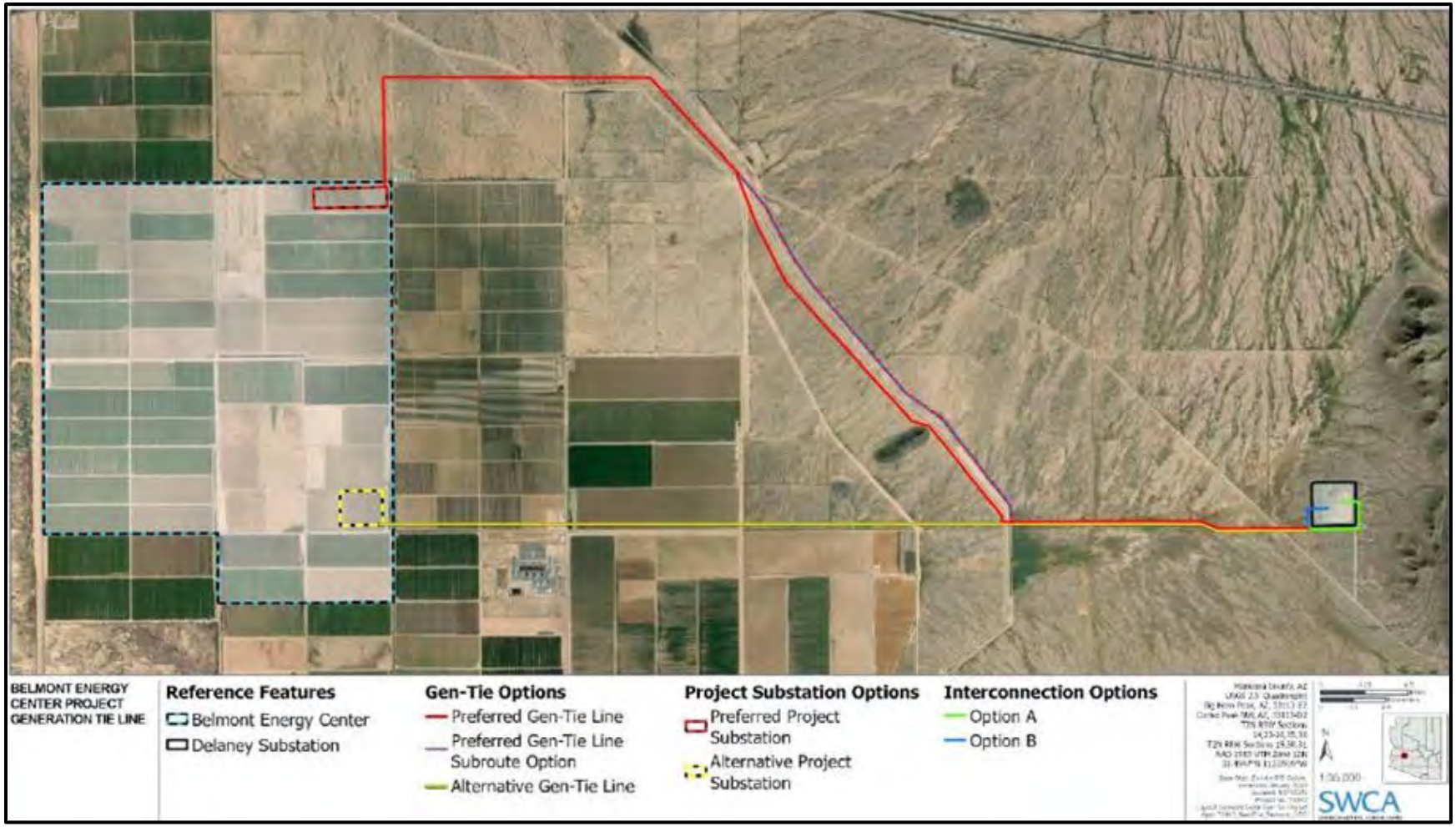


Exhibit J-1b. Project information letter (2 of 2).

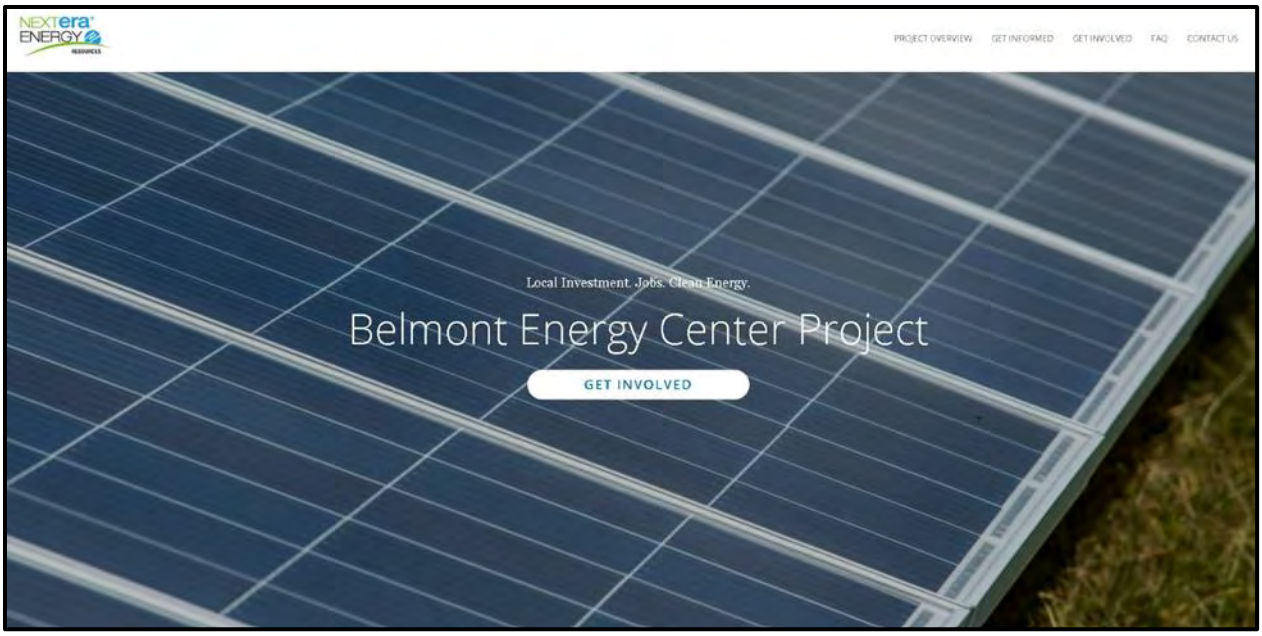


Exhibit J-2a. Project website (1 of 3).

Exhibit J-2b. Project website (2 of 3).

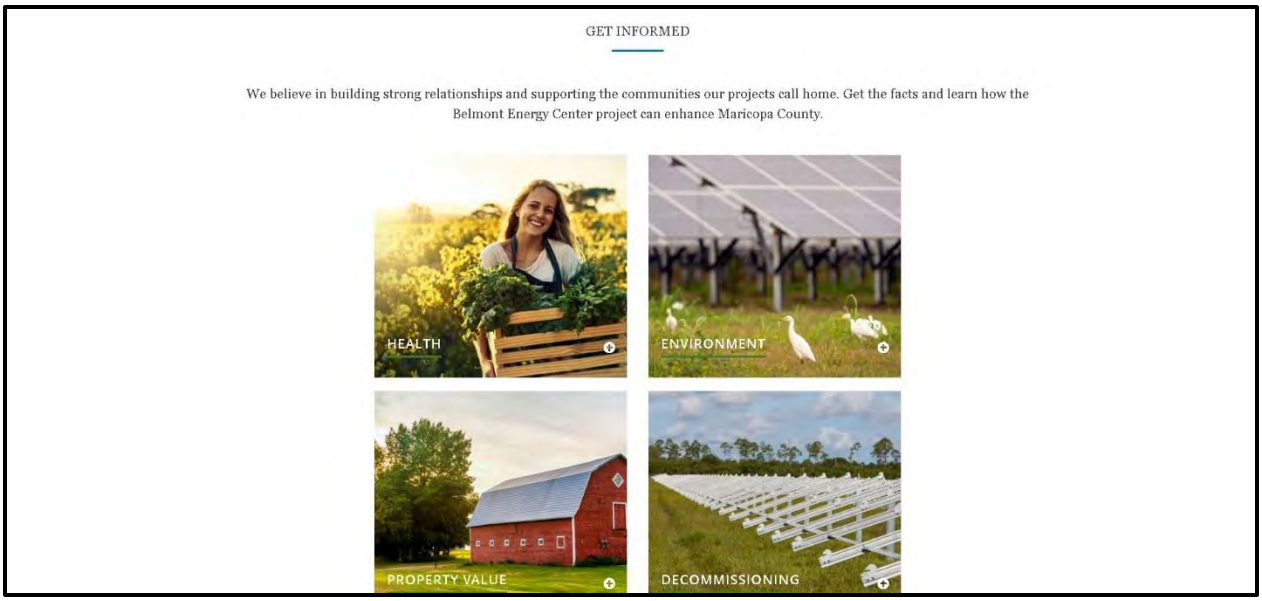


Exhibit J-2c. Project website (3 of 3).

Exhibit J-3. Belmont Energy Center Facebook page.

Exhibit J-4a. Project virtual open house (1 of 4).

Exhibit J-4b. Project virtual open house (2 of 4).

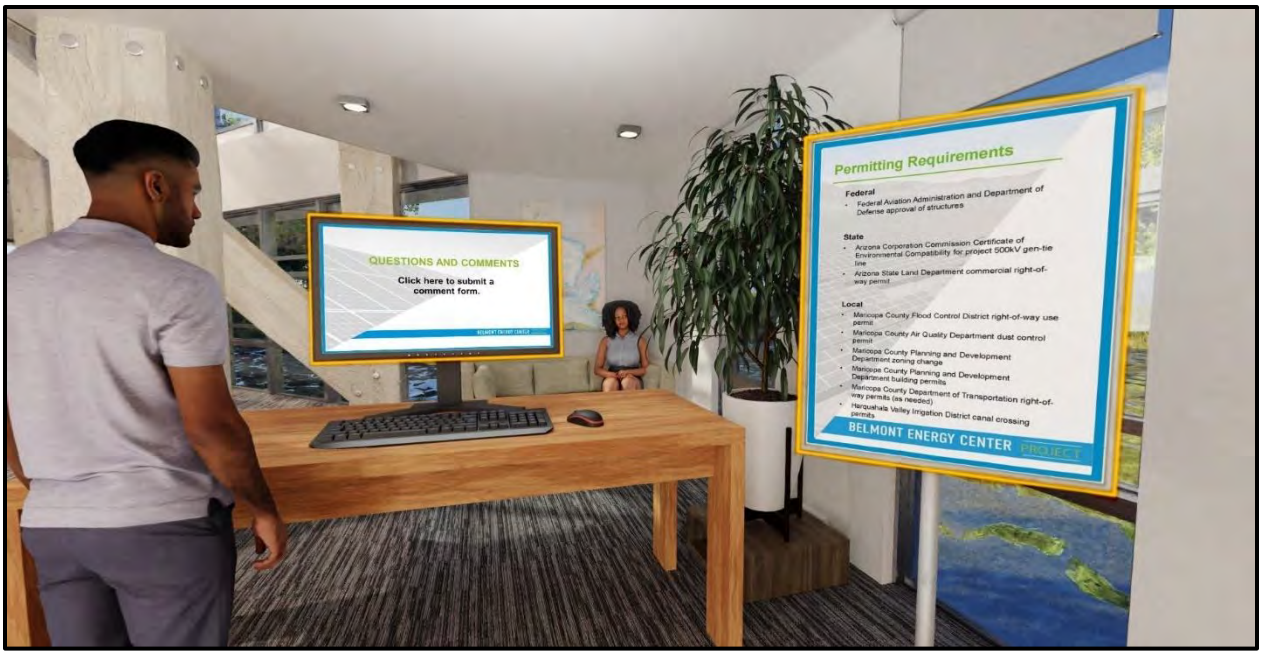


Exhibit J-4c. Project virtual open house (3 of 4).

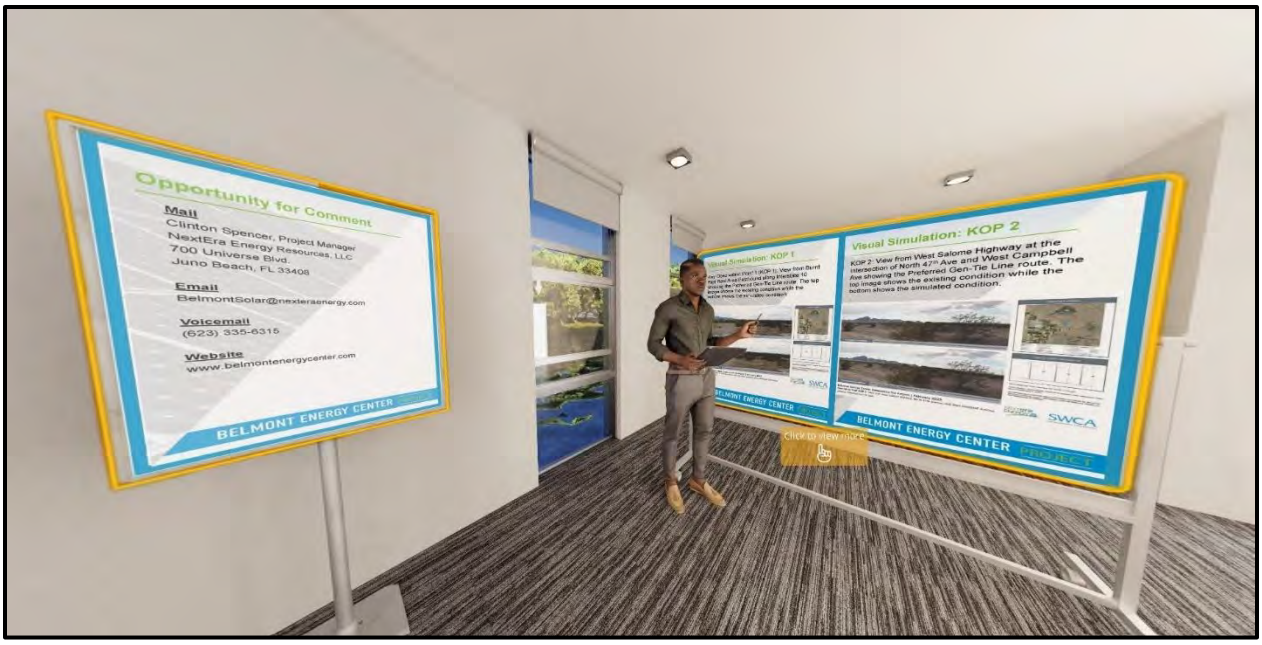


Exhibit J-4d. Project virtual open house (4 of 4).

March 1, 2023

Belmont Energy Center
Open House Sign-In Sheet

Please write legibly

NEXTera ENERGY RESOURCES

Full Name	Email Address	Telephone	Want to receive project updates?*
[redacted]	[redacted]	[redacted]	Yes
[redacted]		[redacted]	Y
[redacted]	[redacted]	[redacted]	
[redacted]	[redacted]	[redacted]	Yes
[redacted]	[redacted]	[redacted]	Yes

*By providing your information, you agree NextEra Energy Resources may contact you at the number you provided above with information about the project in the future. We will not share your information with any 3rd party sources.

Exhibit J-5a. In-person public open house sign-in sheet.

Comment Form

Belmont Energy Center Project Generation Tie Line
Public Open House Meeting
Wednesday, March 1st, 2023
4:30-6:30 PM

Name: _____

Affiliation: _____

Email: _____

Phone: _____

Address: _____

City _____ State _____ Zip _____

Comment: _____

Exhibit J-5b. Example comment form.

Exhibit J-6a. Open house display.

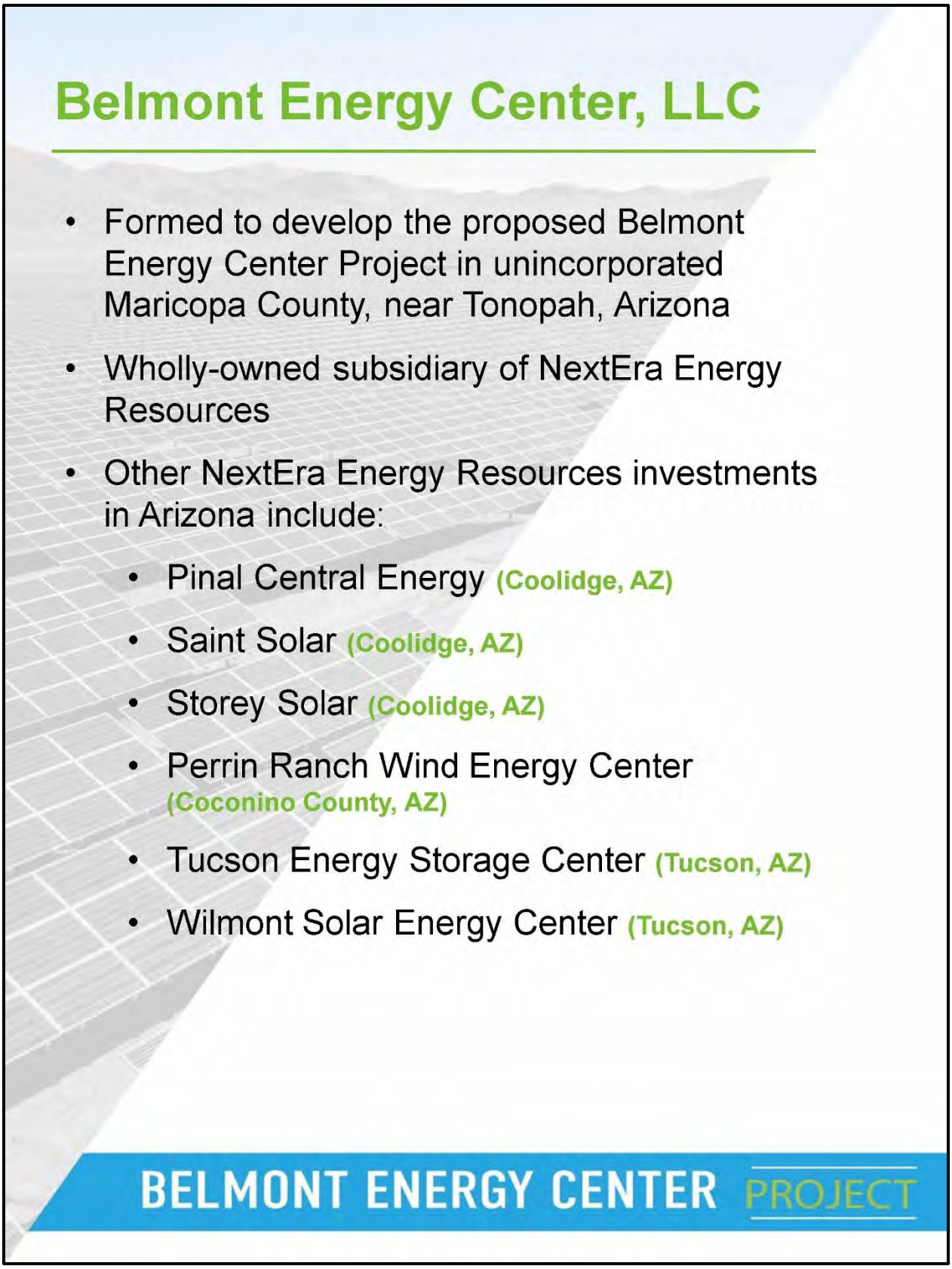


Exhibit J-6b. Open house display.

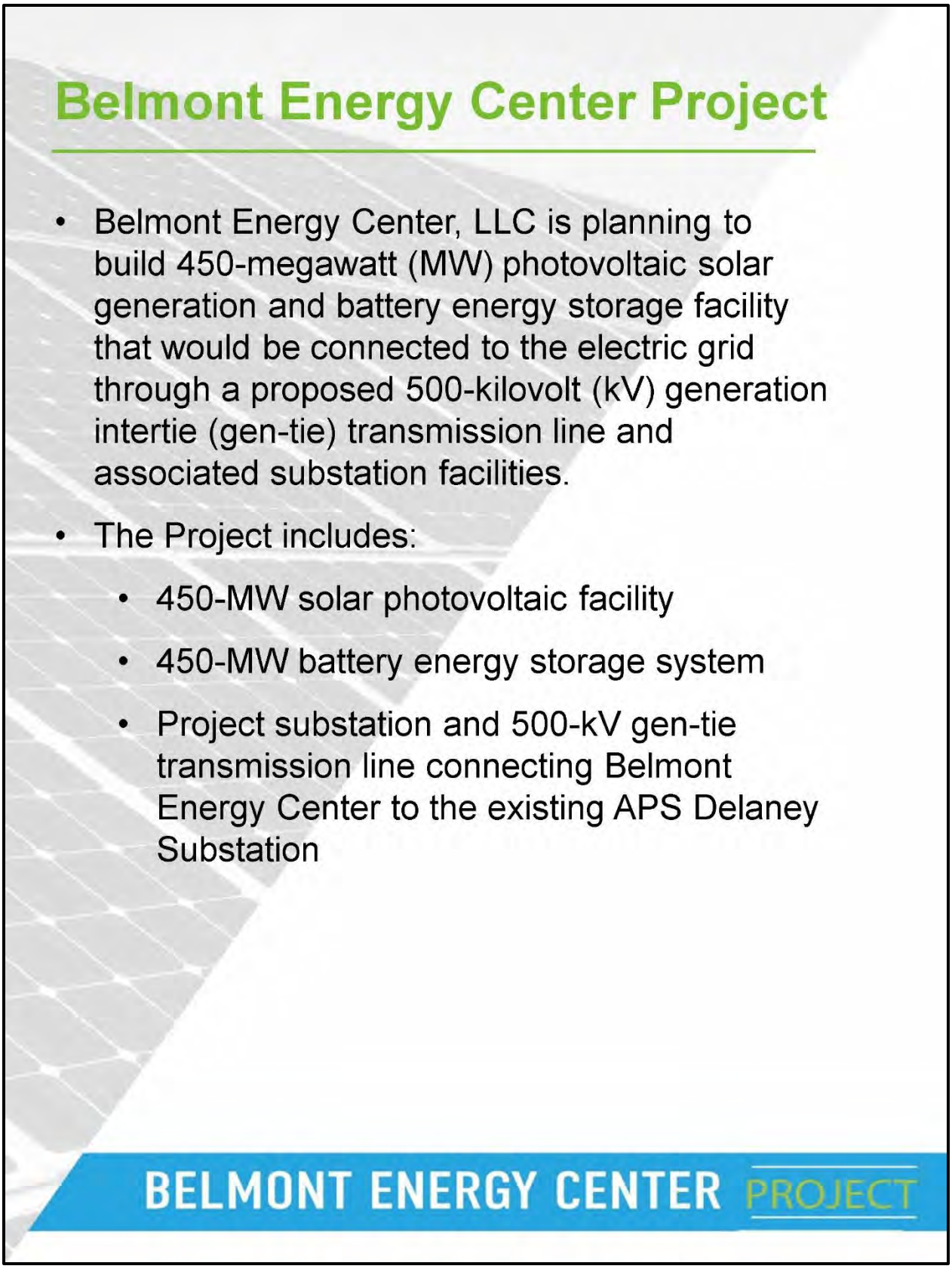


Exhibit J-6c. Open house display.

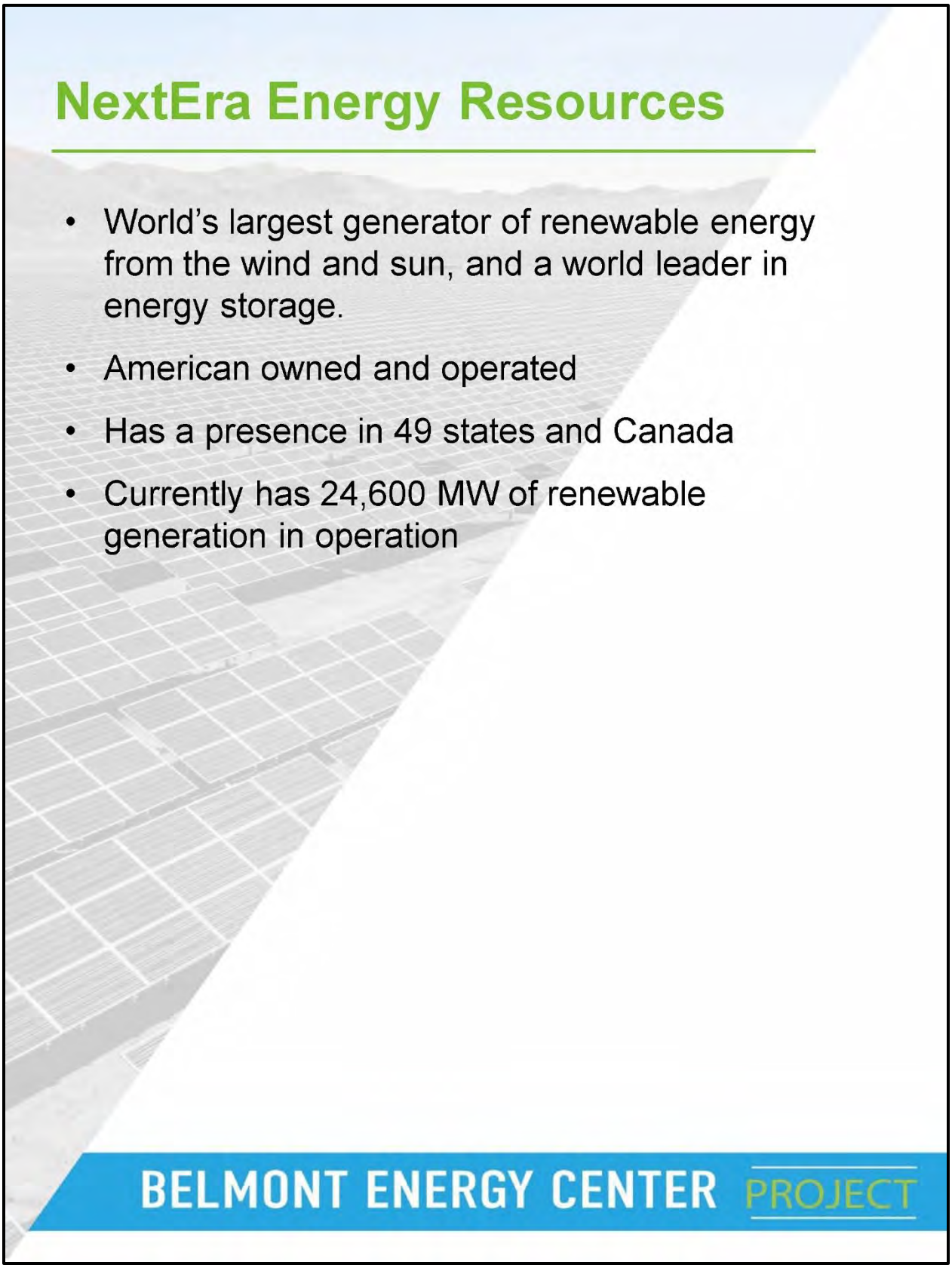
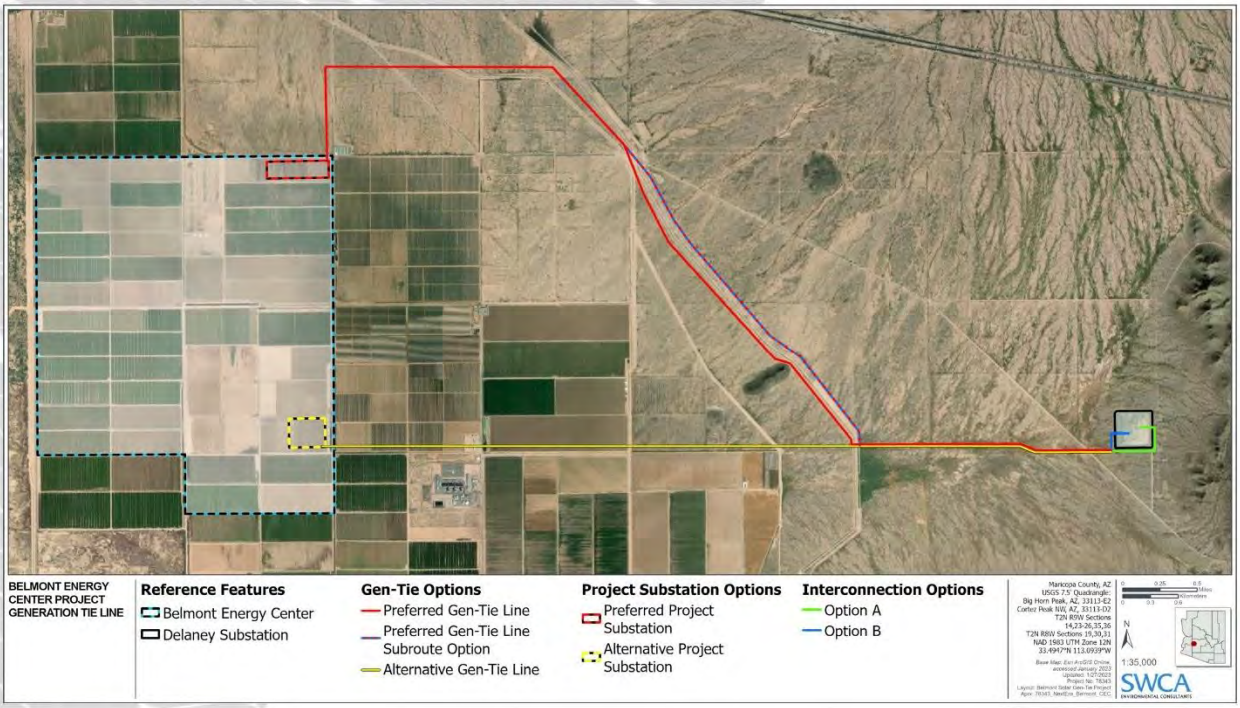


Exhibit J-6d. Open house display.

Project Area

Below is a map of the Belmont Energy Center, proposed gen-tie transmission line and associated substation facilities. The Project is located in unincorporated Maricopa County, approximately five miles west of Tonopah, Arizona.



BELMONT ENERGY CENTER PROJECT

Exhibit J-6e. Open house display.

Exhibit J-6f. Open house display.

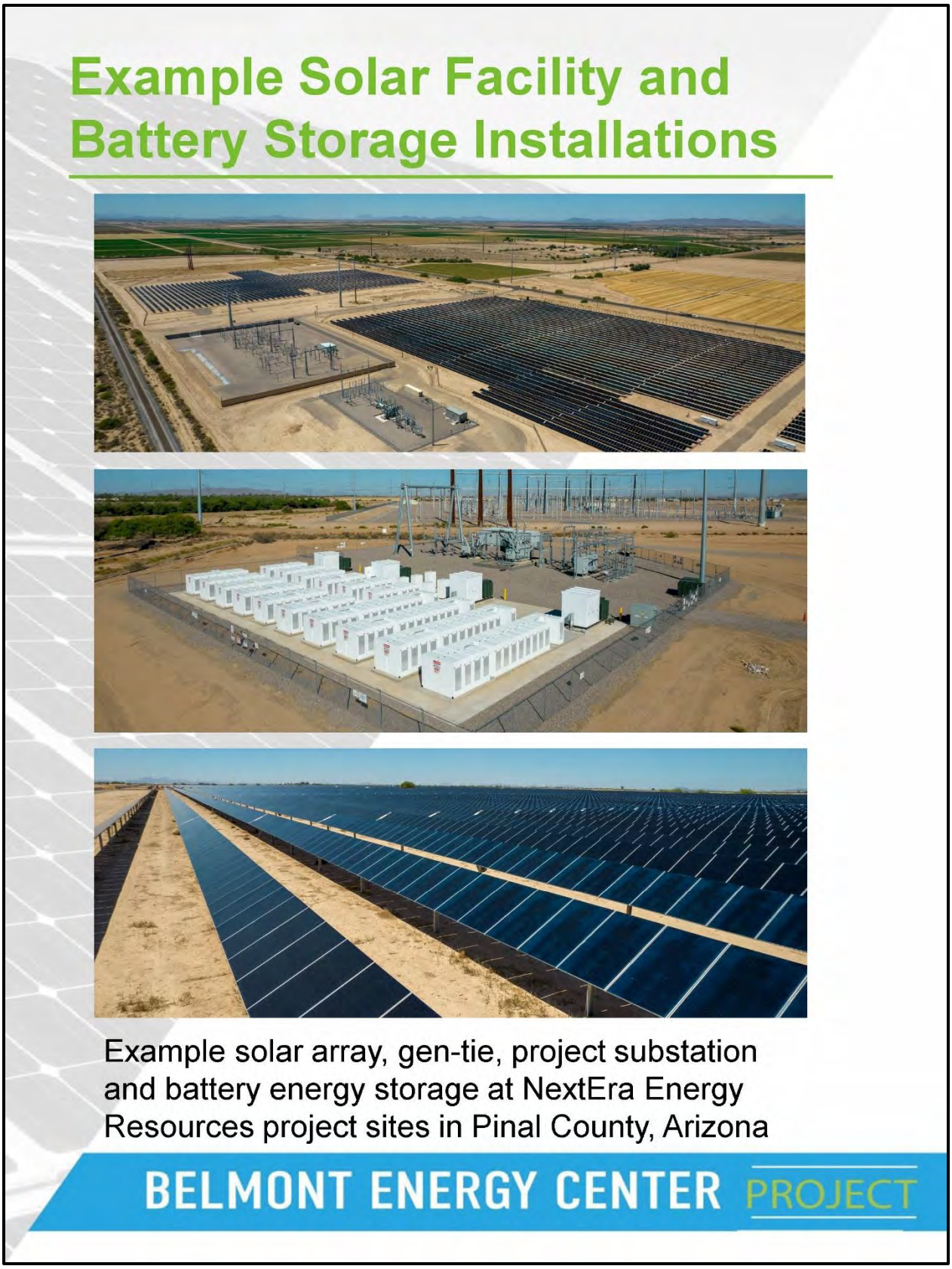
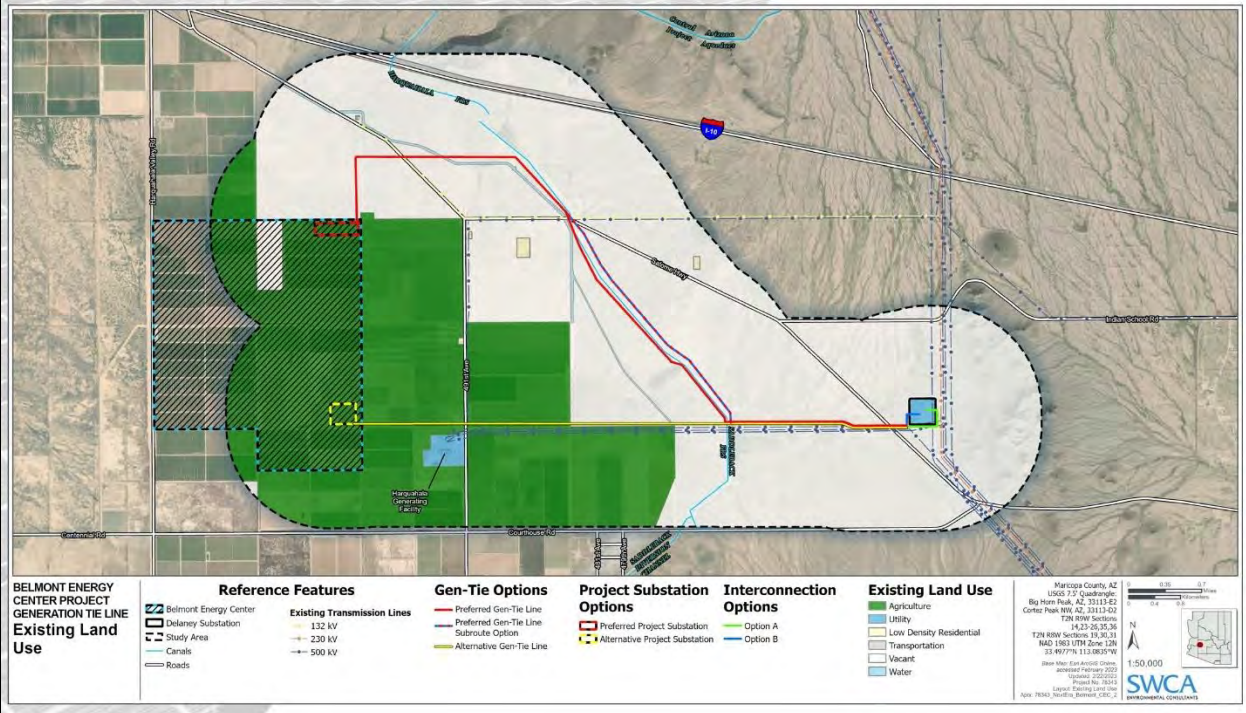


Exhibit J-6g. Open house display.

Existing Land Use

Below is the existing land use within the one-mile study area of the gen-tie transmission line. Land uses within the project area include agriculture, utility, low-density residential, transportation, vacant and water.



BELMONT ENERGY CENTER PROJECT

Exhibit J-6h. Open house display.

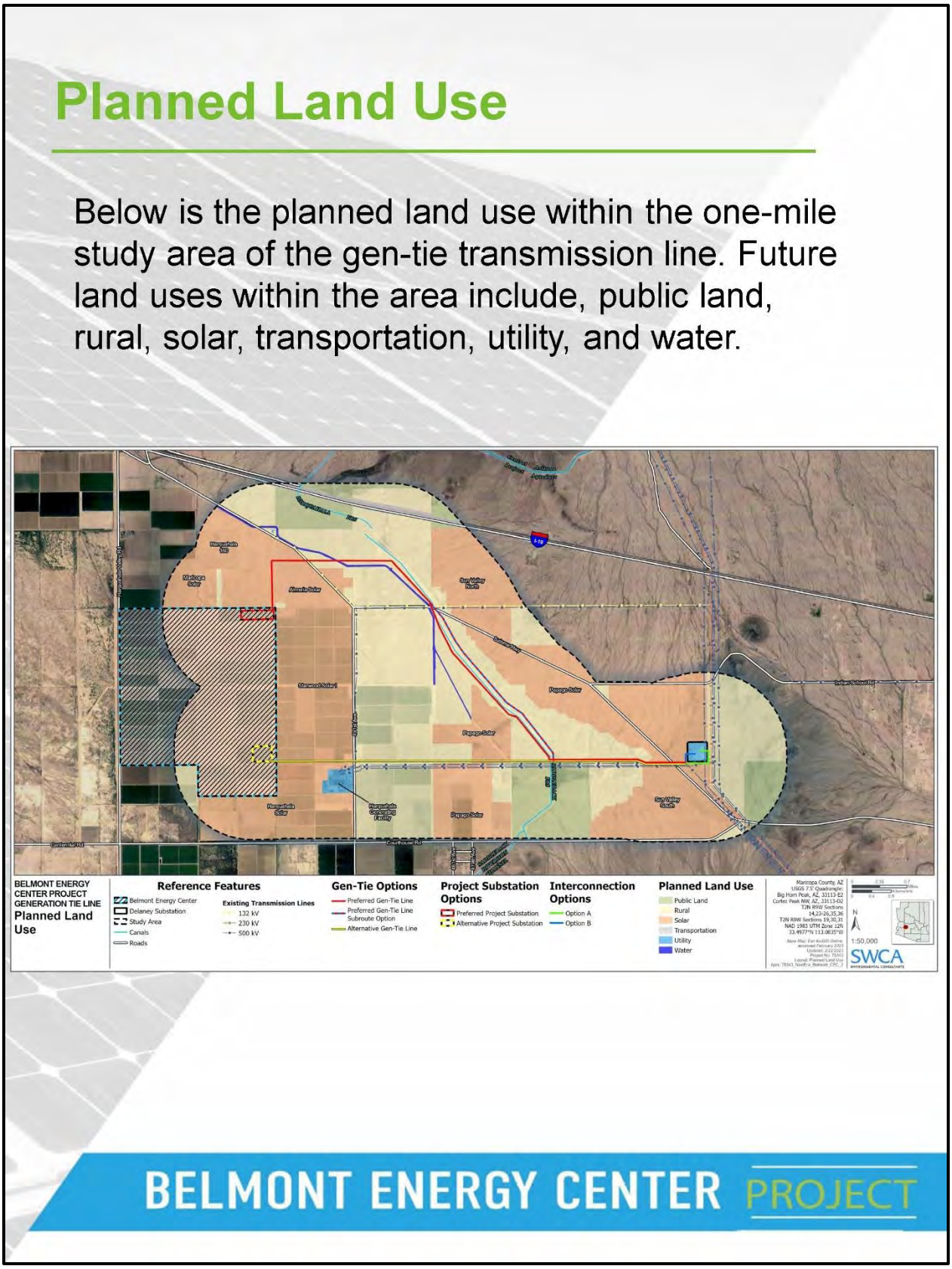


Exhibit J-6i. Open house display.

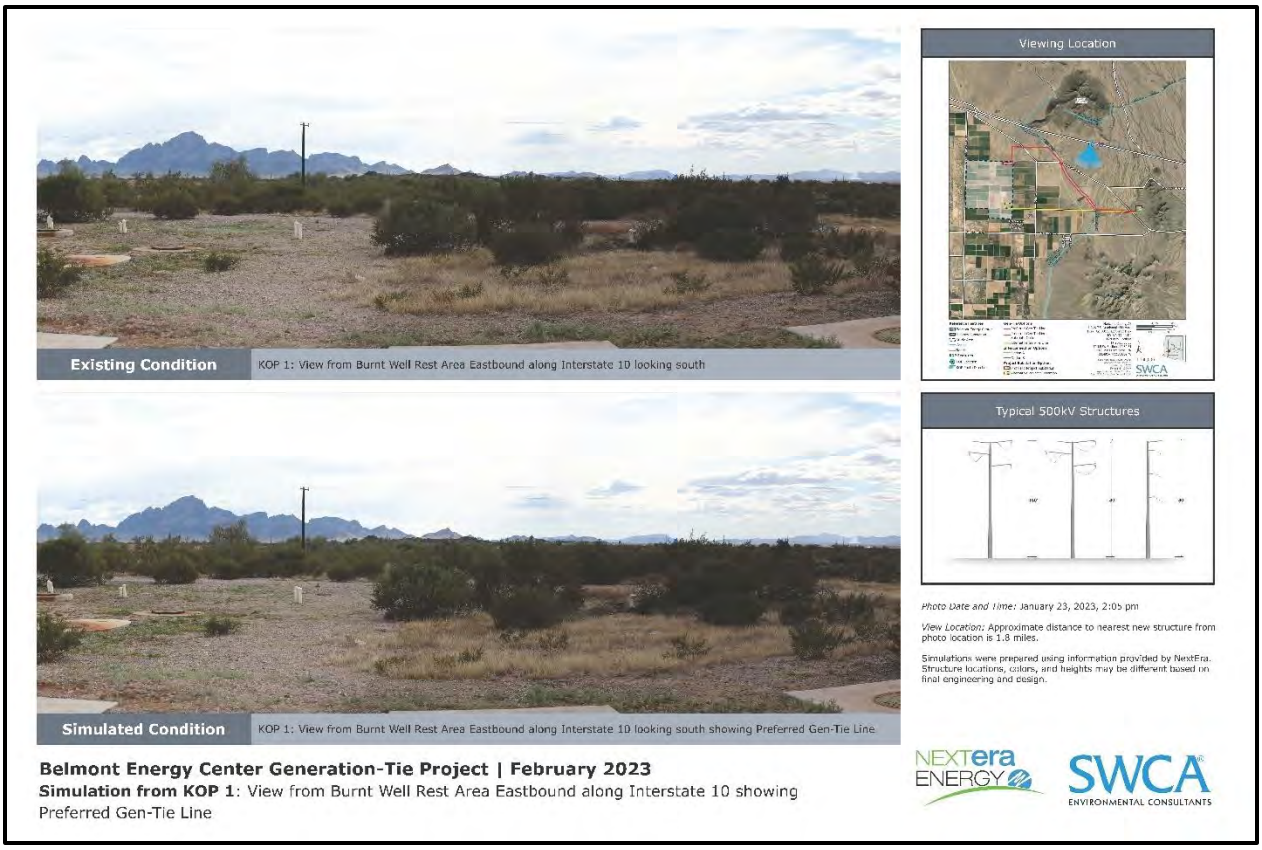


Exhibit J-6j. Open house display.

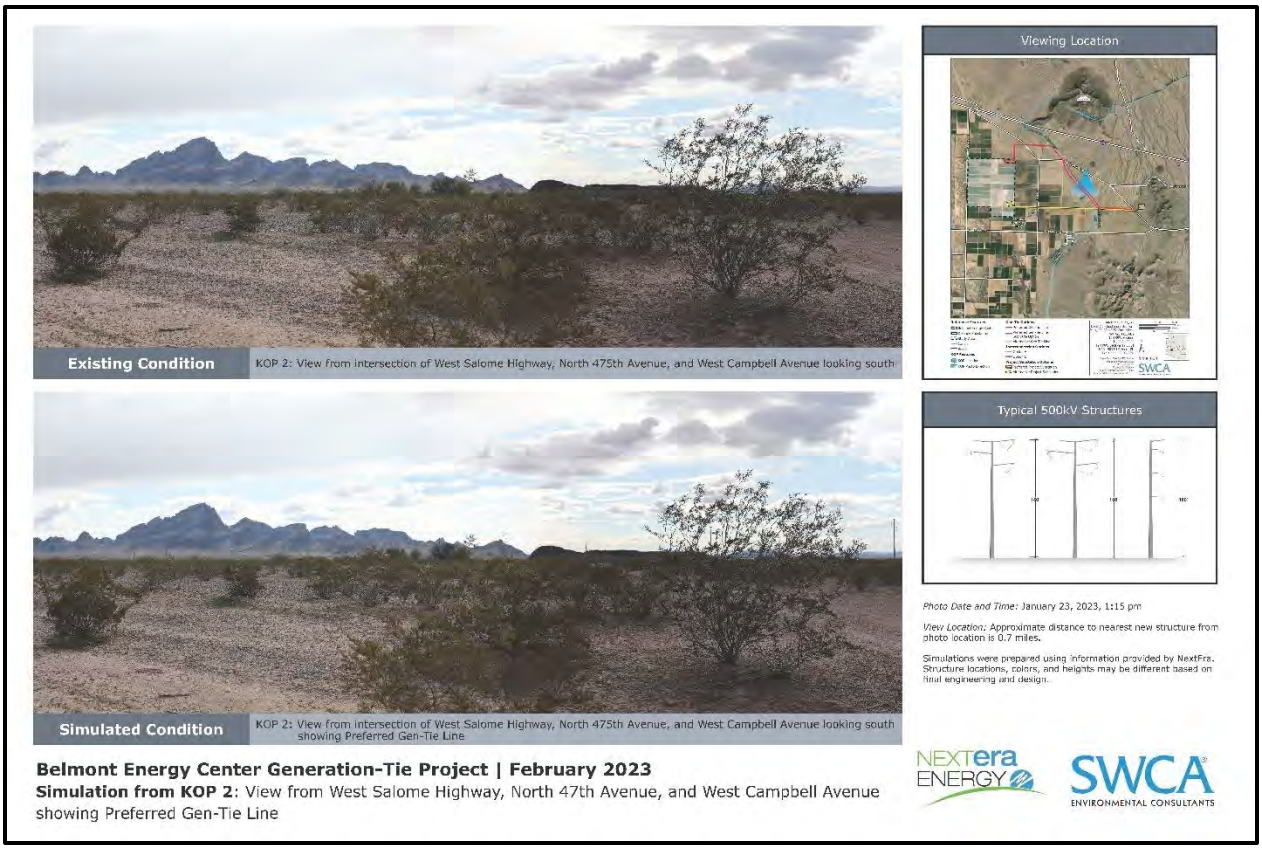


Exhibit J-6k. Open house display.

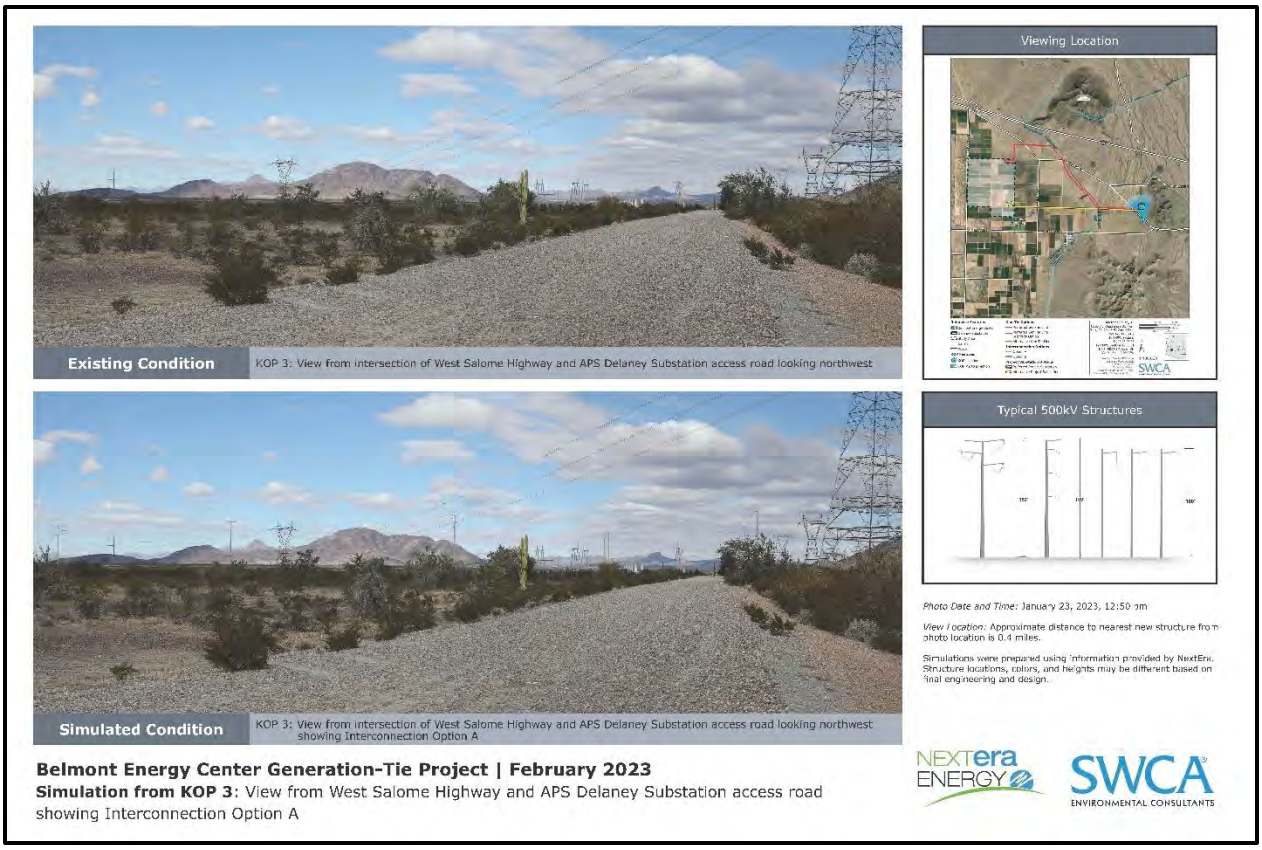


Exhibit J-6l. Open house display.

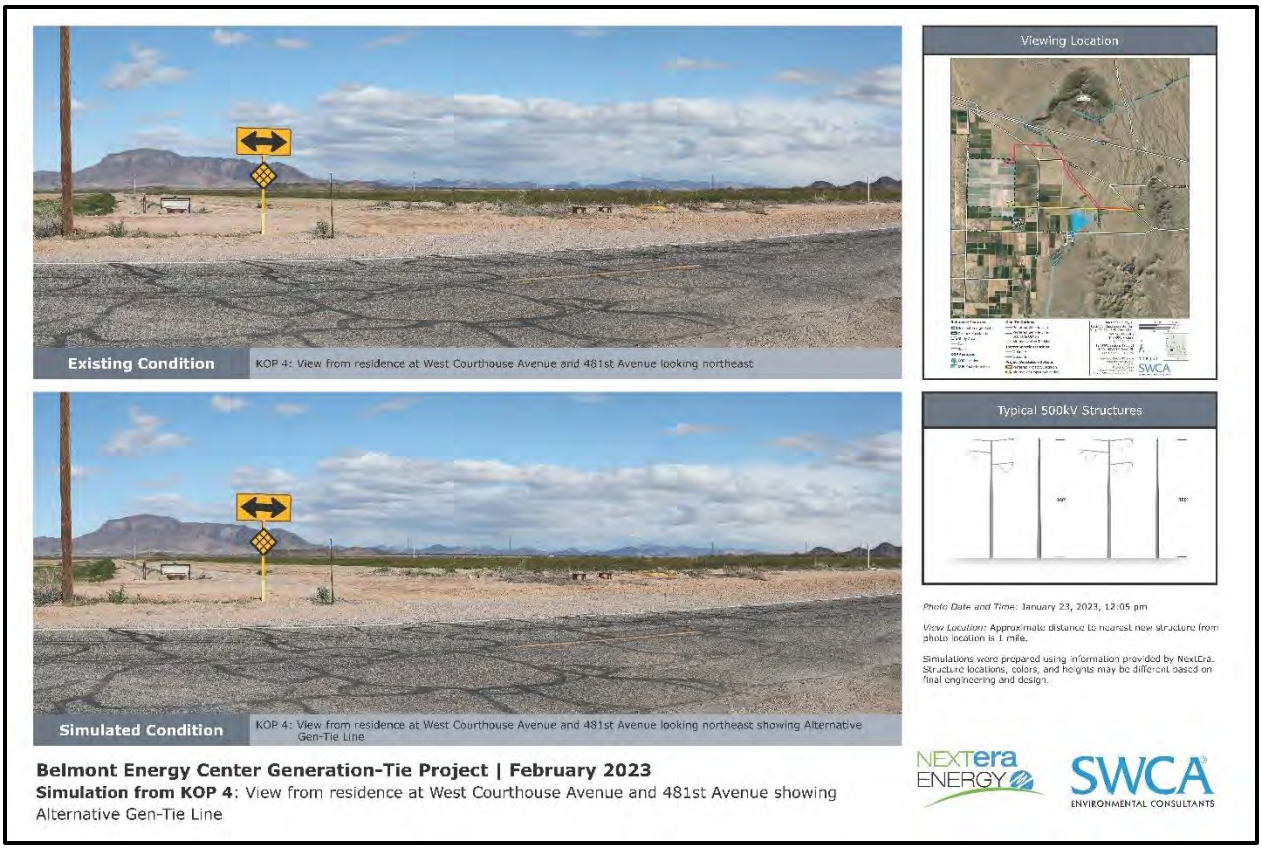


Exhibit J-6m. Open house display.

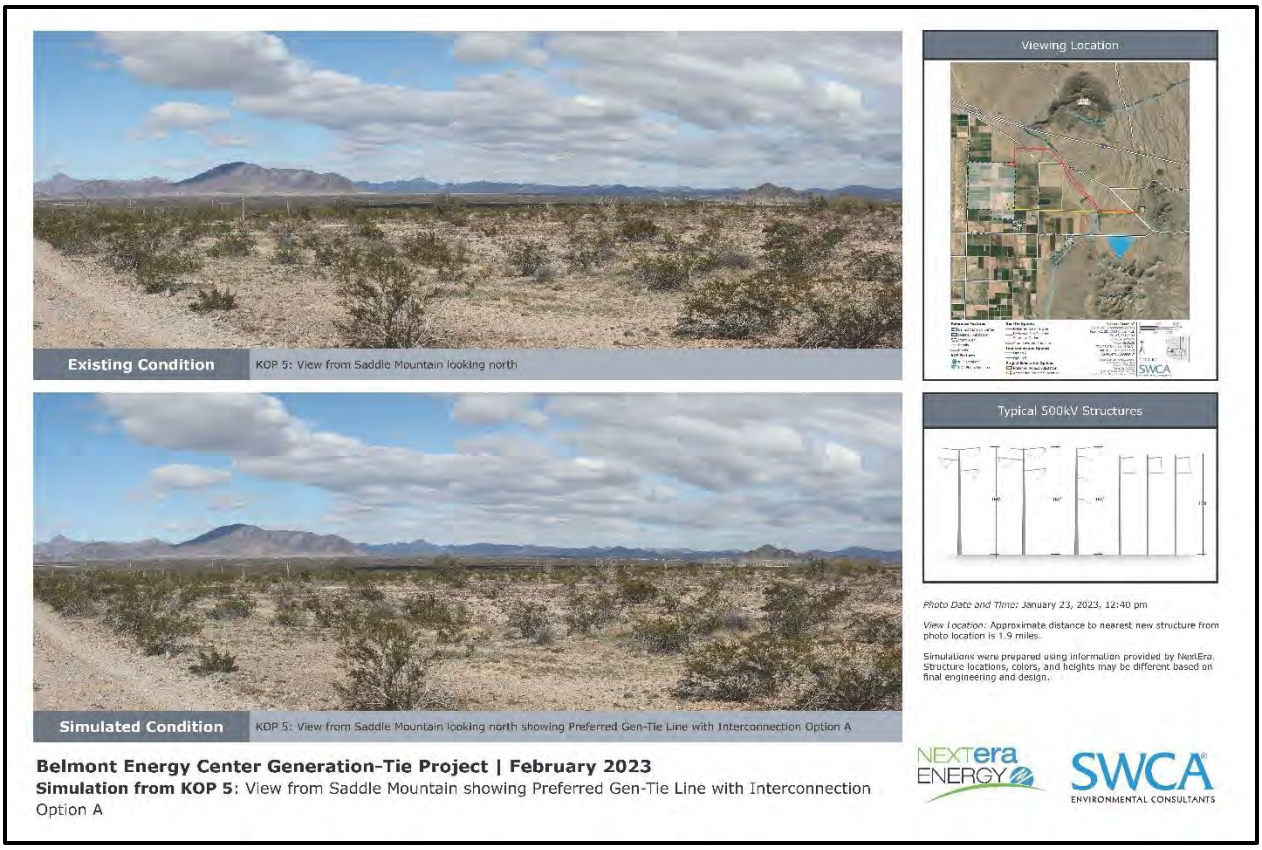


Exhibit J-6n. Open house display.

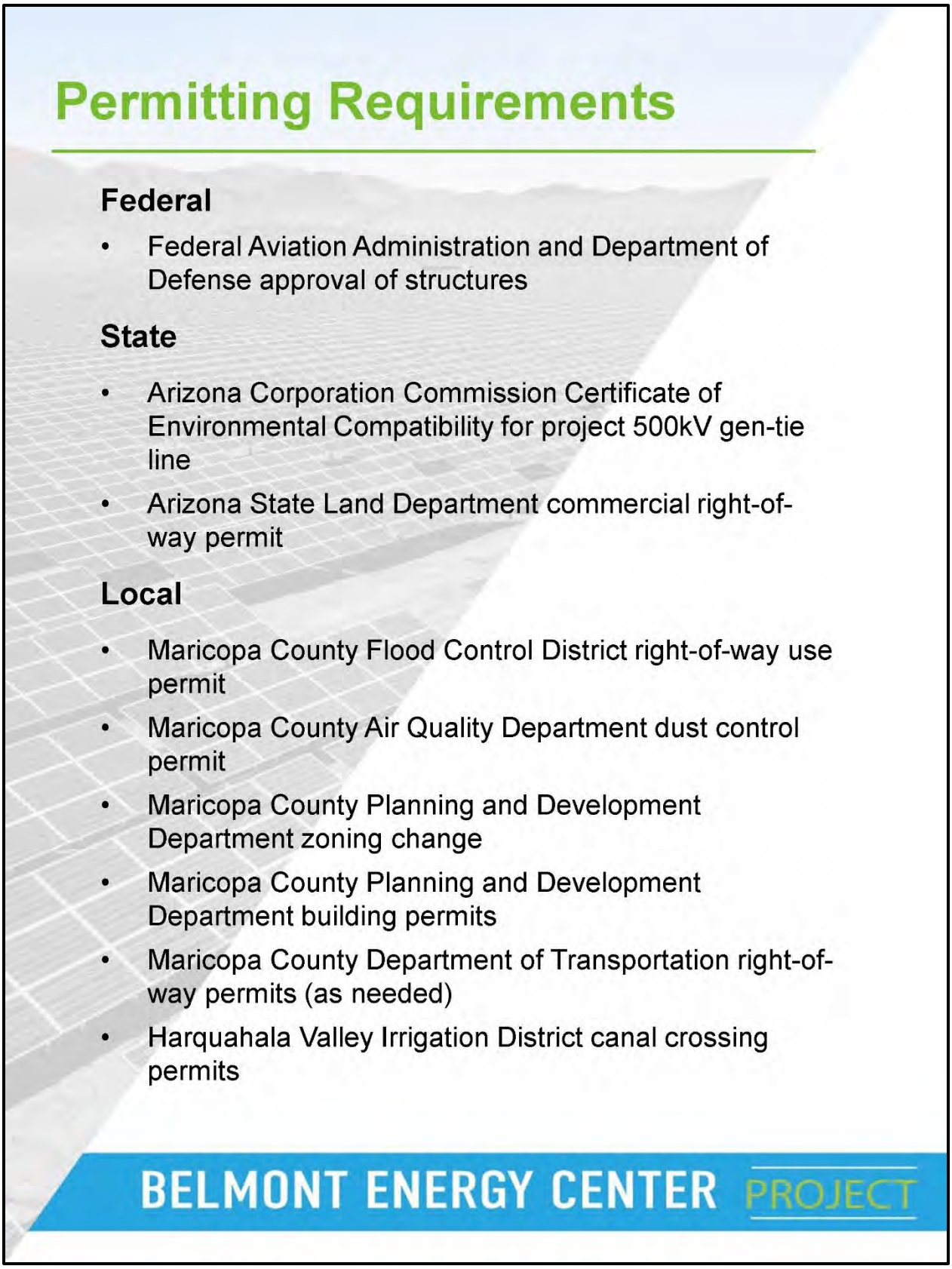


Exhibit J-6o. Open house display.

Exhibit J-6p. Open house display.

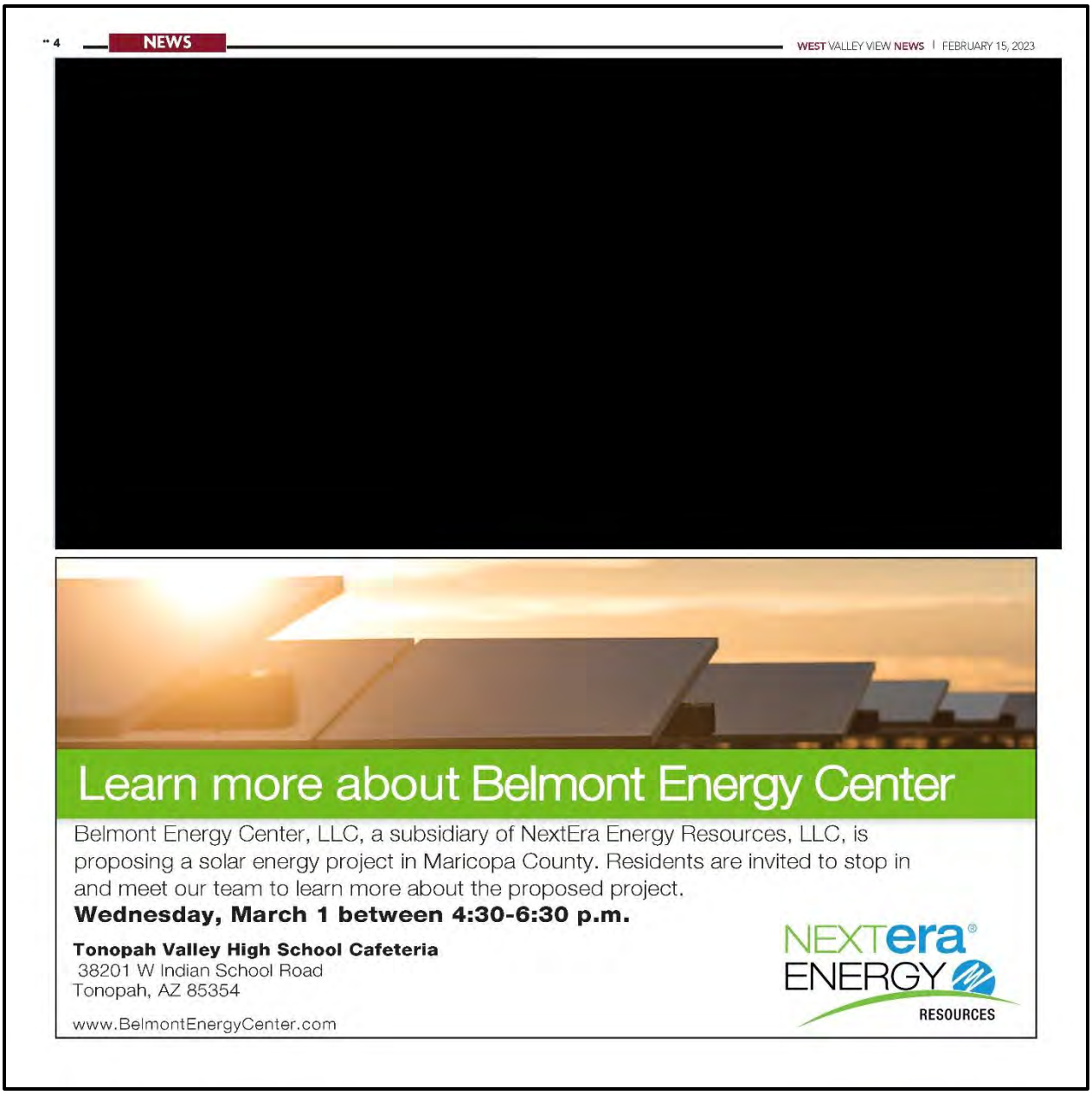


Exhibit J-7a. Belmont Energy Center newspaper advertisement.

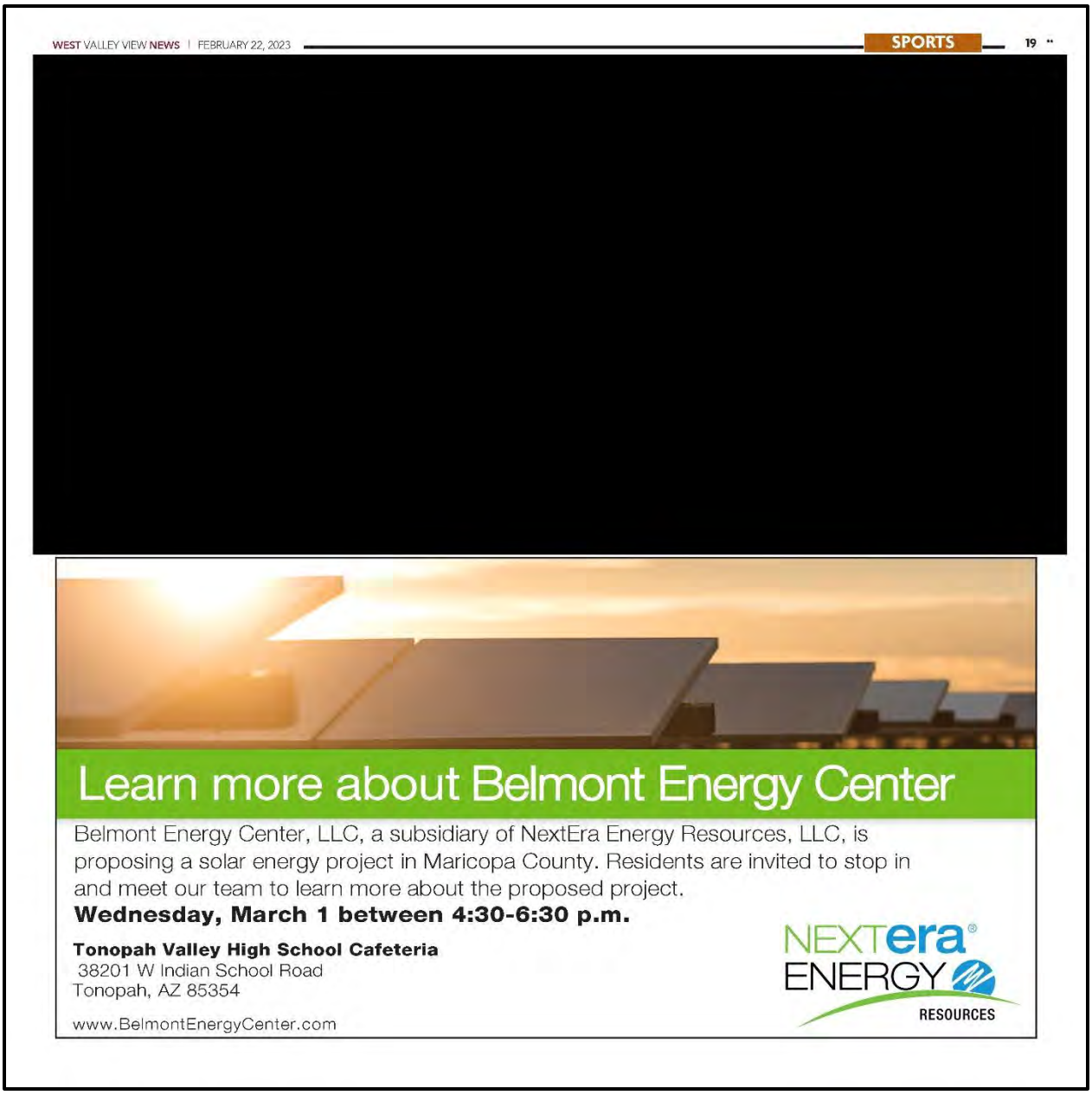


Exhibit J-7b. Belmont Energy Center newspaper advertisement.

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