NAVAJO POWER

DRAFT PLAN OF DEVELOPMENT

Painted Desert Power Solar Project

Cameron & Coalmine Canyon Chapters
Navajo Nation, Arizona

Painted Desert Power LLC

April 2023

Prepared by

terabase ENERGY

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1.0 PROJECT OVERVIEW

For decades, electric generation providers have relied on non-renewable energy resources on the Navajo Nation and have profited tremendously. Now, with fossil-fuel industries in decline, the Navajo Nation is seeking to facilitate development of new solar energy generation projects to support a transition to renewable energy. Navajo Power, a majority Native-owned public benefit corporation (PBC), has established Painted Desert Power LLC (PDP) to develop the Painted Desert Power Solar Project (Project) as a model for renewable energy development that promotes long-term community development for the residents of the Former Bennett Freeze Area (FBFA) and the Navajo Nation as a whole.

Navajo Power PBC (Navajo Power) develops competitive utility-scale solar projects in close partnership with communities, tribes, and Nations to catalyze economic empowerment for Native families and communities. Communities where projects are sited receive fair compensation for usage of their land. In accordance with their covenant, Navajo Power reinvests 80% of its profits, partially in community benefits and predominantly in new projects designed to help close the gap in project development financing in Indian Country. Navajo Power believes there is immense opportunity to drive sustainable economic development in Native communities with clean energy projects.

Navajo Power is jointly developing the Project with AES Clean Energy (AES), a leading independent power producer that owns and operates more than 400 renewable generation systems across the United States (US) with a wind, solar, and battery energy storage portfolio of 4.4 gigawatts (GW) and 40 GW under development. AES is expected to be the owner and operator of the Project.

The Project is a proposed 750-megawatt (MW) photovoltaic (PV) solar generating and battery energy storage system (BESS) facility in the Cameron and Coalmine Canyon chapters of the Navajo Nation Reservation, approximately 4 miles east of Cameron, Arizona. The Project would be constructed within a 5,163-acre area that includes 4,563 acres to be leased from the Navajo Nation under the provisions of the Navajo Nation General Leasing Regulations of 2013. The solar generation facility and ancillary facilities would be constructed and operated within the proposed lease area. The Project is planned in two distinct areas, Solar Array Areas 1 and 2, separated by a floodplain and presumed United States Army Corps of Engineers (USACE) jurisdictional wash (not included in the Project footprint) and accessed via three roads running east from Bureau of Indian Affairs (BIA) Route 6730 (BIA RT 6730). An approximately 4.2-mile, 500kV generation intertie (gen tie) line would run west from the Project substation to interconnect directly with the existing Moenkopi Substation (35°49'57"N 111°26'47"W) operated by the Arizona Public Service Company (APS). The 224-acre gen tie corridor is outside of the Navajo Nation lease boundary being requested and would necessitate a right-of-way (ROW) grant issued by the BIA.

Figure 1.0-1 is an overview map of the Project Site.

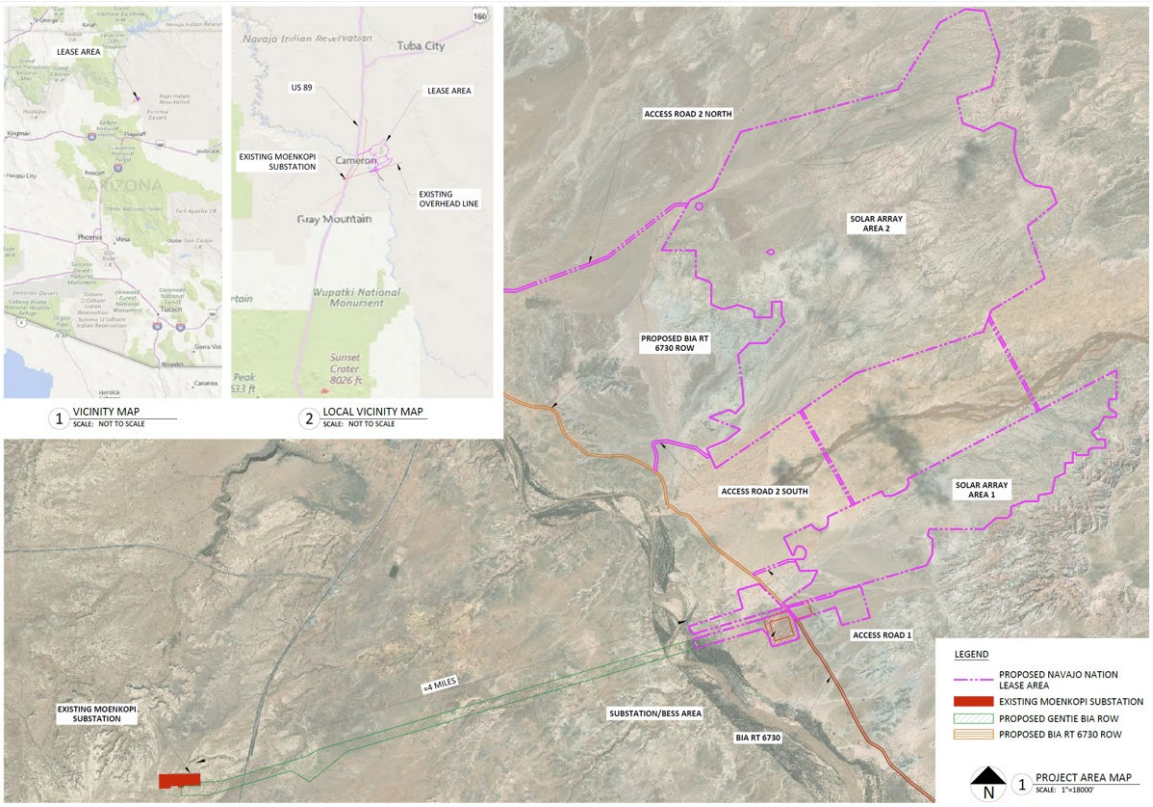

Figure 1.0-1 Project Overview

2.0 PROPONENT'S PURPOSE AND NEED

The Navajo Nation has been providing electricity to the Western US for many years, but several of its coal plants have recently closed or are soon slated to close. The Navajo Generating Station (NGS), located near Page, Arizona, closed in November 2019. The closures of NGS and the Kayenta Mine, which supplied NGS with coal, resulted in significant job losses for Navajo workers and reduced revenues for the Navajo Nation. However, these planned closures have also created an opportunity for the Navajo Nation to diversify its energy portfolio by encouraging renewable energy development on tribal lands for the benefit of the Navajo people. The Navajo Háyoołkáál Proclamation outlines support for these efforts. Furthermore, the Project location is within the FBFA, an area in significant need of economic development and job opportunities.

The goals of the Project are:

- Improve the economic condition of the Navajo Nation with job opportunities and income for the community.
- Facilitate and support the Navajo Nation's energy transition through the development of renewable energy resources as directed by the Navajo Nation leadership and promoted in the Navajo Háyoołkáál Proclamation.
- Allow increased economic power generation, transfers, sales, and purchases by providing a new source of renewable energy, up to 750MW, to assist the Navajo

Nation in achieving its renewable energy development goals and to support power generation needs in the Southwest.

- Install commercially proven, financeable solar and battery storage technology that is readily available, efficient, and environmentally friendly to generate cost-competitive and reliable renewable energy.
- Replace power previously generated by the now-retired coal-fired NGS.
- Locate the Project in a rural setting within the Cameron and Coalmine Canyon chapters on the Navajo Nation.
- Locate the Project near an existing electric transmission system for ease of interconnection and to minimize impacts associated with the expansion of transmission infrastructure.
- Minimize or avoid potential impacts on the local community, environment, and biological and cultural resources by locating the Project on underutilized, previously disturbed, or degraded land.

3.0 CONSISTENCY WITH THE NAVAJO HÁYOOŁKÁÁŁ PROCLAMATION

PDP proposes to develop the Project in accordance with the Navajo Háyoołkááł Proclamation. On April 2, 2019, the Office of the President and Vice President of the Navajo Nation issued the Navajo Háyoołkááł Proclamation, also known as the Navajo Sunrise Proclamation, which "creates a new economic vision for the Navajo people through healing the land, fostering clean energy development, and providing leadership for the energy market for the Navajo people." The proclamation is based on four principles, excerpted here:

1. A diverse energy portfolio, creating workforce development and job creation for the Navajo People from focused carbon-based energy to renewable energy development, including workforce,
2. Restoration of land and water after decades of uranium and coal mining,
3. Rural electrification of homes that lack access to electricity,
4. Utility-scale renewable energy development, to supply electricity to the Navajo Nation and Western United States. (Navajo Háyoołkááł Proclamation, para 2)

PDP is committed to the principles of the proclamation and to working with the Navajo Nation to ensure that the Project maximizes the positive impact on the local Navajo communities and Navajo economy. In adherence to the proclamation, the Project would re-utilize lands impacted by historic uranium mining; focus on developing a strong local workforce; address the electrification needs of areas affected by the Bennett Freeze and other infrastructure challenges; and expand the energy portfolio of the Navajo Nation while providing renewable electricity to the region.

4.0 PROJECT BENEFITS TO THE NAVAJO NATION

The Project would have a positive impact on the economy of the Navajo Nation and help the Navajo Nation build a more balanced energy portfolio by developing clean renewable energy for the long-term benefit of the Navajo people.

The Project would repurpose reclaimed lands impacted by historic uranium mining and reduce dependence on energy generated from fossil fuels, partially replacing the coal-fired NGS, decommissioned in 2019. This Project would offset GHG and other air pollutant emissions produced by fossil fuel plants, using virtually no water to produce electricity relative to coal- or gas-fired generation. The Project would help the Navajo Nation become a significant producer of renewable energy and provide clean energy jobs and workforce training within the community. In addition, as part of an applicant-proposed benefits package, PDP plans to include opportunities for rural electrification through off-grid solar power and energy storage solutions for remotely located Navajo households lacking access to power and running water.

The Project would create revenue streams for the Navajo Nation through taxation[1] and lease payments while also generating jobs in a new sector for the Navajo community[2]. PDP would generate an estimated $58 million in community stakeholder payments and $12 million in Navajo Nation lease payments over the Project's lifetime (Mangum Economic Consulting LLC [Mangum Economics] 2022).

Project construction would support an estimated 770 jobs in Coconino County with $39.7 million in associated labor income, and $116.9 million in total economic output. Of the jobs supported by Project construction, 570 would be directly associated with construction, contributing $30.2 million in labor income to Coconino County's fifth largest industry sector (Mangum Economics 2022). According to the Bureau of Labor Statistics, the average weekly wages for construction jobs are $918, as compared to the county-wide average of $866. Total routine supply and material purchases, or intermediate expenditures, within the county resulting from Project construction are estimated to range from $41 million to $58 million. Sales and other consumption tax revenues resulting from this economic activity are estimated to range from $1.6 million to $7.4 million (Triple Point Strategic Consulting LLC [Triple Point] 2022).

Project operation would create at least 21 new jobs in Coconino County with $1 million in associated labor income and $3.3 million in total economic output, annually (Mangum Economics 2022). Total intermediate expenditures within the county resulting from Project operation are estimated to range from $500,000 to $1.5 million, annually. Sales and other

[1] Navajo Nation taxes are under confidential negotiation; therefore, an estimate is not available for this document.

[2] Mangum Economics Consulting LLC's Painted Desert Power Economic and Fiscal Contribution to Coconino County, Arizona and the Navajo Nation is dated April 7, 2022. Triple Point Strategic Consulting LLC's Review of Mangum Economics 2022 Report is dated May 2022.

consumption tax revenues resulting from this economic activity are estimated to range from $103,000 to $160,000, annually (Triple Point 2022).

Personal property tax revenue would be generated from the purchase and ownership of PV, BESS, and other capital equipment purchased outside of Coconino County for Project construction and operation. The total lifetime revenue generated by personal property tax is estimated to range from $6.3 million to $6.4 million (Triple Point 2022).

5.0 VIABLE POWER MARKETS FOR ENERGY FROM THE PROJECT

Currently, Arizona's investor-owned utilities are required to obtain renewable energy credits (RECs) from eligible renewable resources to meet 15% of their retail electric load by 2025. This RPS was established in 2006 under Arizona Administrative Code §§ 14-2-1801 et seq. While Arizona's RPS is not one of the most progressive standards in the nation, the largest investor-owned utilities in the state are setting ambitious renewable energy and carbon reduction goals. For example, Tucson Electric Power and Salt River Project announced plans to retire several coal-fired power plants, setting a 70% renewable energy by 2035 goal and a 90% carbon reduction goal by 2035, respectively (Arizona Corporation Commission 2022). On January 22, 2020, APS, the largest electric utility in Arizona, announced that it has voluntarily set a target of switching to 100% clean energy by 2050 with a goal of 45% renewable energy by 2045.

Because the Moenkopi Substation and the transmission system in the vicinity of the Project is co-owned by several Nevada- and California-based utilities, the Project is uniquely situated to export electricity to these adjacent states, as well. Nevada passed its most recent RPS bill in April 2019, requiring the state to procure 50% of its power from renewables by 2030 and 100% by 2050. In 2018, California enacted Senate Bill 100, which requires utilities and other power providers to achieve 60% renewables penetration by 2030 and 100% by 2045. Under these laws, a large number of power buyers in both states could be customers for energy delivered by the Project.

6.0 PROJECT LOCATION AND NEIGHBORING LAND USES

The Project Site and surrounding area are part of the Navajo Nation. The Project Site is located in Sections 7-9, 16-22, and 27-32 of Township 29 North, Range 10 East of the Gila-Salt River Meridian, in Coconino County, Arizona, in the Coalmine Mesa Chapter[3] of the Navajo Nation. The gen tie crosses Township 28-29 North, Range 9 and 10 East of the Gila-Salt River Meridian, in Coconino County, Arizona, originating in the Coalmine Mesa Chapter of the Navajo Nation and crossing into the Cameron Chapter of the Navajo Nation.

[3] The prior name for the Coalmine Canyon Chapter, Coalmine Mesa, is used in the legal description; throughout the rest of this document, we use the chapter's current name.

US 89 is the main highway used to access the Project Site and the nearest town is Cameron, Arizona, located approximately 4 miles to the west of the Project Site.

The Project Site is located next to several partially reclaimed uranium mines (**Figure 13.3-1**) and just east of the Little Colorado River canyon and has traditionally been used by Navajo people for sheep grazing. Two major sets of existing high voltage (HV) transmission lines run adjacent to the Project: the APS Four Corners transmission corridor immediately to the south of Area 1 and the APS NGS transmission corridor approximately 3.5 miles to the west of Area 1. The APS-operated Moenkopi Substation is located approximately 6 miles to the west-southwest.

7.0 PROJECT DESCRIPTION

7.1 DESCRIPTION OF PROPOSED PROJECT AND ALTERNATIVES

This section describes the elements of the Proposed Project (**Section 7.1.1**; **Section 7.1.3**) and alternatives (**Section 7.1.2**; **Section 7.1.4**).

7.1.1 Proposed Solar Generating Facility

The Proposed Solar Generating Facility is a 4,563-acre solar PV facility arranged in two distinct solar generating areas, Proposed Solar Array Area 1 (Area 1) and Proposed Solar Array Area 2 (Area 2). These areas are separated by a floodplain featuring an unnamed USACE jurisdictional wash (not included in the Project footprint). To the south of the wash lies Area 1, consisting of a large area of contiguous solar arrays and related facilities (such as pad mounted inverters and transformers). The larger Area 2 is located north of Area 1 by approximately 0.9 miles and features additional solar arrays. Area 2's northern and southern portions are separated by a slurry pipeline and historic cultural corridor. Within the southern portion of Area 2 lie several areas of rugged topography that the Proposed Facility would not disturb. The Proposed Facility (**Figure 7.1-1**) avoids grading in this rugged central portion of Area 2 by packing the rows of north-south oriented trackers more tightly throughout the remainder of Area 2.

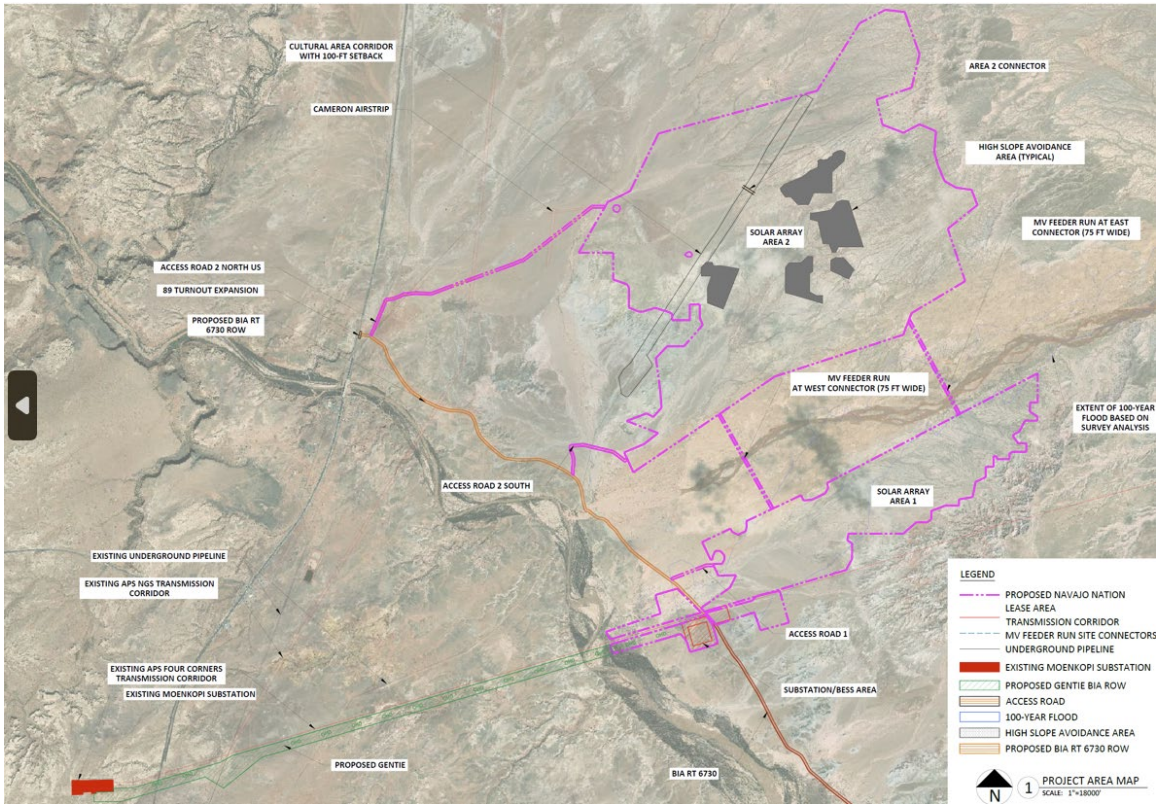

Figure 7.1-1 Proposed Solar Generating Facility Site Plan

Fully built out, Area 2 would be approximately 3.5 times the size of Area 1. Operations and maintenance (O&M) facilities would be located within Areas 1 and 2 (**Table 7.1-1**).

Table 7.1-1 Proposed Facility Components

PROPOSED FACILITY COMPONENTS	PERMANENT IMPACTS *(in acres)*	TEMPORARY IMPACTS *(in acres)*
Proposed Solar Array Area 1	54.7	888.1
Proposed Solar Array Area 2	325.7	4,013.9

7.1.2 Alternative Solar Generating Facility

Like the Proposed Solar Generating Facility, the Alternative Solar Generating Facility (**Figure 7.1-2**) is a 750MW solar PV facility arranged in two distinct solar generating areas, Alternative Solar Array Area 1A (Area 1A) and Alternative Solar Array Area 2A (Area 2A), but the Alternative Facility would require significantly more grading work (**Appendix B**) to accommodate the increased tracker row spacing that would allow for greater annual energy production relative to the Proposed Facility.

As in the Proposed Facility, the solar array areas are separated by a floodplain featuring a USACE jurisdictional wash (not included in the Project footprint). To the south of the wash lies Area 1A, consisting of a large area of contiguous solar arrays and related facilities

(such as pad mounted inverters and transformers). Alternative Area 1A occupies almost exactly the same area as Proposed Area 1 but the distance between the solar arrays within Area 1A would be approximately 10% greater, allowing for slightly more energy production from each row due to the reduction in inter-row shading at certain times of day.

The larger Area 2A is located north of Area 1A by approximately 0.9 miles and features additional solar arrays. Area 2A's northern and southern portions are separated by a slurry pipeline and historic cultural corridor. Within the southern portion of Alternative Area 2A, several areas of rugged topography would be graded or otherwise leveled to create more usable area relative to the Proposed Area 2. These flattened areas would allow Area 2A to accommodate inter-row spacing similar to that of Area 1A, allowing the Alternative Facility to produce more energy by reducing row-to-row shading at dawn and dusk.

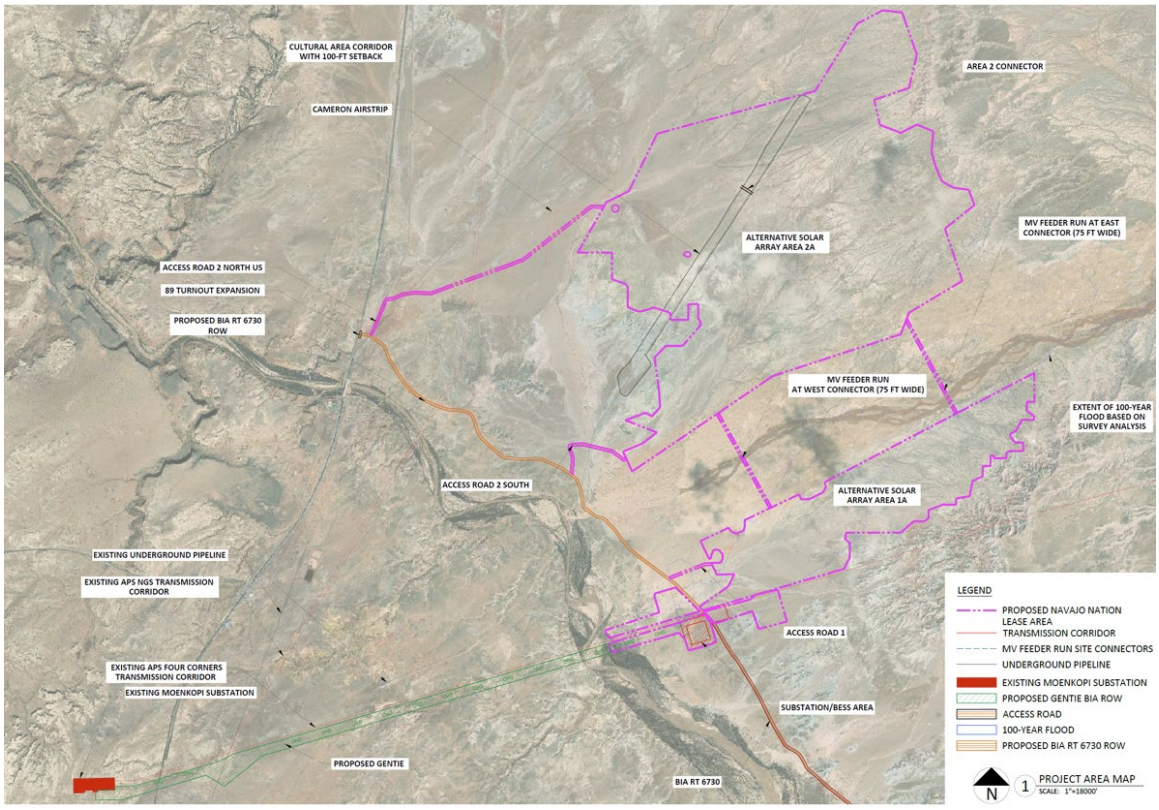

Figure 7.1-2 Alternative Solar Generating Facility Site Plan

Fully built out, Area 2A is about 3.5 times the size of Area 1A. O&M facilities would be located within Areas 1A and 2A (**Table 7.1-2**).

Table 7.1-2 Alternative Facility Components

ALTERNATIVE FACILITY COMPONENTS	PERMANENT IMPACTS *(in acres)*	TEMPORARY IMPACTS *(in acres)*
Alternative Solar Array Area 1A	59.4	883.35
Alternative Solar Array Area 2A	528.85	3,810.7

7.1.3 Proposed Project Access Roads and Electrical Connectors

The site plans for both the Proposed Solar Generating Facility (**Figure 7.1-1**) and the Alternative Solar Generating Facility (**Figure 7.1-2**) include the Proposed Project Access Roads and Electrical Connectors, the Proposed Substation/BESS Area, and the Proposed Gen Tie corridor to the Moenkopi Substation.

Area 1 or Area 1A would be accessed via Access Road 1 running east from BIA RT 6730. Area 2 or Area 2A would be accessed via Access Roads 2 South and 2 North running east from BIA RT 6730. The two portions of Area 2 or 2A would be connected by a single access road crossing the cultural corridor and slurry pipeline with alternating current (AC) medium voltage (MV) cables running overhead. The gap between Areas 1 and 2 or Areas 1A and 2A would be connected via the East and West Connectors. These corridors would contain MV circuits (above ground, on poles, or underground), temporary access roads (except for areas within the seasonal wash), and overhead or underground communications (fiber-optic) cable.

The Proposed Project components and the number of acres permanently or temporarily impacted by each component are listed in **Table 7.1-3**.

Table 7.1-3 Proposed Project Components

PROPOSED PROJECT COMPONENTS	PERMANENT IMPACTS *(in acres)*	TEMPORARY IMPACTS *(in acres)*
Proposed Substation/BESS Area	15.1	2.6
Proposed Gen Tie	0.05	13.2
Proposed Moenkopi Substation Expansion	1.3	0.8
Access Road 1	1.3	2.9
Access Road 2 South	2.5	5.9
Access Road 2 North	8.0	18.6
Area 2 Connector	0.7	0.7
BIA RT 6730 Improvement and Widening	22.9	22.9
US 89 Turnout Improvement and Expansion	0.5	0.2
East Connector	0.002	4.8
West Connector	0.002	4.8
Total	52.4	82.2

7.1.4 Alternative High-Voltage Project Components

Several alternative HV Project components are described here for consideration for either the Proposed Solar Generating Facility or the Alternative Solar Generating Facility. There are two alternative substation and BESS area locations, Alternative Substations/BESS Areas 1A and 1B. Alternative Substation/BESS Area 1A would require an additional access road, Alternative Access Road 1A.

Two alternative gen tie alignments (**Table 7.1-4**; **Figure 7.1-3**) are presented for evaluation:

1. Whereas the Proposed Gen Tie starts at the Proposed Substation/BESS Area and extends westward along the southern side of the APS Four Corners transmission corridor to the APS-operated Moenkopi Substation 4.2 miles away, Gen Tie Alternative 1 originates from Alternative Substation/BESS Area 1B and runs parallel to the existing APS Four Corners transmission corridor on its north side for 2.8 miles before crossing under it just east of the APS NGS transmission corridor. Alternative 1 continues running parallel to the APS Four Corners transmission corridor on its south side for 1.4 miles before accessing the Moenkopi Substation from the south, at the same location as the Proposed Gen Tie.
2. Gen Tie Alternative 2 also originates from Alternative Substation/BESS Area 1B but runs parallel to the APS Four Corners transmission corridor on its north side all the way to the Moenkopi Substation. Under this alternative, the Moenkopi Substation would be expanded on the north side of the facility.

Table 7.1-4 Substation and Gen Tie Alternatives

SUBSTATION COMPONENT	GEN TIE COMPONENT(S)	OTHER REQUIRED COMPONENTS
Alternative Substation/BESS Area 1A	Proposed Gen Tie	Proposed Moenkopi Substation Expansion, Alternative Access Road 1A
Alternative Substation/BESS Area 1B	Gen Tie Alternative 1	Proposed Moenkopi Substation Expansion
Alternative Substation/BESS Area 1B	Gen Tie Alternative 2	Alternative Moenkopi Substation Expansion

The alternative components are shown in **Figure 7.1-3**.

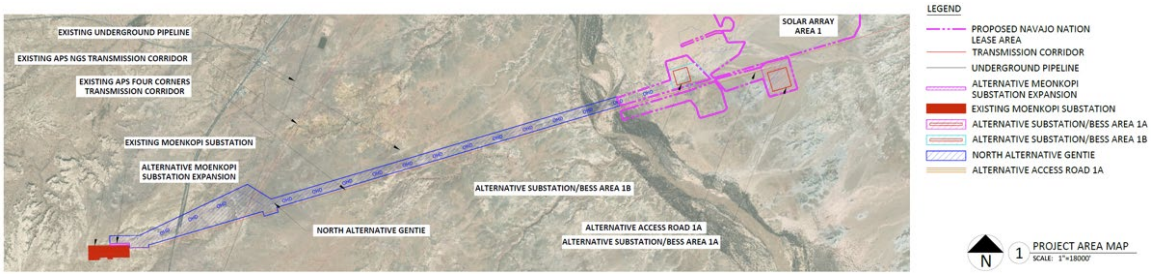

Figure 7.1-3 Substation and Gen Tie Alternatives

Additional alternative Project components and the number of acres permanently or temporarily impacted by each component are listed in **Table 7.1-5**.

Table 7.1-5 Additional Components for Project Alternatives

ADDITIONAL COMPONENTS FOR PROJECT ALTERNATIVES	PERMANENT IMPACTS *(in acres)*	TEMPORARY IMPACTS *(in acres)*
Alternative Substation/BESS Area 1A (including Alternative Access Road 1A)	16.5	2.9
Alternative Substation/BESS Area 1B	15.5	2.5
Gen Tie Alternative 1, including the Proposed Moenkopi Substation Expansion	1.4	18.9
Gen Tie Alternative 2, including the Alternative Moenkopi Substation Expansion	1.5	18.6

7.1.5 Alternatives Considered but Dismissed from Further Analysis

Several possible solar array locations with a history of uranium mining immediately adjacent to Areas 1 and 2 were considered but excluded to avoid limiting the access needed for long-term studies, characterizations, or potential future reclamation activities conducted by other parties. Nearby abandoned uranium mine (AUM) sites were identified in the February 2022 Phase I Environmental Site Assessment (Phase I ESA) report prepared by SWCA Environmental Consultants Inc. (SWCA), but all are avoided by the Proposed Project and by alternative Project elements.

Another gen tie option was evaluated. This alternative ran east from the Moenkopi Substation then northeast alongside the APS NGS transmission corridor, continuing for approximately 2.5 miles through the community of Cameron and roughly parallel to US 89. Approximately 1 mile east of the US 89 bridge over the Little Colorado River, this option veered east to access Area 2. This alternative was dismissed as it would have passed closer to homes and businesses in Cameron, had greater visual impacts from US 89, and presented greater engineering challenges navigating terrain in the final mile of its approach to the solar array areas.

7.2 SITE PLAN

At full build-out, most of the Project Site (**Figure 7.1-1**) would be occupied by solar panels mounted on single-axis trackers (solar panel mounting structures) and related equipment.

Temporary construction laydown or on-site assembly facility areas, construction trailers, and parking areas would be provided within the Project Site. Due to the size of the Project Site, one or more of the laydown or on-site assembly facility areas would be relocated periodically within Areas 1 and 2 as construction progressed.

7.3 SOLAR ARRAY AND GENERATION SYSTEM

PV panels would produce all electricity generated by the Project. PV panels convert sunlight into direct current (DC) electricity. The major equipment in the solar field includes the:

- PV solar panels
- single-axis trackers
- inverters
- BESS
- three-phase pad-mounted transformers and circuit breakers

The current design groups the PV panels, inverters, and MV transformers into approximately 4MW of direct current (MWdc) blocks that, when combined, would produce the Project output. MWdc block, inverter, and transformer sizes would be finalized closer to the time of construction.

The degree of tilt for the trackers would change over the course of each day. The peak height of a solar tracker would be approximately 7 to 13 feet (ft), reached during the morning and evening hours when the panels are tilted to face the rising or setting sun.

The trackers would be mounted on driven piles, ground screw, or cast-in-drilled-hole (CIDH) foundations to support the panel mounting system. The electrical equipment (inverters and transformers) would be housed in containers or in small shelters or skid platforms approximately 8 to 10 ft tall. The Project would also include small meteorological monitoring stations to track solar insolation, temperature, and wind direction and speed from a height of approximately 30 ft.

The PV panels utilize non-reflective surfaces to maximize efficiency and convert sunlight into direct current (DC) electricity. The DC output of multiple rows of PV panels is collected through one or more combiner boxes and directed to an inverter that converts the DC electricity to AC electricity. From the inverter, the generated energy flows to a transformer where it is stepped up to distribution-level voltage, approximately 34.5 kilovolts (kV). Multiple transformers are connected in parallel via 34.5kV lines (installed either overhead or below ground) to a single 34.5/500kV substation.

7.4 SUBSTATIONS, BESS, GEN TIE, AND TELECOMMUNICATIONS

A new collector substation located at the southwest corner of the Project Site would step up power from 34.5kV to 500kV for transmission. The Project substation would consist of one or more general step-up transformers, a control house, and a substation superstructure within an approximately 8-ft tall fence enclosure. Location options for the Project

substation appear in the maps of the Proposed Solar Generating Facility Site (**Figure 7.1-1**), the Alternative Solar Generating Facility Site (**Figure 7.1-2**), and the substation and gen tie alternatives (**Figure 7.1-3**).

Certain phases of the Project may include a BESS that would store electricity for dispatch into the transmission grid via the gen tie. At complete buildout, PDP anticipates that the BESS could consist of approximately 75 to 150 enclosed battery storage containers. Each container would house battery modules mounted in racks (akin to server racks) and associated electrical equipment. PDP anticipates that the battery storage containers would be built using standard International Organization for Standardization (ISO) shipping containers and would each measure approximately 53 ft in length, 8 ft in width, and 9 ft in height, though other form-factor structures may be used. Each storage container would be completely outdoor accessible (with no internal access).

The combined substation and BESS area is expected to cover approximately 15 acres and may be distributed throughout the site.

An approximately 4.2-mile, 500kV gen tie line would run west from the Project substation near Area 1 to interconnect directly with the APS-operated Moenkopi Substation on the west side of US 89 (35°49'57"N 111°26'47"W). Fully built out, the gen tie would support up to three circuits of suspended 500kV electrical conductors and one or two communications lines. The communications lines would be either suspended overhead and/or buried in a trench within the gen tie corridor.

The gen tie's approximately 28 towers would be steel monopole structures (**Figure 7.4-1)**, steel H-frame structures, or a combination of the two. The towers' maximum height would be approximately 140 ft. Tower structure designs would be finalized after further geotechnical and engineering studies. The proposed transmission lines would span 900 to 1,400 ft; however, crossing the LCR floodplain may require a span of up to 2,800 feet. The gen tie would largely parallel the existing 500kV APS Four Corners transmission corridor to minimize visual impacts and would need to cross the Little Colorado River, the APS NGS transmission corridor, and US 89. The gen tie's crossings of these obstacles are expected to take place adjacent to, and in a similar fashion to, those already engineered for the APS Four Corners transmission corridor. Stringing circuits and cabling across the Little Colorado River canyon would likely require the use of a helicopter.

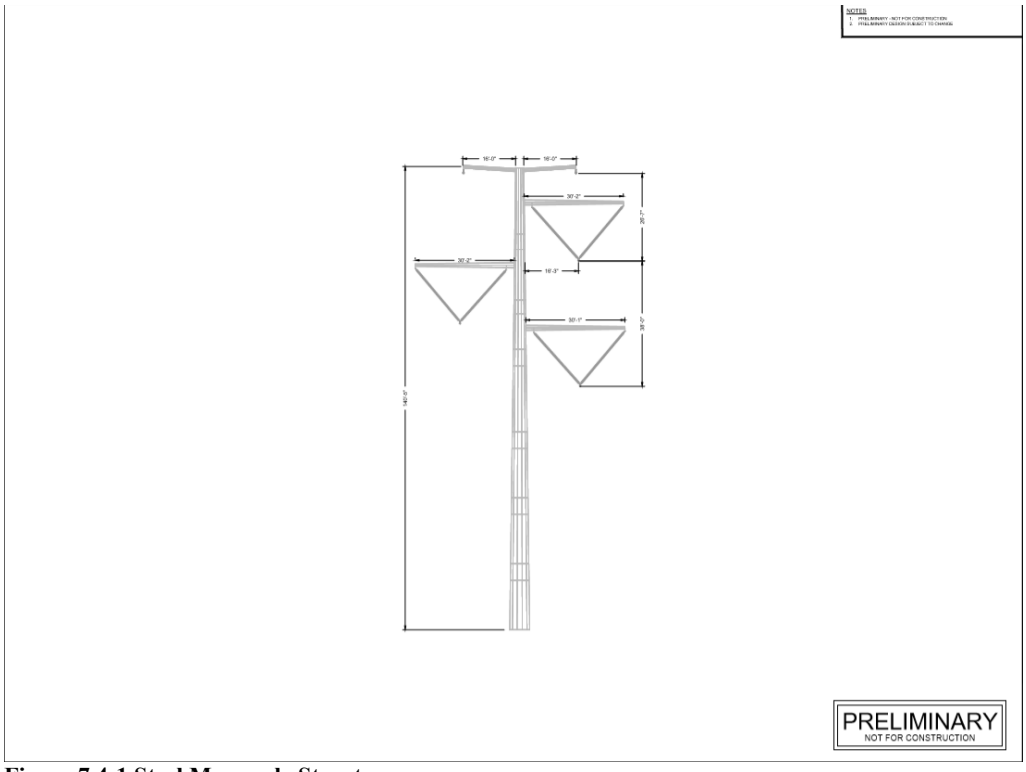

Figure 7.4-1 Steel Monopole Structure

It is expected that the gen tie would enter the Moenkopi Substation from either a northern or southern approach, requiring expansion of the Moenkopi Substation in the corresponding direction. The final approach to the Moenkopi Substation and the configuration of required upgrades would be determined by APS as part of its interconnection study process. Preliminary conversations with APS defined the southern approach into Moenkopi and some expansion of the substation to the south as the preferred options and these are therefore included as part of the Proposed Gen Tie and Alternative 1. The northern approach to the Moenkopi Substation is included only in Alternative 2.

If the interconnection to the Moenkopi Substation were made through an existing open bay to the south, it is expected that only a new set of 500kV breakers and disconnect switch and additional bus, conduit, conductor, and cable would be required; if the interconnection were made from the north, it is expected that an additional 500kV backbone would also be required.

7.5 GRADING, EXCAVATIONS, AND DRAINAGE

The Project Site is located on livestock (primarily sheep) grazing land and vacant land not used for any purpose. The average slope of the Project Site is 1-2% downward to the west-southwest with several extensive areas of more rugged terrain occurring in the north portion of the site. Some seasonal washes cross the Project Site moving in the same general direction. Some terrain undulations and areas with slopes greater than 10% have been identified, primarily in the eastern and northern portions of the Project Site and would be avoided in the Proposed Project to the extent possible. A light-on-land approach would be adopted to minimize impacts. Grading would be required for the construction of access

roads and AC stations, for any temporary or permanent structures, and for the substation/BESS area. Single-axis trackers with relatively high slope tolerance would be selected for the Project and arrays would be sited to avoid the most prominent topographic features. There is a paucity of vegetation on the Project Site. Where necessary, vegetation would be cleared. Grading would be employed where necessary to smooth or flatten the terrain to give trackers sufficient ground clearance.

Trenching to a depth of 3 to 5 ft would be required for the placement of DC cables, AC MV cables, and communications lines throughout the Project Site. Multiple direct bores under the main wash between Areas 1 and 2 are expected to be used to allow these two connectors to cross the wash without surface disturbance. Cables would also run over the sole access road crossing the cultural corridor and slurry pipeline, the Area 2 Connector.

Any civil work on the Project Site (**Table 7.5-1**) is expected to balance on site with no import or export of material. **Section 10.7** describes planned Project Site restoration and reseeding. The dirt roadways within and around the Project Site would be graded and compacted. Some roads, including BIA RT 6730 and access roads serving the O&M facilities and the Project substation, would be covered with aggregate base course.

Table 7.5-1 Ground Disturbing Activities and Impacts for the Proposed Project

AREA	SECTION	DISTURBANCE TYPE	ESTIMATED AREA OF DISTURBANCE (in acres)	ESTIMATED DEPTH OF DISTURBANCE
Proposed Solar Array Area 1	Road	Clear[4] and Grade[5]	13.07	16"
	AC Station	Clear and Excavate[6]	0.12	10-18'
	Pile	Ground Penetration	0.11	8-10'
	Trench	Trenching[7]	8.41	3-5'
	Grading	Clear and Grade	41.28	1'
	Facilities	Clear	0.11	10"
Proposed Solar Array Area 2	Road	Clear and Grade	43.31	16"
	AC Station	Clear and Excavate	0.43	10-18'
	Pile	Ground Penetration	0.38	8-10'
	Trench	Trenching	37.56	3-5'
	Grading	Clear and Grade	281.55	3'

[4] Land clearing is the process of removing trees, stumps, brush, stones, and other obstacles from an area as required.
[5] Land grading is a leveling of the surface: dirt from higher up is moved into lower-lying areas to create a level surface to serve as a foundation.
[6] Land excavation is the clearing of all vegetation, brush, rocks, and debris.
[7] Trenching is digging a narrow trench in the ground for the installation, maintenance, or inspection of pipelines, conduits, or cables.

AREA	SECTION	DISTURBANCE TYPE	ESTIMATED AREA OF DISTURBANCE (in acres)	ESTIMATED DEPTH OF DISTURBANCE
Proposed Substation / BESS Area	Substation	Clear and Excavate	14.7	10-18'
	Road	Clear and Grade	0.43	16"
	MV Connector	Ground Penetration	0.001	10-14'
Proposed Gen Tie	Tower Footings	Clear, Grade, and Ground Penetration	0.1	8-10'
Proposed Moenkopi Expansion Area	Substation Expansion	Clear and Excavate	1.3	10-18'
Access Road 1	Road	Clear and Grade	1.0	16"
Access Road 2 South	Road	Clear and Grade	2.1	16"
Access Road 2 North	Road	Clear and Grade	6.2	16"
Area 2 Connector	Road	Clear and Grade	0.4	16"
BIA RT 6730 Improvement and Widening	Road	Clear and Grade	11.4	16"
US 89 Turnout Improvement and Expansion[8]	Road	Clear, Grade, and Pave[9]	0.5	16"
West Connector	MV Poles	Ground Penetration	0.002	10-14'
	Bore	Boring	0.53	4'[10]
East Connector	MV Poles	Ground Penetration	0.002	10-14'
	Bore	Boring	0.53	4'[11]

[8] Options for access to BIA RT 6730 from US 89 are currently being reviewed with ADOT.
[9] Paving is the use of material such as stone, tar, or concrete to form the hard surface of a road, driveway, etc.
[10] Drilling a horizontal underground bore will avoid any surface disturbance. The expected diameter of the conduit to be placed within each bore hole is approximately 8 inches.
[11] Drilling a horizontal underground bore will avoid any surface disturbance. The expected diameter of the conduit to be placed within each bore hole is approximately 8 inches.

As it is currently configured, most of the Project Site would be drained by sheet flow to on- and off-site drainages. Detailed grading and drainage plans for the Project would be developed in the detailed design phase prior to construction.

Standard secondary containment would be provided around the transformers within the Project substation to prevent the release of any transformer oil or lubricants.

7.6 TEMPORARY ON-SITE FACILITIES

Some temporary facilities would be deployed on-site during construction of the Project. These facilities would include office trailers; laydown yards with assembly areas, fabric buildings, and tents; generators; and bathrooms.

7.7 WATER SUPPLY AND USE

During construction and operation, the Project would use water trucked to the Project Site or pumped from on-site or nearby wells. Any water from the Navajo Nation would be utilized in accordance with the Navajo Nation Water Code. Characterization of groundwater resources near the Project Site, and potentially of well data near the Project Site, would need to be collected and/or assessed for thorough documentation. Potentially viable existing wells in the vicinity of Cameron are in the process of being identified while Project water needs and access are being assessed and issues with groundwater rights, permitting requirements, and safety addressed.

The entire buildout of the Project Site would be expected to require approximately 750 acre-feet (ac ft) of water. Depending upon climatic conditions during construction, actual use could be much lower. Construction water use would be limited to soil conditioning and dust suppression. Potable water would be transported to the Project Site for drinking and domestic needs.

During the operational phase, solar PV plants use minimal water. The annual water consumption for operation of the facility would be expected to be approximately 30 ac ft. This includes the water required for washing the PV panels as many as four times per year using a manual cleaning system. Dirt and gravel roads and access points may require maintenance and reconstruction after major storm events. Minor water usage is expected for use in dust abatement and soil compaction.

The Technical, Construction and Operations Branch (TCOB) of the Navajo Nation Department of Water Resources (DWR) is responsible for reviewing and responding to applications for the water use permits required for the Project. Construction water use permit applicants estimate the volume of total project water to be used from each source for which a water use permit is requested. The TCOB Water Code Section staff verifies the estimates.

Prior to construction, PDP will prepare a water use plan. Options for the Project water supply are outlined in a technical memorandum from C2 Environmental LLC (C2 Environmental). C2 Environmental evaluated the potential effects on local water resources of the Project's anticipated direct non-potable water uses during construction and operation, including compaction, cleaning, repairs, and dust abatement.

Potential water supply options considered for the Project include:

- two large production wells available to lease for construction water and located 15 miles from the Project Site at Babbit Ranches LLC
- 140 existing wells identified by the Navajo Nation Water Management Branch within a 10-mile radius of Cameron, all of which are unlikely to support high-production water needs
- Well 3T-551 located within the Cameron Chapter and in need of study to determine whether it has the capacity to support both Project needs and community demand
- development of a new well, regulated by the Navajo Nation Water Management Branch, that could support Project needs and other community uses

The highest water-use functions of the Project include dust abatement for Project Site access roads and therefore two alternatives to traditional soil and gravel road construction are being considered. Preliminary estimates indicate that the water consumption required by a traditional road over a two-year construction period could be reduced with the application of a polymer treatment to the road base and surface. PDP will consider applying a polymer treatment to the road to reduce Project water usage.

7.8 TEMPORARY AND PERMANENT ACCESS ROADS

Access to the Project Site would be via US 89 and BIA RT 6730. Primary access would be controlled through a security gate at the main entrance to Area 1 located at the southwest corner of the Project Site. The Project substation would have its own separate access and a secured gate off BIA RT 6730. Two secondary access roads are proposed for access to Area 2. Access Road 2 South would provide access to the southwest corner of Area 2, while Access Road 2 North would provide access to the northwest corner of the Project Site via the Cameron airstrip. The two portions of Area 2 would be connected by a single access road crossing the cultural corridor and slurry pipeline, the Area 2 Connector. All these access roads would be used during Project construction. During Project operation, Access Road 2 North may only be used for emergencies. All the access roads (**Table 7.8-1**) would be graded and improved to appropriate construction standards (widened, compacted, covered with gravel or paved, etc.) due to the increased traffic volume and heavy loads transported on these roads during construction. In addition, BIA RT 6730, a public road, would need to be widened and resurfaced to appropriate construction standards to handle the Project construction traffic during all weather conditions (**Section 10.3.1**). Finally, the existing access to BIA RT 6730 from US 89 may need to be enlarged, improved, or paved to appropriate construction standards. Detailed specifications for improvement and expansion of the existing US 89 access to BIA RT 6730 would be defined through coordination through applicable agreements with the Navajo Nation Division of Transportation (NDOT) and consultation with the Arizona Department of Transportation (ADOT) and the BIA.[12]

[12] Options for access to BIA RT 6730 from US 89 are currently being reviewed with ADOT.

Temporary construction access routes would be established along the East and West Connectors to allow for placement of the MV structures and connection of the MV wiring and any communications lines and for the direct bore under the jurisdictional wash. Minimal grading work is expected to be done to establish these routes.

Multiple temporary construction access routes would also be established between US 89 and the west rim of the Little Colorado River canyon and on the east side between BIA RT 6730 and the east rim. In these areas, construction crews would use existing jeep tracks to the extent feasible but might need to widen or improve these routes to afford access and allow for the delivery of equipment and structures for gen tie construction.

There is currently very little traffic on any of the roads (other than US 89) in the vicinity of the Project.

Table 7.8-1 Permanent and Temporary Access Roads for the Proposed Project

ROAD	LENGTH TO BE IMPROVED *(in ft)*	PERMANENT IMPACTS *(in acres)*	TEMPORARY IMPACTS *(in acres)*
BIA RT 6730	20,000	11.4	22.9
US 89 Turnout Improvement and Expansion[13]	300	0.5	0.2
Access Road 1	1,900	1.0	2.1
Access Road 2 South	3,700	2.1	4.1
Access Road 2 North	11,600	6.2	13.2
Area 2 Connector	600	0.4	0.7
East Connector	4,500	2.6	5.2
West Connector	4,500	2.6	5.2
Alternative Access Road 1A (if needed)	2,600	1.5	3.0

7.9 PROJECT SUPPORT SYSTEMS

The following Project systems would control, protect, and support the Project and its operations.

7.9.1 Security

During construction and operation, the Project may be monitored by on-site security staff and/or security cameras monitored remotely. An appropriate security fence, approximately 8 ft tall with signage, would be placed around the perimeter of the Project and all electrical equipment would be locked and could be topped with barbed wire per applicable electrical

[13] Options for access to BIA RT 6730 from US 89 are currently being reviewed with ADOT.

and safety code requirements. PDP would coordinate with the Navajo Nation Department of Fire & Rescue Services (NNFD) Fire Chief, or the appropriate county or state representative designated by the Navajo Nation, to ensure that access to the Project Site is maintained in a manner consistent with emergency services requirements. The Project would use inward-facing, low-level security lighting at ingress and egress points.

7.9.2 Fire Protection

Fire protection in the Project area would be provided by the NNFD. A fire protection plan (FPP) would be developed based on National Fire Protection Association (NFPA) standards. It is expected to be reviewed by the NNFD and approved by the appropriate county or state representative designated by the Navajo Nation. The Project would utilize equipment that is Underwriters Laboratories (UL) Listed and/or Factory Mutual (FM) Approved. The Project would be designed in accordance with NNFD requirements for access and would not hinder access to neighboring properties.

7.9.3 Control System

A microprocessor-based plant control system (PCS) would provide control, monitoring, alarm, and data storage functions for plant systems as well as communications with the solar field Supervisory Control and Data Acquisition (SCADA) system over a fiber-optic network. Redundant capability would be provided for critical PCS components so that no single component failure would cause a facility outage. All field instruments and controls would be hard-wired to local electrical panels. Local panels would be hard-wired to the Project PCS. Communications within the facility would be transmitted over the fiber-optic network and external communications would use local area networks or wireless technology in areas with no existing network or for redundancy.

7.9.4 Lighting System

The Project's lighting system would be limited to hooded, shielded illumination aimed downward to focus only on chosen locations near the main entrance, parking area, and Project substation. Lighting would be designed to provide the minimum illumination needed to achieve safety and security objectives. There would be no lighting in the solar field. Therefore, light trespass on surrounding properties would be minimal.

7.9.5 Solar Array Corrosion Protection

Steel piles in solar arrays are typically protected using a hot-dipped galvanization coating. Soil corrosivity and resistivity would be studied during the geotechnical investigation (**Section 13.4**) and based on soil properties a galvanization thickness would be determined and specified to the pile and racking manufacturer.

7.10 WASTE GENERATION AND MANAGEMENT

Construction waste would be generated from installation of the solar arrays and related facilities. Construction waste is expected to be minimal and consist mostly of recyclable materials, such as cardboard, steel, and electrical wiring. The engineering, procurement, and construction (EPC) contractor responsible for daily on-site management of construction would carefully disassemble and recycle shipping containers and solar panel

packaging to minimize solid waste impacts. The EPC contractor would contract with a waste and recycling service provider to ensure all waste generated from Project construction is disposed of in accordance with applicable regulations. The EPC contractor would store, collect, and dispose of solid waste in such a manner as to prevent fire and health hazards, rodent harborage, insect breeding, accidents, and odor. The EPC contractor would ensure that no littering on the Project Site or neighboring properties would occur during construction.

There are two facilities potentially able to accept waste from the Project. The first is Blanding Landfill in San Juan County, Utah, which currently accepts most of the waste from the western region of the Navajo Nation. Navajo Sanitation would provide roll-off bin services at the Project Site. A second waste disposal facility option closer to the Project Site is Flagstaff Landfill, which is run by the city of Flagstaff and provides services to Flagstaff and Coconino County residents and businesses. Republic Services (formerly Allied Waste), located in Page, Arizona, may be able to provide commercial waste disposal services with delivery to this facility.

Hazardous materials on the Project Site are expected to be limited to fuels and transformer fluids and would require monitoring. A hazardous material handling plan would be developed for the Project. Solid and/or hazardous material waste from the Project is expected to be generated by isolated fuel spills or PV modules damaged during shipping or construction. Contaminated soils from isolated spills are unlikely to exceed 150 pounds (lbs) and would be disposed of in steel drums. Any damaged modules would be removed from the Site by the EPC contractor and recycled or disposed of according to Navajo Nation, state, and federal regulations.

8.0 SITE CONTROL: GRAZING PERMIT HOLDERS AND LOCAL CHAPTERS

The Project location was chosen in consultation with local chapter officials and grazing permit holders to minimize impacts on grazing and other community land uses. Chapters on the Navajo Nation are certified local government entities vested with the authority and responsibility to advocate on behalf of their constituents. Grazing permit holders have been granted permits by the BIA to graze their livestock on their ancestral lands.

Between August 2018 and February 2022, PDP held dozens of meetings with Navajo families who hold grazing permits in the Cameron and Coalmine Canyon chapters. At these meetings, PDP educated local grazing permit holders about solar power and the development steps required for a large solar project. PDP worked with these grazing permit holders to select a Project Site that did not disturb traditional ceremonial areas or areas currently used for grazing activities. Before entering into agreements with grazing permit holders for rights to their grazing land, legal representation was provided to ensure that the grazing permit holders fully understood the agreements and that the agreements addressed the concerns of the grazing permit holders. All affected grazing permit holders have signed consents supporting development of the Project on the Project Site. PDP has assigned a representative to provide updates to grazing permit holders on a regular basis.

PDP has secured resolutions supporting land withdrawal from the Cameron and Coalmine Canyon chapters and has committed to providing revenues from the Project to the chapters once the Project is built. Both chapters plan to use these revenues for the provision of essential community services. These agreements give PDP the exclusive right to develop a utility-scale solar project within the chapters.

The Project site control milestones to date are listed in **Table 8.0-1**.

Table 8.0-1 Site Control Milestones[14]

MILESTONE	DATE ACHIEVED
Coalmine Canyon Chapter approves resolution supporting land withdrawal for a portion of the solar array	February 26, 2020
Grazing permit holders consent to development, construction, and operation of the Project on 5,163 acres	February 3, 2022
Cameron Chapter approves resolution supporting the grant of right-of-way for the Project	June 26, 2022
Coalmine Canyon Chapter approves resolution supporting land withdrawal for the entire solar array	TBD
Navajo Nation approves final Coalmine Canyon Chapter land withdrawal	TBD

Once the Project is decommissioned and reclamation has been completed, the Navajo Nation, possibly in collaboration with the BIA, could reinstate grazing and recreation at the Project Site. During Project operation, sheep grazing would be a compatible land use to provide vegetation control within the solar arrays.

9.0 LAND LEASE

A lease with the Navajo Nation can be approved once the Project receives approval through the Navajo Nation's environmental review process. As required in the land withdrawal notice (**Section 8**), PDP has obtained the necessary biological and cultural clearances and initiated the environmental review process. It is important to note that PDP has been in close contact with the levels of tribal government that would either grant or participate in a decision regarding the lease, including the Navajo Nation Division of Natural Resources (NNDNR), the Cameron and Coalmine Canyon chapters, and the Navajo Land Department (NLD). Meetings started in March 2018 and continued through March 2023[15]. As described in **Section 14**, PDP is complying with the Navajo Nation's General Leasing Regulations of 2013 and working with the assigned environmental reviewer from the Navajo Nation General Land Development Department (GLDD) to complete all permitting requirements.

The Biological Resources Compliance Form (BRCF) was issued by the Navajo Department of Fish and Wildlife on February 5, 2021, and completed on February 8, 2021, and the

[14] Upon the Coalmine Canyon Chapter's approval of the resolution supporting land withdrawal, this table will be updated in the plan of development.
[15] Meetings are ongoing and the end date of this range is current as of the date of this document.

Cultural Resources Compliance Form (CRCF) was completed by the Heritage and Historic Preservation Department on March 31, 2021. PDP intends to avoid or mitigate significant biological or cultural impacts on the Project Site based on survey data collected to date.

Preconstruction biological clearance surveys and/or monitoring are required by the Navajo Nation Department of Fish & Wildlife (NNDFW) prior to Project construction.

Engineers are using 50 ft setbacks from all eligible cultural sites, with two exceptions:

- the setback for the standing hogans adjacent to Area 1 and the West Connector will be no less than 100 ft
- there will be a general "prehistoric corridor" avoidance area to the immediate northwest of the slurry pipeline in Area 2 with a setback of at least 100 ft from eligible cultural sites, with an exception made only for the Area 2 Connector

It is expected that the preparation of a threshold determination document under the leasing regulations would lead to issuance of a Finding of No Significant Impact (FONSI) for the Area 1 and Area 2 solar installations. Following the issuance of the FONSI, PDP would be eligible to enter into negotiations for a lease with the Navajo Nation. PDP has retained a land appraiser to value the land. This valuation would inform discussions between PDP and the Navajo Nation about setting a market-based lease value that fairly compensates the tribe.

10.0 CONSTRUCTION

10.1 SOLAR ARRAY AND SUBSTATION CONSTRUCTION

10.1.1 Site Preparation

Construction of the Project would begin with the clearing and grading (as necessary) of staging areas. Access to the Project Site would be improved to appropriate construction standards. Staging areas typically include temporary construction trailers, worker parking, truck loading and unloading facilities, and fabric buildings and areas for assembly. Road corridors would be surveyed, cleared, and graded to bring equipment, materials, and workers to the locations under construction. Existing buried electrical lines or pipelines, PV array locations, and locations of other facilities could be flagged and staked to guide construction activities. Cultural sites and other sensitive resources would be permanently fenced or temporarily roped off prior to construction activity in their vicinity. Best management practices for stormwater and erosion control would be put in place during the site preparation phase and prior to significant grading activities.

Two temporary water tanks would be established to store water for use during construction. Diesel and gasoline fuel tanks would be set up and operated on the Project Site in accordance with Navajo Nation, state, and federal regulations.

10.1.2 Solar Array Construction

PV system installation would include earthwork, grading, and erosion control, as well as erection of the trackers, PV panels, foundations, and associated electrical equipment. System installation would begin with teams installing the single-axis trackers and steel pile support structures. Their exact design would be determined by the specific soil conditions but would likely include pneumatically driven steel beams (W, C, or Sigma profiles) attached to a tracker racking system. Panel installation and electrical work would follow.

Concrete may be required for the footings and foundations and would be required for the pads for the inverters, transformers, and BESS. Concrete would be produced at an off-site location by a local provider and transported to the Project Site by truck. Final concrete specifications would be determined during detailed design engineering and would meet applicable building codes. Inverters and MV transformers are typically delivered on prefabricated skids (or placed on skids assembled on-site) then lifted onto concrete foundations via crane.

The trackers require a moderately flat surface for installation. Some minor earthwork—including grading, fill, compaction, and erosion control—will be required to accommodate the placement of trackers, foundations or footings, access roads, and drainage features. Construction of the solar arrays would include installation of trackers, PV panels, inverters, transformers, buried electrical cables, and other related equipment. Some parts of the solar field might be assembled in the vicinity of the laydown yard rather than in the field.

Trackers would generally follow existing land contours with localized grading where necessary to address major variations in topography and in areas where it would not significantly impact existing vegetation or surface hydrology. Grading within the Project Site would be limited to the locations of access roads, inverter pads, laydown areas, some trackers where topography requires it, internal and external transmission poles, and ancillary facilities (including the parking and material storage areas, the O&M facilities, and the Project substation).

Across most of the Project Site, a low-impact mow and disc-and-roll technique would be used to remove surface vegetation and keep root balls in place. This practice minimizes dust generation and water usage related to dust suppression and promotes faster regeneration of vegetation cover than re-seeding alone. Grubbing and grading would be required to level particularly rough areas of the Project Site and to prepare the ground for concrete foundations for substation equipment and inverters. Access roadbeds would also be grubbed, graded, and compacted. The fenceline would be grubbed and graded to create a level surface for proper fence installation.

Recycling would be conducted during construction in compliance with the Coconino County Engineering Design and Construction Manual and any other Navajo Nation or county requirements.

10.1.3 Substation Construction

Medium-voltage collection circuits would be routed to the Project substation at the southwestern corner of the Project Site. The main components of the substation are the

steel riser structures, electrical bus work, circuit breakers, main power transformer, pad transformers, switches, reactive power equipment, and electronic cabinets. All are installed on poured concrete pads or column foundations. As many as three step-up transformers would be installed within concrete oil containment basins to prevent environmental spills. Capacitor banks might also be installed to provide the reactive power required by the grid. The control building of the substation would be prefabricated and installed on-site on a poured concrete pad. A copper wire grounding network consisting of wire and driven grounding rods would connect all substation components to facilitate electrical grounding of the substation. Electrically rated rock gravel would be spread within the substation area and for approximately 2 ft outside the substation area to prevent potential step/touch voltage hazards for workers.

10.1.4 Construction Schedule

Construction would be expected to require approximately 12 to 36 months from the beginning of site preparation to the completion of a commercially operational facility. The full 750MW Project could be constructed in approximately three phases. Construction of Area 1 is expected to begin first, but construction of Area 2 could precede, overlap with, or follow construction of Area 1. The schedule would depend on future commercial arrangements.

10.1.5 Traffic and Circulation

The number of workers expected on the Project Site during construction would vary over the construction period. If the full 750MW Project is built in a single phase, peak workforce is expected to average approximately 500 each day, generating about 70 daily round trips (**Table 10.1-1**). The number of deliveries of equipment and supplies per day would also vary over the construction period, with an estimated daily average of 25 trips per day and a total of approximately 40,320 trips over a material delivery period of 12 to 36 months. Depending on the phasing of construction, more daily deliveries could be required. All Project-related parking during construction would be on-site, moving within the solar field as it is developed. Off-site parking and worker shuttling could also be considered. A traffic and transportation plan would be prepared for the Project and would include detailed worker and delivery trip estimates.

Table 10.1-1 illustrates the likely requirements for worker transportation to the Project Site during construction, which may vary based on the phasing of construction. An estimated 10% of the drive would be on unpaved roads.

Table 10.1-1 Construction Workforce Transportation Requirements

TYPE	MONTHS	HOURS PER DAY	QUANTITY OF VEHICLES	TOTAL *(in hours)*	NOTES
Buses	12	2	5	2,880	Busing from neighboring towns and cities
Vanpools	12	2	20	11,520	Vanpools from neighboring towns and cities

TYPE	MONTHS	HOURS PER DAY	QUANTITY OF VEHICLES	TOTAL *(in hours)*	NOTES
Cars	12	2	40	2,3040	Estimated 85% of workforce commuting from the south[16]
Project Support	12	2	5	2,880	From airport
			Total	40,320	

Table 10.1-2 lists the distances likely traveled by construction materials and equipment.

Table 10.1-2 Construction Material and Equipment Transportation Needs

TYPE	MONTHS	HOURS PER DAY	QUANTITY OF VEHICLES	TOTAL *(in hours)*	NOTES
General (Phoenix)	12	8	2	4,992	Mostly electrical supplies
General (Flagstaff)	12	4	4	4,992	
General (Utah)	12	2	4	2,496	
Modules (Long Beach, CA)	3	16	15	7,020	
			Total	19,500	

Table 10.1-3 lists the number of water trips during construction expected to be required if water is sourced outside the Project Site.

Table 10.1-3 Water Trips Required for Project Site Construction

TYPE	MONTHS	HOURS PER DAY	QUANTITY OF VEHICLES	TOTAL *(in hours)*
Dust Mitigation	12	10	4	11,520
Civil Usage	3	10	4	2,880
Logistics	12	6	2	3,456
Other (Parking)	12	4	2	2,304
			Total	20,160

Table 10.1-4 lists the expected number of fuel trips needed during construction.

[16] Chuck Howe, C2 Environmental

Table 10.1-4 Fuel Trips Required During Construction

TYPE	MONTHS	REFILLS	QUANTITY OF VEHICLES	TOTAL *(in gallons)*	NOTES
Gasoline	12	12	2	288	100-gallon tank
Diesel	12	12	8	1,152	500-gallon tank
HV Breaker Gas	3	0	3	9	Limited to Cx storage tanks
			Total	1,449	

10.1.6 Construction Workforce Estimates and Housing

In compliance with the Navajo Preference in Employment Act (15 Navajo Nation Code 7) and the Navajo Nation Business Opportunity Act (5 NNC 2), PDP will make efforts to hire qualified Navajo professional employees and/or contractors. To maximize the number of Western Navajo residents able to take advantage of this opportunity, PDP will make efforts to work with Navajo colleges, universities, and others to create a workforce development and training program to build capacity for Navajos to work on the Project. In addition, the Project will aim to hire relevant Navajo-owned businesses. Job fairs would be advertised and hosted on the Navajo Nation well in advance of the commencement of construction.

Construction of Area 1 would be expected to require approximately 200 to 300 on-site construction workers at peak workforce. For the construction of Area 2, 500 construction workers could be required at peak workforce depending on the duration of the construction schedule and phasing of the buildout.

To prepare for Project construction, PDP would work with the Navajo Nation to develop a workforce housing plan that incorporates local hotel, motel, recreational vehicle (RV) park, and temporary rental resources in nearby towns and cities, including Cameron, Tuba City, and Flagstaff. No on-site housing facilities are expected to be built.

10.1.7 Construction Equipment List

Table 10.1-5 is a list of typical construction equipment expected to be required for the Project.

Table 10.1-5 Project Construction Equipment List

ITEM OF CONSTRUCTION EQUIPMENT	NUMBER REQUIRED
Off-Highway Trucks	12
Skid-Steer Loaders	20-30
Rubber-Tired Dozers	12
Tractors/Loaders/Backhoes	16
Excavators	20-30
Graders	12

ITEM OF CONSTRUCTION EQUIPMENT	NUMBER REQUIRED
Rollers	8
Bore Drill Rigs	32
Forklifts	30-40
Reach Stackers	16
Gantry Cranes	16
Trailers	16
Generator Sets	16
Pile Drivers	48
Helicopter	1
Mini/Large Trenchers	20-30
Large Dump Trucks	20-30

A construction work week would consist of up to seven 10- to 12-hour days with vehicles expected to be required for construction operating on the schedule outlined in **Table 10.1-6.**

Table 10.1-6 Construction Vehicle Quantities and Schedules

TYPE	MONTHS	HOURS PER DAY	QUANTITY	TOTAL *(in hours)*	NOTES
Civil Equipment	3	8	10	5,760	Including blades, scrapers, loaders, dozers, rollers, etc.
Post Machines	9	8	10	17,280	
Forklifts	12	8	14	32,256	For off-loading and logistics
Vehicles	12	8	12	27,648	
Buggies	12	8	40	92,160	
Vans/Buses	12	2	10	5,760	For transporting personnel to work areas
Cranes	3	6	1	432	For PCS skid off-loading
Module Trucks	3	8	14	8,064	May be exempt as delivery vehicles
Generators	3	10	20	14,400	For inverter Cx, if needed
			Total	203,760	

10.2 GEN TIE CONSTRUCTION

10.2.1 Pre-Construction Activities

The first activities conducted as part of construction would be surveying and staking facility locations. Field topographic surveys would be conducted to obtain detailed topographic information with 1-ft interval accuracy. The surveys would use photogrammetry and field cross-sections. Simultaneously with the field surveys, Project facilities locations would be staked. Facilities and areas to be staked would include the ROW and construction area boundaries, gen tie structure centers, foundation structures, and designated areas to protect cultural resources. No paint or permanent discoloring agents will be applied to rocks or vegetation to indicate activity limits.

The work would be performed in accordance with standard stipulations included in the BIA's ROW. Standard best management practices (BMPs) and design features would be followed and used during the design, construction, and reclamation phases.

Construction activities would commence upon approval of the ROW grant by the BIA. Construction could take approximately 3 to 6 months to complete.

10.2.2 Vegetation Clearing and Grading

During construction, topsoil (the upper 6 inches of soil, or what is available) would be removed and stockpiled for use in reclamation. BMPs (e.g., silt fence, filter socks) would be used during construction to minimize erosion of disturbed areas. A stormwater pollution prevention plan (SWPPP) has been prepared for the Project and would be implemented during construction. Vegetation would not be removed along the gen tie ROWs unless it is located along an access road or if the area requires grading to ensure stable or level areas for power line infrastructure (i.e., structure locations/poles).

10.2.3 Gen Tie Construction

Construction would consist of grading, drilling, and excavation for the gen tie structures and the maintenance access road. Following site preparation, foundations would be installed at each power line structure location. The exact type of foundation would vary, depending on the type of structure developed in the final design. Foundations may include drilled-shaft anchor-bolted foundations, drilled-shaft embedded foundations, or vibrated steel casings.

10.2.3.1 Structures

An auger truck or excavator would excavate a hole for each structure base or a foundation if required. If the pole requires a concrete foundation, then concrete with reinforcing steel bars and anchoring bolts would be placed to fill the hole. Vertical excavations would be made with power auguring equipment. Blasting is not anticipated. In rocky areas, holes would be excavated by drilling or by installing special rock anchors. During excavation, structure sites would be accessed by truck-mounted power augers or drill rigs, cranes, material trucks, and crew trucks. Spoil material (excavated soil) would be used for fill where suitable, and the remainder would be spread at the structure site.

The power line structures for the gen tie would be delivered to the laydown yard for storage and then transferred from the laydown yard to their installation location as needed. The structures would be assembled in sections on cribbing that provide for the proper alignment of the steel members. Steel sections would be laid out with hydraulic cranes. The pole base and top sections would be assembled at each structure site. Insulators and hardware may be placed on the structure before its erection.

The gen tie line structures would be constructed of tubular steel poles and either a monopole or H-frame design (**Figure 7.4-1**). A crane would be used to set the pole base sections onto each foundation. An electrical grounding crew would then install the grounding and test the ground resistance. The structures would be no higher than 140 ft.

10.2.3.2 Conductor Stringing

The cable for the gen tie line would be strung using conventional wire stringing using tension stringing equipment. The wires would be sagged following specified sagging data, corrections, and offsets. The wires would be dead-ended on the dead-end structures and clipped in on the tangent and angle structures. Conductor stringing would likely be done one phase at a time, with all equipment in the same operational place until all phases of that operation are strung. Several temporary pulling sites may be needed for construction; the actual number and location would be determined in the final power line design. The line would be hung by truck.

The sequence of conductor stringing is summarized below:

- **Finger Lines**: The finger line pulls the later pilot line through travelers installed on each davit arm. The finger line is typically a small diameter synthetic rope that can be pulled by hand or a crawler tractor.
- **Pilot Lines**: The finger line, once in place, is used to pull the pilot line, which is a larger synthetic rope or small steel line. This requires a vehicle at each side of the pulling area, a Bullwheel tensioner truck pulling the pilot line, and a drum puller truck on the other side holding the reel.
- **Conductor**: The conductor is pulled through using the pilot line. Other activities may include offset clipping if suspension insulators are not plumb or splicing together two conductor reels. Once complete, the traveler equipment would be removed.
- **Tensioning**: After the conductor is completely strung through a section, the section is tensioned to comply with design specifications. The dead-end clamps would be tightened once the conductor has been tensioned or loosened to meet the appropriate sag specification given the ambient temperature.

10.2.3.3 Pole Structure Pads

The typical gen tie structure construction site will be a maximum of 200 feet by 200 feet. The typical collector line structure construction site would be a maximum of 50 feet by 100 feet (0.12 acre). The footprint of the structure foundations would be 3 to 10 feet in diameter (78.5 to 262 square feet). Collector lines can also be installed below grade or

trenched. Framing pads would be accessed by the existing and proposed road network and along the proposed ROW.

10.2.4 Access

The Project area would be accessed via existing area unnamed roads and two-tracks. Minor maintenance would be needed to keep the access/service roads passable for the life of the ROW.

10.2.5 Safety and Traffic Control

All construction activities would be required to comply with Occupational Safety and Health Administration regulations. Appropriate speed limits would be enforced for all construction personnel. During dry weather, dust would be controlled by watering roads to increase visibility. The applicant would provide for the safety of the public traveling on existing roads.

10.2.6 Construction Workforce

The workforce would consist of laborers, craftsmen, supervisory personnel, and construction management personnel for power line construction and the solar generating and storage facility. In total, there would be approximately 200 to 500 gen-tie and construction workers on-site, on average. About 70 vehicles would be needed to transport the workforce to and from the construction site (**Table 10.1-1**).

Construction would occur up to 7 days a week for up to 10 to 12 hours per day. Additional hours may be necessary to make up for schedule and weather delays. Due to extreme heat during summer months or rain delays, cement crews (for example) may need to work during nighttime hours to avoid excessive heat that would complicate curing and drying cement.

10.3 ROAD CONSTRUCTION AND IMPROVEMENT

Prior to beginning road work, PDP would document the conditions of all access roads and turnoffs to the Project Site by video, showing the full width of the roadway plus a 5-ft buffer in preparation for the restoration work required at completion of the full-scale Project build-out. All the access roads (**Table 7.8-1**) would be graded and improved to appropriate construction standards (widened, compacted, covered with gravel, or paved, etc.) due to the increased traffic volume and heavy loads transported on these roads during construction in all weather conditions (**Table 7.5-1**).

The dirt roadways within and around the Project Site would be graded and compacted. Minimal grading work is expected to be done to establish these routes. Some roads, including BIA RT 6730 and access roads serving the O&M facilities and the Project substation, would be covered with aggregate base course. The existing turnout providing access to BIA RT 6730 from US 89 may need to be enlarged, improved, or paved to appropriate construction standards[17]. Detailed specifications for improvements to the US

[17] Options for access to BIA RT 6730 from US 89 are currently being reviewed with ADOT.

89 turnout and BIA RT 6730 would be defined through coordination through applicable agreements with NDOT and consultation with ADOT and the BIA.

Multiple temporary construction access routes would also be established between US 89 and the west rim of the Little Colorado River canyon and on the east side between BIA RT 6730 and the east rim. In these areas, construction crews would use existing jeep tracks to the extent feasible but might need to widen or improve these routes to afford access and allow for the delivery of equipment and structures for gen tie construction.

10.3.1 BIA RT 6730 ROW

10.3.1.1 Existing Condition and Proposed Improvements

BIA RT 6730 will serve as the primary access route for the project site. Upgrades will be required for both construction and operations and maintenance (O&M). Improvements will include upgrades to the roadway surface, minor adjustments to the roadway width, and improvements to the drainage crossings. The cattle guard will be improved or protected in place. The project proposes to improve approximately 3.8 miles of BIA RT 6730, from its most westerly point where it meets US 89.

BIA RT 6730 is currently an unpaved road running parallel to the LCR along its eastern bank. The road surface consists of compacted native material that appears to stand up well to the current traffic loads. The road varies in width from 21 to 38 feet. Minor rutting can be observed along the road at points where various washes cross the roadway as shallow ford crossings. In addition to the ford crossings, there is one 18 to 24-inch corrugated metal storm drain crossing near the eastern end of the planned BIA RT 6730 improvements. A cattle guard lies at the western end of BIA RT 6730, between US 89 and BIA RT 6742.

The roadway would be improved to a minimum width of 20 feet with 2-foot shoulders and would likely be resurfaced with gravel or aggregate base. Depending on local fire and emergency access requirements, the fire marshal may require asphalt pavement, instead of compacted road base, as this route will provide emergency access to the entire site. The shoulders may be armored with rock in areas where washes flow parallel to the roadway. The roadway will be crowned with a 2-3% cross slope for drainage. The existing cattle guard will be protected or improved, as needed, to protect its existing function and purpose.

The existing storm drain crossing will be improved to withstand construction and O&M equipment loading. Ford crossings will be analyzed during the design phase. Depending on local fire marshal requirements and maximum flood depths, the ford crossings may need to be improved to allow for reliable access. Improvement of ford crossings could include rock ford construction, concrete ford construction, or construction of dry culvert crossings.

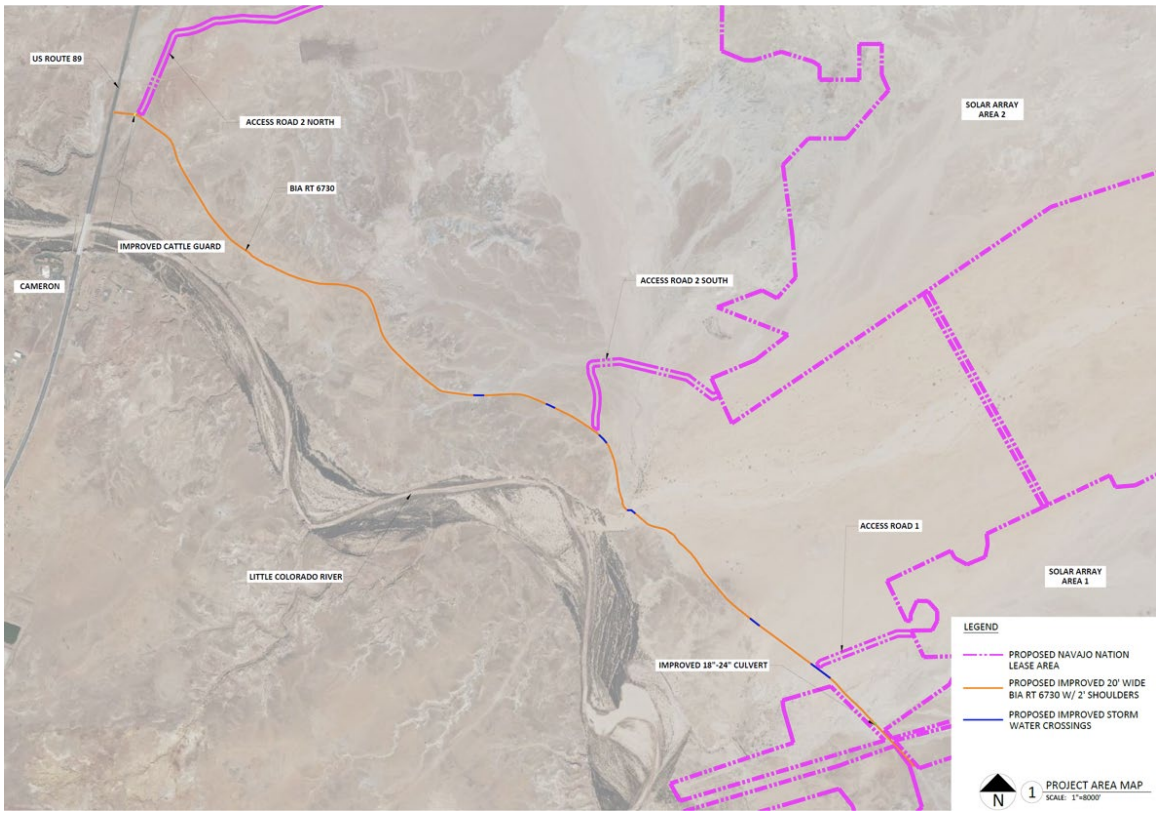

Figure 10.3-1 BIA RT 6730 ROW Improvements

10.3.1.2 Construction Activities

Methods of construction and types of equipment to be used on the BIA RT 6730 improvements may include a grader, blade, backhoe, dump trucks, and transport trucks. There will be a workforce (number of people and vehicles) of approximately 10 to 20 construction personnel on-site during road construction and improvement. Approximately 5 to 10 standard size pickups will be used to transport construction personnel and 6 to 8 transport truck loads to deliver equipment to location. Workers will be on-site 10 hours a day, 6 days a week (Monday through Saturday), for the duration of construction. Heavy equipment will be transported to the site and left until construction is complete.

10.3.1.3 Pre-Construction Staking

The BIA RT 6730 ROW boundary will be staked to ensure all activity is confined to the authorized area. When applicable, boundaries will be marked with station numbers. All staking will be maintained for the duration of the construction.

10.3.1.4 Clearing and Grading

Vegetation removal would only occur along the edges of the ROW where the road surface is widened or where drainage structures are installed along the road to facilitate stormwater drainage.

10.4 SITE RESTORATION AND RESEEDING

To minimize dust, erosion, and weed infestations, Project areas graded or cleared of vegetation to allow for construction may be reseeded at the direction of the NNDFW with a native seed mix developed in coordination with the NNDFW botanist, including appropriate grasses and pollinator plants. Potential for the introduction of new weeds or spread of existing weeds because of Project development would be minimized through the implementation of a weed management plan and any use of herbicides would be coordinated with the NNDFW and would follow guidelines and measures contained in the Navajo Nation Integrated Weed Management Plan, Appendix E Mitigation Measures. Specifically, PDP would follow the US Fish and Wildlife Service Recommended Protection Measures for Pesticide Applications in Region 2 (April 2007).

11.0 OPERATIONS AND MAINTENANCE

Upon commissioning, the Project would enter the operational phase. For the duration of the operational phase, the Project would be operated remotely and monitored by on-site staff for security and maintenance purposes. As the Project's PV arrays produce electricity passively with a minimal number of moving parts, maintenance requirements would be limited. Any required planned maintenance would be scheduled to avoid peak load periods and unplanned maintenance would typically be performed as needed. An inventory of spare components would be maintained on-site or in a nearby warehouse facility. Visual inspections of cables and towers would be conducted periodically and failures, such as those due to unforeseen weather events, would be repaired.

11.1 O&M ACTIVITIES

It is expected that a small warehouse and a modular office trailer would be located either near the Project substation or centrally on the Project Site. The location of the O&M facilities would be determined after further on-site studies and detailed design, but would be within the area surveyed for biological, cultural, and other resources. Potable water would be available on-site and the trailer may include a septic system for sanitary facilities. Electricity would be available on-site via backfeed power or on-site generators. The total footprint of the O&M facilities should be no greater than 7,000 square feet (sq ft). A small parking area would be contiguous to the O&M facilities. The design and construction of the solar arrays (panels, inverters, etc.) and the warehouse would be consistent with Navajo Nation building standards.

Standard operational activities to ensure maximum efficiency include:

- responding to automated alarms based on monitored data, including actual versus expected tolerances for system output and other key performance metrics
- communicating with customers, transmission system operators, and other entities involved in facility operations
- designating a site supervisor to monitor and implement emergency and normal shutdown procedures

11.2 O&M WORKFORCE AND CIRCULATION

When fully operational, the Project could require as many as approximately [NUMBER NEEDED FROM AES] on-site technicians and personnel. Additional O&M personnel would travel to the Project Site on a regular basis to perform specialized preventive maintenance or respond to unplanned outages.

During Project operation, primary access to the Project Site would be via the gate off of BIA RT 6730, with access off the Cameron airstrip available for emergencies. Operation of the Project could generally be expected to generate fewer than [INSERT NUMBER FROM TABLE 11.2-1 UPON REVISION] trips per day by maintenance and security personnel (**Table 11.2-1**).

Table 11.2-1 O&M Workforce Transportation Needs

TYPE	MONTHS	HOURS PER DAY	QUANTITY OF VEHICLES	TOTAL *(in hours)*	NOTES
Trucks	420	2	[TBD]	[TBD]	Based on [TBD] O&M techs and one supervisor [TBD]

Each panel cleaning period could require an average of up to 100 water truck deliveries per day. Other deliveries of supplies or equipment could be necessary to support O&M. There would be no significant impact on current local traffic patterns during the operation of the Project.

11.3 O&M EQUIPMENT

Equipment required for operation includes:

- inverters (daytime use only)
- MV transformers (24/7)
- solar tracker motors (daytime use only)
- HV transformer (24/7)
- emergency diesel backup generator at the substation (monthly maintenance operation for thirty minutes to one hour; emergency backup power typically required less than annually)
- substation MV and HV circuit breakers (very infrequent operation one second in duration)
- only if needed, tractors with scrapers for mowing and vegetation management (annual 20-day event requiring 10 tractors eight hours per day, five days per week)
- basic utility and pickup trucks for general security patrols and maintenance

Table 11.3-1 is a list of typical operating equipment expected to be required for the Project and the sound power level of each item.

Table 11.3-1 Project Operation Equipment Sound Power Levels

ITEM OF OPERATION EQUIPMENT	SOUND POWER LEVEL *(in A-weighted decibels, or dBA)*
Solar Tracker Motor	58
MV Transformer	66
HV Transformer	89
BESS	75
Inverter	65-75
Generator	73
Hand Power Tools	109
Light Vehicles/Pick-Up Trucks	88

Inverters and MV transformers would be located throughout the solar arrays, but would be placed interior to the arrays, at least 300 ft from the Project Site boundary in all cases.

The HV equipment (HV transformers, BESS, and backup generator) would be located only in the substation/BESS area, more than 1 mile from the nearest residence. The backup generator is for emergency use only in the event of an outage to the gen tie.

The Project would reduce potential for greenhouse gas (GHG) emissions using best management practices, including recovery, recycling, and safe handling of sulfur hexafluoride (SF_6), 1,400 lbs of which may be used in each 500kV circuit breakers' gas-insulated switchgears. SF_6 leakage rates are below 0.5% per year and each circuit breaker would be equipped with an SF_6 gas density monitoring system to indicate loss of SF_6 and trigger a lock-out function if levels drop.

11.4 SITE MAINTENANCE

Project maintenance performed on-site would consist of equipment inspection and replacement. Maintenance would occur during daylight hours. Maintenance program elements include:

- managing a group of prequalified maintenance and repair firms to meet the O&M needs of the facility throughout its life.
- implementing a responsive, optimized cleaning schedule.
- responding to plant emergencies and outages in a timely manner.
- maintaining an inventory of spare parts to ensure timely repairs and consistent plant output.
- maintaining a log to effectively record and track all maintenance problems.
- performing maintenance on the Project Site as required to clear obstructive ground cover.

The energy production of the proposed solar power plant would be optimized by periodic cleaning. It is not anticipated that the Project would experience high levels of dust accumulation on panels, but several cleanings per year may be conducted depending on

weather conditions. Cleanings would occur as many as four times per year. Manual cleaning requires a water truck with attached sprayers and brushes that drives down the solar panel rows washing the panels. The water consumption is approximately 3 cups per panel and a crew of 30 people with trucks can clean the array in approximately 3 weeks.

11.5 ROAD MAINTENANCE

Road maintenance up to and including full reconstruction or adjustment of the elevation/location of access roads may occur to provide adequate access for workers, deliveries, vehicles, and emergency vehicles, as needed. Best practices in road maintenance would be implemented to repair damaged features following storm events and between rainy seasons. Road maintenance would be minimized by conducting regular inspections and by maintaining site drainage features. Wet season closures of unpaved internal roads will also be employed to minimize the need for heavy maintenance and reconstruction.

11.6 REMOTE MONITORING

The Project would be monitored 365 days a year from a remote location utilizing a SCADA system. Safe, effective, and efficient operation of the Project would be dependent upon the operator receiving accurate information on all environmental measurements that affect production, including solar irradiation, ambient temperature, back-of-panel temperature, and wind speed. These environmental characteristics would be reported by sensors: pyranometers measuring irradiance, thermometers measuring temperatures, and anemometers measuring wind speed. Other characteristics of the Project would also be reported in real time, including the current production, voltage, amperage, power quality, and status of all circuit protection devices.

Signals from all sensors, meters, and circuit protection devices would be accumulated in one or more data loggers, which would report via secure internet connections to the monitoring provider. The monitoring system would be set up to send alarms when one or more conditions compromise the safe and efficient operation of the Project. If an emergency should arise in the off-hours, on-call personnel would be assigned to immediately report to the Project Site.

12.0 DECOMMISSIONING AND RECLAMATION

The Project is expected to have a useful life of at least 35 years, subject to extension with component upgrades and system replacements. PDP would decommission and remove the system and its components at the end of the Project's useful life. The Project Site could then be converted to other uses or be restored to sheep grazing property. All decommissioning, system removal, and Project Site restoration activities would adhere to the requirements of appropriate governing authorities, including requirements set forth in the lease and real estate agreements with the Navajo Nation.

As part of decommissioning, Project Site restoration activities are likely to include the removal of permanent access roads, including Access Road 1, Access Road 2 South, and Access Road 2 North and the Area 2 Connector, according to the requirements of the appropriate governing authorities, including requirements set forth in the lease and real

estate agreements with the Navajo Nation. Prior to construction, PDP would document the conditions of all access roads and turnoffs to the Project Site by video, showing the full width of the roadway plus a 5-ft buffer. Any public street surfaces damaged by Project construction traffic would be restored to their pre-existing condition within 6 months of completion of the full-scale Project build-out. Upon completion of the full-scale Project build-out, the temporary access roads used during construction would be reclaimed to as close as possible to pre-construction function and conditions.

13.0 ENVIRONMENTAL SETTING

13.1 OVERVIEW

Site planning, design features, and mitigation measures are expected to mitigate any potential effects on air quality, hazardous materials, soils, and cultural, paleontological, biological, hydrological, geological, mineral and mining, visual, and other resources. Transportation management, dust control, noxious weeds, erosion and sediment control, and other plans would be prepared as needed to mitigate short-term impacts during construction.

The Project would change the current land use from primarily low-density grazing land and partially reclaimed, abandoned uranium mining to clean energy generation for the duration of the Project life. Because there is ample open range land around the Project Site, this Project is likely to have a negligible effect on recreation, grazing, agriculture, and other adjacent land uses. Once the Project is decommissioned and reclamation has been completed, the Navajo Nation, in collaboration with the BIA, could reinstate grazing and recreation at the Project Site. During Project operations, sheep grazing would be a compatible land use to provide vegetation control within the solar arrays. Sheep grazing within solar arrays is a widely practiced vegetation management technique in the US and globally and is feasible on the Project Site.

The visual impacts of the Project are being mitigated by the Project Site's remote location, its setback from BIA RT 6730, the low profile of most Project components, and the co-location of the transmission line with the existing APS Four Corners transmission line of similar size.

13.2 LAND USE

The Project Site is almost entirely vacant rangeland east of US 89. The Project is located on Navajo Nation land and BIA-managed lands in a region where many uranium mines operated in the 1950s and 1960s. Several AUMs adjoin the subject property, but only one encroaches near the gen tie corridor (**Figure 13.2-1)**. Existing electrical transmission lines run parallel to the proposed gen tie corridor; the gen tie corridors cross the Little Colorado River and US 89 before terminating at the Moenkopi Substation just west of US 89. Most of the proposed access roads are existing dirt roads that would be improved for access to the Site from US 89.

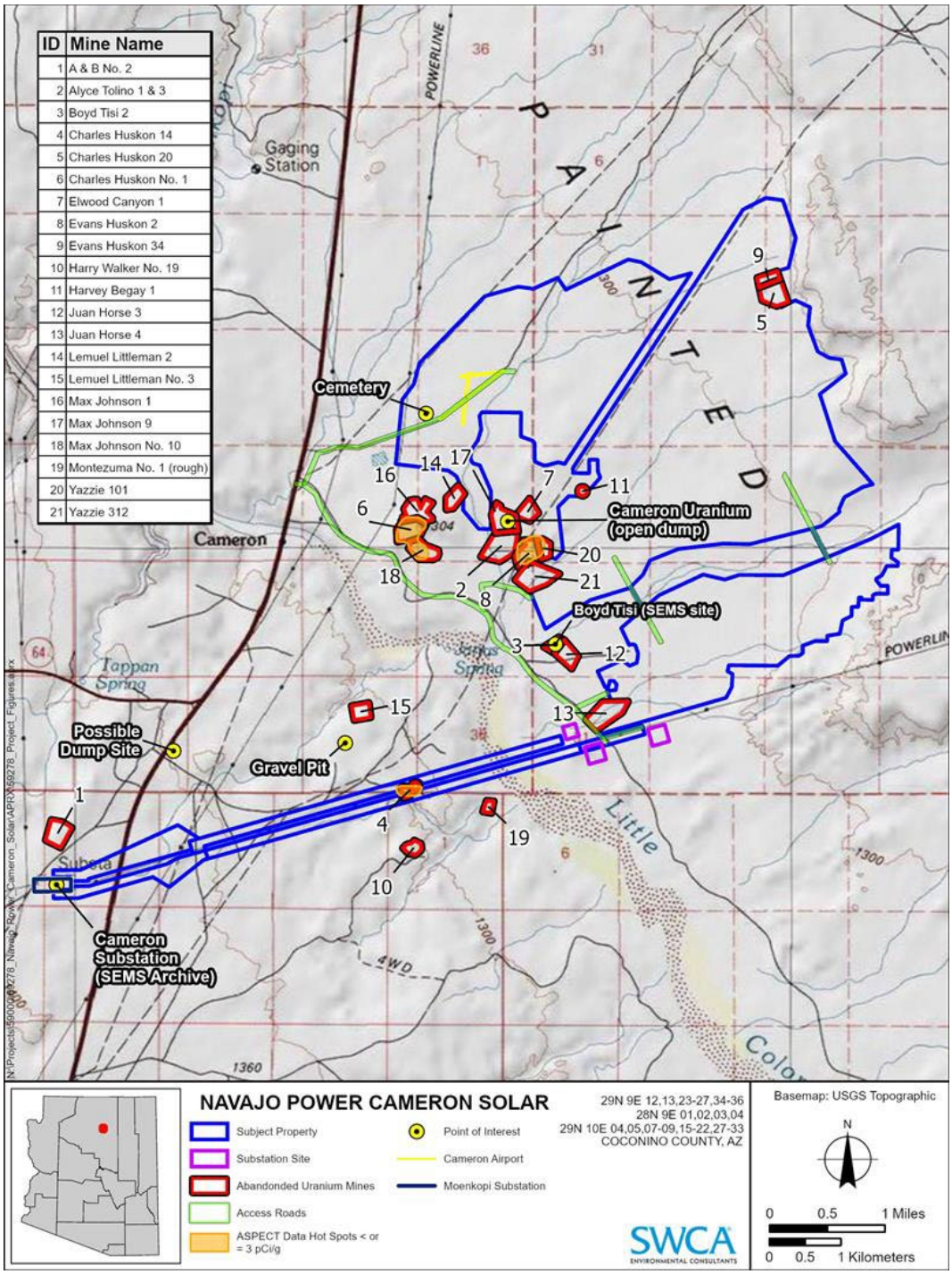

Figure 13.2-1 Map of the Project Site and Features of the Surrounding Area[18]

Other features in the area surrounding the Project include:

- an abandoned airstrip (formerly Cameron Airport), which is inactive and unmaintained but can still be used for medical and other emergency landings.

[18] This map shows the original project scoping area.

- an approximately 1-acre cemetery is located 0.35 miles west-southwest of the abandoned airstrip.
- a pipeline corridor separates the western and eastern parts of Area 2.
- the Cameron Landfill is mapped 900 ft northeast of the Cameron Uranium Landfill.

A few isolated residences are located west of the solar array area and the proposed gen tie would cross a 413.1-acre plot of BIA-designated cropland situated along approximately 1.75 miles of the Little Colorado River floodplain.

Approximately half of the Project is located within the Little Colorado River Navajo Tribal Park, a 363,574-acre recreational area featuring the deep narrow gorge of the Little Colorado River with a visitor center in Cameron, Arizona. The boundaries of the park are not defined or indicated by any signage in the Project area and due to the absence of unique landscape features or trails in the Project area, it is unlikely to be a destination for tourists or tribal members interested in visiting the park.

13.3 HISTORIC AND CURRENT MINING AND RECLAMATION

Fifty-seven AUMs occur within 5 miles of the Project Site. Based on USEPA site assessment reports, 14 are unreclaimed or their status unknown. The ground surface extent of the unreclaimed Charles Huskon No. 14 AUM is located beneath the proposed gen tie (**Figure 13.2-1**).

Some of the AUMs are said to have been reclaimed, but it is not clear that the reclamation work adhered to USEPA standards. However, gamma radiation and bismuth measurements at all the unreclaimed mines are notably higher than those of naturally occurring radioactive material (NORM) as compared to the reclaimed mines, indicating that past reclamation practices were successful in limiting surface radiation (SWCA 2022).

The Project Site itself, according to Navajo families who live in the area, does not include any abandoned uranium mining operations. However, according to the Phase I ESA for the Project Site, 14 different uranium mines operated in the immediate vicinity (**Figure 13.3-1**) and are now in various states of reclamation.

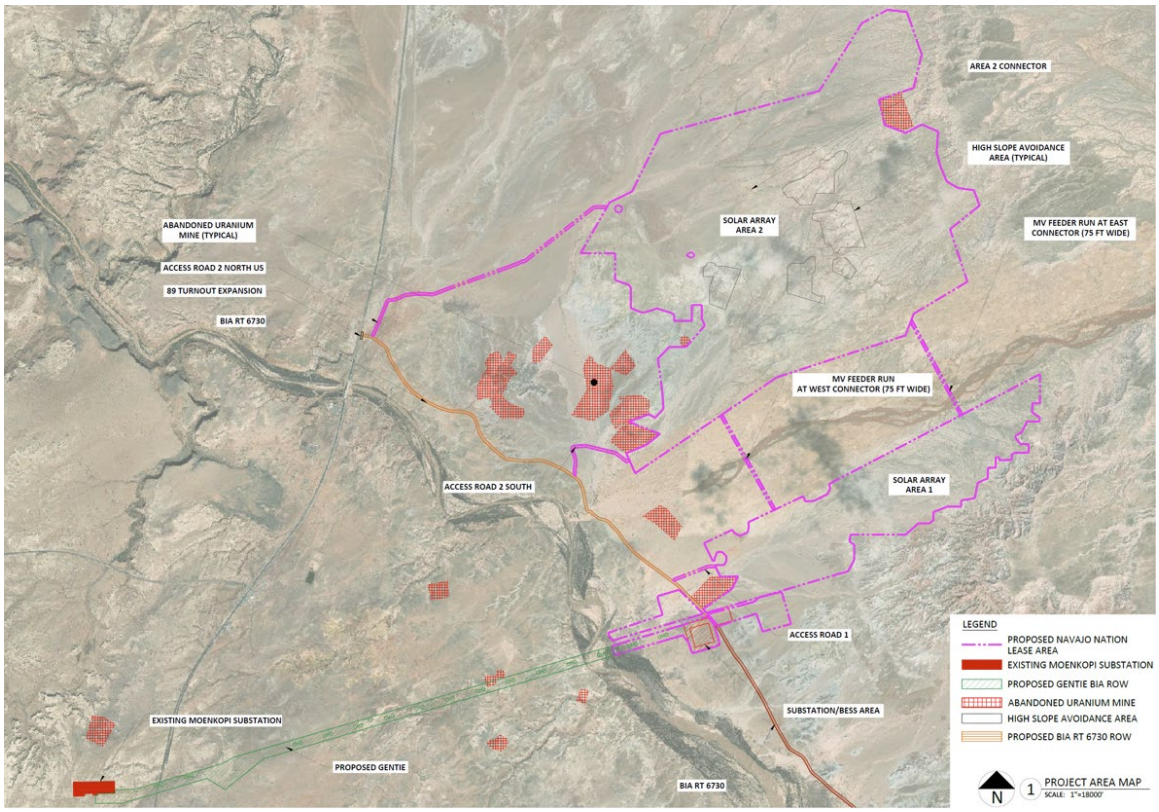

Figure 13.3-1 Abandoned Uranium Mines in the Project Area

South of the Project Site, the Juan Horse No. 4 Mine, ownership unknown, has been identified by the Navajo Abandoned Mine Lands (NAML) Reclamation Department. The Juan Horse No. 3 Mine, located just southwest of the Project Site and owned by Wells Cargo, has received Superfund monies for reclamation, but the USEPA is currently reassessing this site. The Boyd Tisi No. 2 Mine, ownership unknown, is just northwest of the Juan Horse No. 3 Mine and subject to trust funding from a settlement. It is a Superfund Enterprise Management System (SEMS) site. West of the Project Site is the Yazzie No. 312 Mine. This mine contains six sites, owned by El Paso Natural Gas, Wells Cargo, and other unknown operators. These six sites are in various states of reclamation, subject to Superfund and settlement trust funding. West of the Yazzie No. 312 Mine is the Max Johnson No. 10 Mine, which contains four sites, owned by El Paso Natural Gas and other mine operators. Like the sites in the Yazzie No. 312 Mine, the Max Johnson No. 10 Mine sites are in various states of reclamation. Because none of these abandoned uranium mines are located on the Project Site, development of the Project is not expected to impact any of these historic mining areas.

13.4 TOPOGRAPHY, SOILS, AND PRELIMINARY GEOTECHNICAL INFORMATION

The average slope of the Project Site is 1-2% downward to the west-southwest. Significant seasonal washes cross the Project Site moving in the same general direction. Some terrain undulations and areas with slopes greater than 10% have been identified (**Figure 13.4-1**),

primarily in the eastern portion of the Project Site, and would be avoided to the extent possible in the layout of the Proposed Solar Generating Facility (**Figure 7.1-1**).

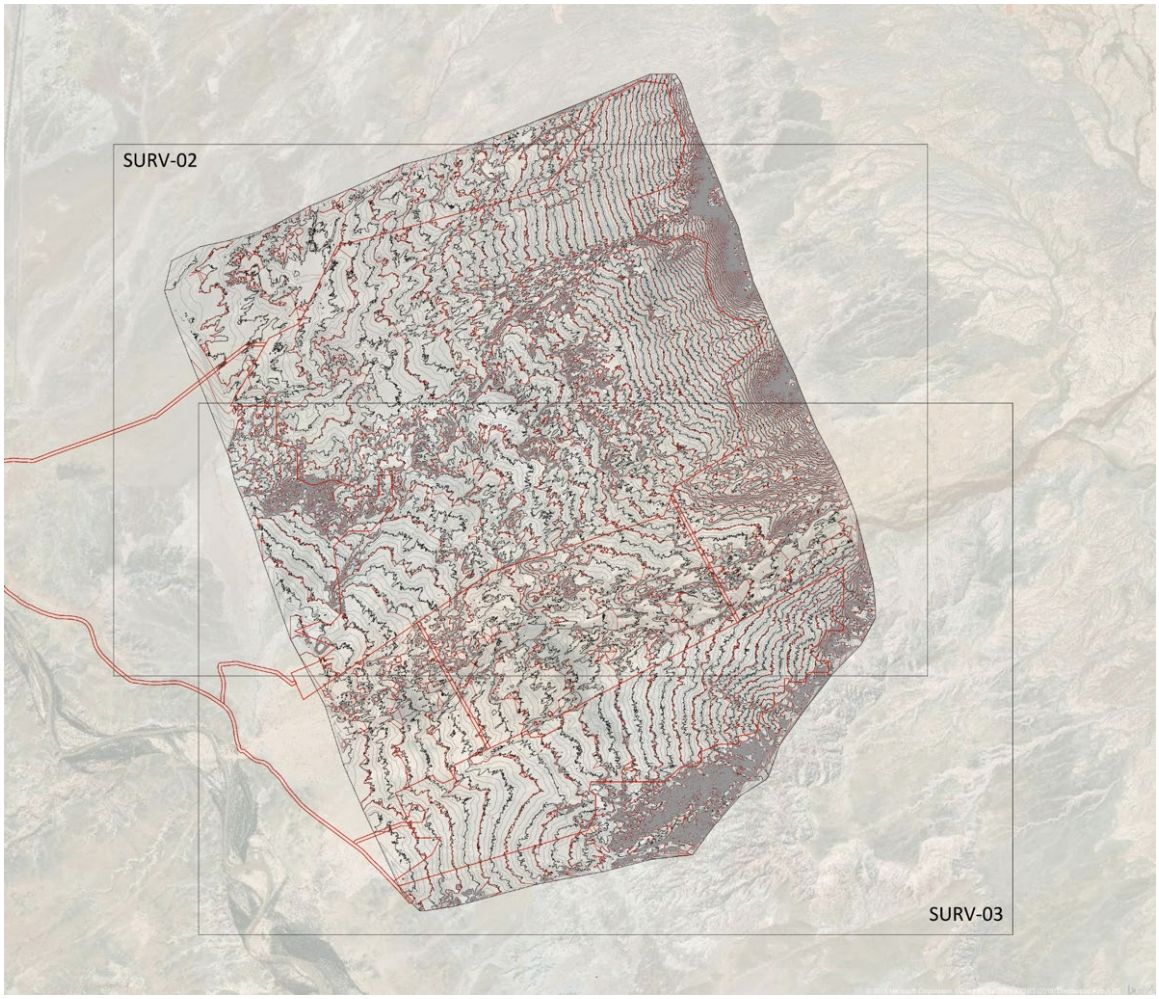

Figure 13.4-1 Site Survey Overview

Figure 13.4-2 shows the slope gradient within the northern Project area labeled "SURV-02" in **Figure 13.4-1**.

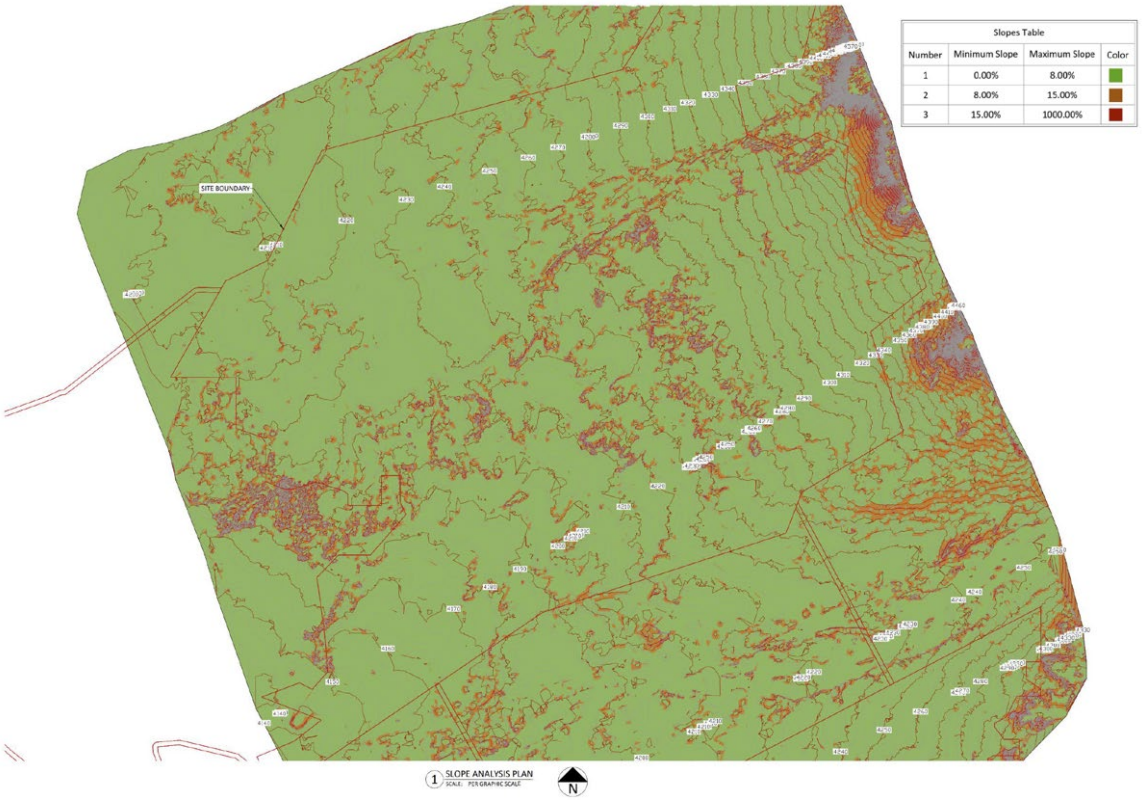

Figure 13.4-2 North Area Slope Analysis

Figure 13.4-3 shows the slope gradient within the southern Project area labeled "SURV-03" in **Figure 13.4-1**.

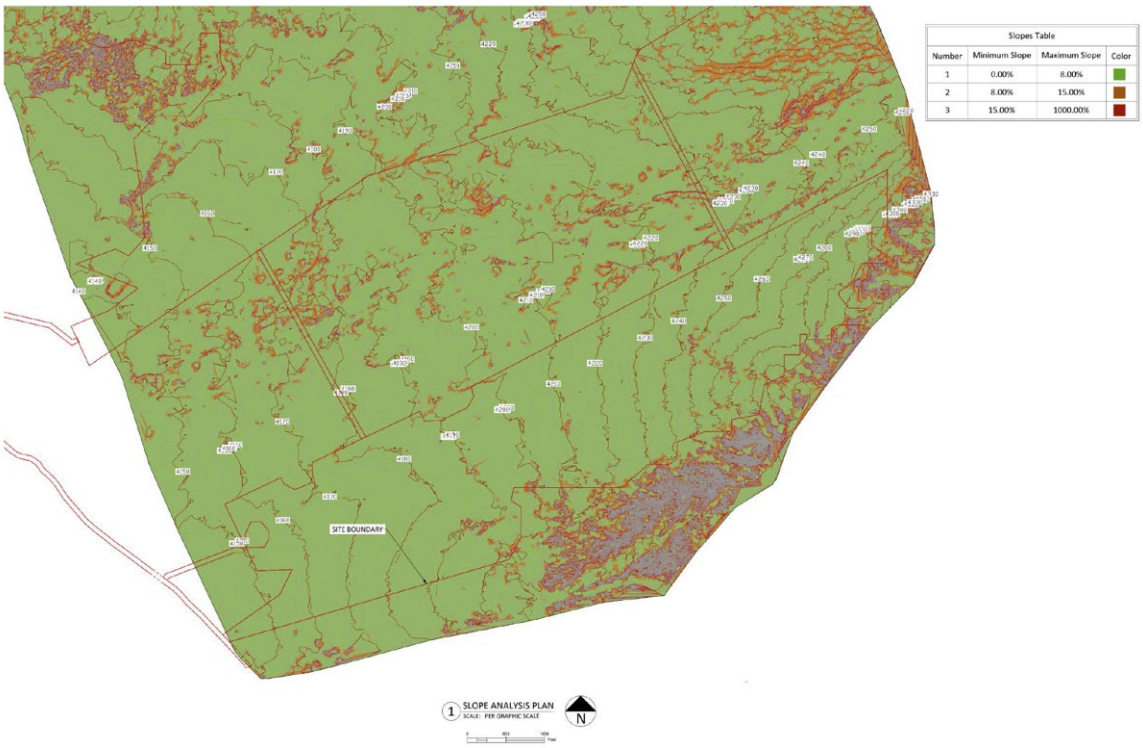

Figure 13.4-3 South Area Slope Analysis

The Project Site includes dry washes flowing predominantly from the northeast. These dry washes are fed by stormwater runoff from the mountain range east of the Project Site. The civil design of the Project would incorporate layout and construction techniques designed to minimize disturbance of the desert washes. Instead of channelizing flows, the Project would utilize grading techniques to maximize the sheet flow of stormwater from existing natural drainage washes across and through the Project Site.

Preliminary and limited soil investigations indicate the presence of lean and sandy clay and silty and clayey sand. The results of limited pile load testing indicate that piles could be driven thereby limiting the need for pre-drilling and pile concrete reinforcement.

The pH and chemical constituents of a limited number of soil samples were analyzed and indicate some additional degree of corrosion protection of embedded posts might be required and careful specification of the cement properties of foundation concrete would be required. Preliminary and limited soil investigations also indicate that the high electrical resistivity of some soils on the Project Site could require more robust solar array grounding systems.

13.5 SOLAR RESOURCE POTENTIAL

Located on the Navajo plateau, above 4,000 ft in elevation, the Project Site represents an excellent solar resource area for a utility-scale solar PV facility in northeastern Arizona.

14.0 ENVIRONMENTAL PERMITTING SUMMARY

PDP is complying with the Navajo Nation's General Leasing Regulations of 2013 and is working with the assigned environmental reviewer from the GLDD to complete the environmental review process. It is expected that the submission of the threshold determination document (TDD) will lead to issuance of a FONSI for the Project itself, including Areas 1 and 2 and the Project substation and related access roads and connectors. Following the issuance of the FONSI, the Navajo Nation Tribal Council can issue a lease decision.

In parallel, a proponent-prepared National Environmental Policy Act (NEPA) environmental assessment (EA) for the gen tie ROW will be reviewed by the BIA as the lead agency in accordance with Title 25 Code of Federal Regulations (CFR) Part 169. It is expected that this will result in a grant of easement for ROW for the gen tie if the Project is approved. PDP completed a ROW application checklist in addition to the NLD's checklist prior to preparation of the TDD and NEPA EA. A Section 106 review was completed by the Navajo Nation Heritage and Historic Preservation Department on March 31, 2021. A Phase I ESA has been prepared and subsequently updated. All versions will be submitted to the Navajo Nation Environmental Protection Agency (NNEPA). BIA and ADOT permits would also be required for improvements to BIA RT 6730 and the US 89 turnout[19] and for the gen tie crossings of these roads. Short-term closures of up to one day may be needed for the stringing and energization of HV cable.

To ensure Project compliance with the Clean Water Act (CWA) Section 404/401, a request for a jurisdictional determination (JD) was submitted to the USACE Phoenix Regulatory Office on November 13, 2020. The JD request was supplemented with the Project Aquatic Resources Delineation Report prepared by Ecosphere Environmental Services Inc. (Ecosphere). Ecosphere concurrently submitted a CWA Section 401 Water Quality Certification (WQC) application to the NNEPA. Supplemental wash crossing design plans were submitted to the NNEPA on February 5, 2021. On March 18, 2021, in anticipation of a similar determination from the USACE, the NNEPA contacted Navajo Power to inform them that no CWA 401 WQC would be required for the Project as no jurisdictional waters of the US occur within the Project area. On March 29, 2021, the USACE issued to Navajo Power a "No Permit Required" letter relative to compliance with the CWA Section 404.

The September 2020 glare analysis conducted for the Project Site concluded that ocular impact to pilots and/or air traffic control facilities would not occur. The Federal Aviation Administration (FAA) Notice Criteria Tool determined that the Project would not exceed notification criteria and FAA notice is not required for the proposed communications towers associated with the Project's proposed gen tie line (14 CFR 77.9). No mitigation will be required.

[19] Options for access to BIA RT 6730 from US 89 are currently being reviewed with ADOT.

15.0 ENVIRONMENTAL HEALTH AND SAFETY

As discussed in **Section 13.3**, there are AUMs in the immediate vicinity of the Project Site. To help in the design and siting process, PDP procured both a Phase I ESA and a preliminary uranium exclusion area mapping and existing site condition assessment from third-party consultants to map the locations of historic mines and provide preliminary assessments of risk and health and safety considerations. PDP is planning to completely avoid both temporary and permanent impacts on historic AUM areas, such that Project Site development activities do not disturb the AUMs or preclude long-term studies, characterizations, or potential future reclamation activities conducted by other parties. No known AUMs occur anywhere on the Project Site.

The studies procured to date have utilized existing terrestrial gamma radiation data and conservative worker exposure assumptions. Based on these studies and subject to the further field characterization and analysis discussed in **Section 16**, the risk of worker radiological exposure resulting in exceedance of applicable health and safety thresholds is considered low. Typical dust control best management practices and construction worker safety protocols are expected to be sufficient to ensure that no workers or on-site personnel are exposed to the health risks associated with AUMs. PDP would submit a dust control plan (SWCA 2022) for construction and operation to the NNEPA for approval prior to construction. Though not expected to be necessary, use of engineering controls, personal protective equipment, and/or exposure monitoring during construction and operation would be included in the comprehensive Health and Safety Plan (HASP) covering both construction- and operation-phase worker activities. This comprehensive worker HASP would be prepared during the development phase of the Project and provided to permitting authorities and other stakeholders for review and comment.

During the development phase of the Project, and prior to beginning construction, additional field data verification, limited soil sampling and analysis, and site-specific toxicology and exposure assessments would be procured for refinement of the final AUM exclusion areas. These studies, likely to be in the form of a Phase II Environmental Site Assessment (Phase II ESA) under applicable ASTM standards, would inform site-specific health and safety protocols, which would also be documented in the comprehensive HASP.

Hazardous materials on the Project Site are expected to be limited to fuels and transformer fluids and will require monitoring. Hazardous material handling and spill prevention and response plans will be developed for the Project.

16.0 TECHNICAL STUDIES AND PLANS

PDP has completed multiple studies in the Project area to assist in assessing the existing conditions and potential for environmental effects from the Project. These studies include:

- Class I Records Review for Cultural Resources, Stratified Environmental & Archaeological Services LLC (SEAS), May 2019

- Preliminary Project Designs, Terabase Energy Inc (Terabase Energy), May 2019-November 2022
- Preliminary Biological Resources Reconnaissance Survey and Desktop Screening Study, Ecosphere, July 2019
- Interconnection and Transmission Study, Stuart Consulting and ZGlobal Inc., August 2019
- Preliminary Geotechnical Desktop Study, ATEK Engineering Consultants LLC, August 2019
- Preliminary Hydrological Screening Studies, Arrowhead Engineering Inc., September-October 2019
- Topographic Drone Survey, Terabase Energy, October 2019
- Power Flow Studies, Stuart Consulting and ZGlobal Inc., November 2019
- Cultural Resource Survey, SEAS, February 2020
- Radiation Monitoring near Uranium Mines and Hotspots, Stantec Inc., March 2020
- Biological Habitat Survey, Ecosphere, March-April 2020
- Preliminary Mapping, iiná bá Inc., May 2020
- Geotechnical Investigation, Stantec Inc., May 2020
- Preliminary Jurisdictional Delineation, Ecosphere, March-April 2020
- Cultural Surveys and Ethnographic Interviews, SEAS, March-October 2020
- Preliminary Uranium Exclusion Area Mapping and Existing Site Condition Assessment, Haley & Aldrich Inc, April 2020
- Land Appraisal Report, William B. Love Appraisals Inc., April 2020
- Traditional Cultural Property Records Search, SEAS, May 2020
- Biological Evaluation, Ecosphere, June 2020
- Aquatic Resources Delineation Report, Ecosphere, November 2020
- Visual Simulations, Terabase Energy, September-October 2020
- FAA Notice Tool Criteria Screening, July 2021
- Dust Control Plan, SWCA, October 2021
- Phase I ESA, SWCA, February 2022 (revised May 2022)
- Painted Desert Power Economic and Fiscal Contribution to Coconino County, Arizona and the Navajo Nation, Mangum Economics, April 2022
- Review of Mangum Economics 2022 Report, Triple Point, May 2022
- Phase I ESA (update), SWCA, December 2022
- Painted Desert Power Solar Project Traffic Analysis, Horrocks, December 13, 2022
- Survey, iiná bá Inc., March 2023

Additional planned environmental studies and plans include:

- safety, emergency preparedness, fire, and site security plans
- further geotechnical survey
- helicopter use plan (for gen tie crossing of the Little Colorado River canyon)

- noxious weed and vegetation management plans
- Phase II ESA
- SWPPP
- traffic study and transportation plan
- hazardous material handling and spill prevention and response plans
- paleontological pre-construction survey and unanticipated discovery plan

Appendix A ACRONYMS AND ABBREVIATIONS

AC	alternating current
ACC	Arizona Corporation Commission
ac ft	acre-feet
ADOT	Arizona Department of Transportation
AES	AES Clean Energy
ALTA	American Land Title Association
APS	Arizona Public Service Company
Area 1	Proposed Solar Array Area 1
Area 2	Proposed Solar Array Area 2
Area 1A	Alternative Solar Array Area 1A
Area 2A	Alternative Solar Array Area 2A
AUM	abandoned uranium mine
BESS	battery energy storage system
BIA	Bureau of Indian Affairs
BIA RT 6730	Bureau of Indian Affairs Route 6730
BMPs	best management practices
BRCF	Biological Resources Compliance Form
C2 Environmental	C2 Environmental LLC
CFR	Code of Federal Regulations
CIDH	cast-in-drilled-hole
CRCF	Cultural Resources Compliance Form
CWA	Clean Water Act
dBA	A-weighted decibels
DC	direct current
DWR	Navajo Nation Department of Water Resources
EA	environmental assessment
Ecosphere	Ecosphere Environmental Services Inc.
EPC	engineering, procurement, and construction
FAA	Federal Aviation Administration
FBFA	Former Bennett Freeze Area
FM	Factory Mutual
FONSI	Finding of No Significant Impact
FPP	fire protection plan
ft	foot, or feet
gen tie	generation intertie
GHG	greenhouse gas
GLDD	Navajo Nation General Land Development Department
GW	gigawatt
HASP	Health and Safety Plan
HV	high voltage
ISO	International Organization for Standardization
JD	jurisdictional determination
kV	kilovolt
lbs	pounds
Mangum Economics	Mangum Economic Consulting LLC
MV	medium voltage
MW	megawatt
MWdc	megawatts of direct current

NAML	Navajo Abandoned Mine Lands
Navajo Power	Navajo Power PBC
NDOT	Navajo Division of Transportation
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NGS	Navajo Generating Station
NLD	Navajo Land Department
NNC	Navajo Nation Code
NNDFW	Navajo Nation Department of Fish and Wildlife
NNDNR	Navajo Nation Division of Natural Resources
NNEPA	Navajo Nation Environmental Protection Agency
NNFD	Navajo Nation Department of Fire & Rescue Services
NORM	naturally occurring radioactive material
O&M	operations and maintenance
PBC	public benefit corporation
PCS	plant control system
PDP	Painted Desert Power LLC
Phase I ESA	Phase I Environmental Site Assessment
Phase II ESA	Phase II Environmental Site Assessment
Project	Painted Desert Power Solar Project
PV	photovoltaic
REC	renewable energy credit
ROW	right-of-way
RPS	renewable portfolio standard
RT	Route
RV	recreational vehicle
SCADA	Supervisory Control and Data Acquisition
SEAS	Stratified Environmental & Archaeological Services LLC
SEMS	Superfund Enterprise Management System
SF6	sulfur hexafluoride
sq ft	square feet
SWCA	SWCA Environmental Consultants Inc.
SWPPP	stormwater pollution prevention plan
TCOB	Technical, Construction and Operations Branch, Navajo Nation Department of Water Resources
TDD	threshold determination document
Terabase Energy	Terabase Energy Inc.
Triple Point	Triple Point Strategic Consulting LLC
UL	Underwriters Laboratories
US	United States
US 89	US Route 89
USEPA	US Environmental Protection Agency
USACE	US Army Corps of Engineers
WQC	Water Quality Certification

Appendix B DETAILS OF THE ALTERNATIVE SOLAR GENERATING FACILITY

Like the Proposed Solar Generating Facility, the Alternative Solar Generating Facility (**Figure 7.1-2**) is a 750MW solar PV facility arranged in two distinct solar generating areas, Area 1A and Area 2A, but the Alternative Facility would require significantly more grading work to accommodate the increased tracker row spacing that would allow for greater annual energy production relative to the Proposed Facility (**Section 7.1.2**).

The civil work on the Project Site required for the Alternative Facility is illustrated in **Table B-1**.

Table B-1 Ground Disturbing Activities and Impacts for the Alternative Solar Generating Facility

AREA	SECTION	DISTURBANCE TYPE	ESTIMATED AREA OF DISTURBANCE *(in acres)*	ESTIMATED DEPTH OF DISTURBANCE
Alternative Solar Array Area 1A	Road	Clear[1] and Grade[2]	13.54	16"
	AC Station	Clear and Excavate[3]	0.12	10-18'
	Pile	Ground Penetration	0.13	8-10'
	Trench	Trenching[4]	8.41	3-5'
	Grading	Clear and Grade	45.52	1'
	Facilities	Clear	0.11	10"
Alternative Solar Array Area 2A	Road	Clear and Grade	40.36	16"
	AC Station	Clear and Excavate	0.43	10-18'
	Pile	Ground Penetration	0.42	8-10'
	Trench	Trenching	37.56	3-5'
	Grading	Clear and Grade	487.63	3'
Proposed Substation / BESS Area	Substation	Clear and Excavate	14.7	10-18"
	Road	Clear and Grade	0.43	16"
	MV Connector	Ground Penetration	0.001	10-14'
Proposed Gen Tie	Tower Footings	Clear, Grade, and Ground Penetration	0.1	8-10'

[1] Land clearing is the process of removing trees, stumps, brush, stones, and other obstacles from an area as required.
[2] Land grading is a leveling of the surface: dirt from higher up is moved into lower-lying areas to create a level surface to serve as a foundation.
[3] Land excavation is the clearing of all vegetation, brush, rocks, and debris.
[4] Trenching is digging a narrow trench in the ground for the installation, maintenance, or inspection of pipelines, conduits, or cables.

AREA	SECTION	DISTURBANCE TYPE	ESTIMATED AREA OF DISTURBANCE *(in acres)*	ESTIMATED DEPTH OF DISTURBANCE
Proposed Moenkopi Expansion Area	Substation Expansion	Clear and Excavate	1.3	10-18'
Access Road 1	Road	Clear and Grade	1.0	16"
Access Road 2 South	Road	Clear and Grade	2.1	16"
Access Road 2 North	Road	Clear and Grade	6.2	16"
Area 2 Connector	Road	Clear and Grade	0.4	16"
BIA RT 6730 Improvement and Widening	Road	Clear and Grade	11.4	16"
US 89 Turnout Improvement and Expansion[5]	Road	Clear, Grade, and Pave[6]	0.5	16"
West Connector	MV Poles	Ground Penetration	0.002	10-14'
	Bore	Boring	0.53	4'[7]
East Connector	MV Poles	Ground Penetration	0.002	10-14'
	Bore	Boring	0.53	4'[8]

[5] Options for access to BIA RT 6730 from US 89 are currently being reviewed with ADOT.
[6] Paving is the use of material such as stone, tar, or concrete to form the hard surface of a road, driveway, etc.
[7] Drilling a horizontal bore hole under a sensitive area will avoid surface disturbance. The expected diameter of the MV conduit to be place within the bore hole is 8 inches.
[8] Drilling a horizontal bore hole under a sensitive area will avoid surface disturbance. The expected diameter of the MV conduit to be place within the bore hole is 8 inches.

Appendix C PAINTED DESERT POWER SOLAR PROJECT DOCUMENTS

2023-03_Terabase-Exhibit PDF Files

2022-12-13_Horrocks-Painted Desert Power Solar Project Traffic Analysis

2022-12_SWCA-Phase I Environmental Site Assessment

2022-10-16_Coalmine Canyon Chapter-Resolution Supporting Land Withdrawal for the Entire Solar Array (with Feb 2020 resolution and maps)

2022-06-26_Cameron Chapter-Resolution Supporting the Grant of Right-of-Way for the Project (with map)

2022-04-07_Mangum Economics-Painted Desert Power Economic and Fiscal Contribution to Coconino County, Arizona and the Navajo Nation

2022-02_SWCA-Phase I Environmental Site Assessment

2022-02_SWCA-Dust Control Plan _Revised 2022-05

2022-01-19_Terabase-Permit Area Civil Analysis for the Proposed Solar Generating Facility-Rev 08.22.2022

2022-01-19_Terabase-Permit Area Civil Analysis for the Alternative Solar Generating Facility-Rev 08.22.2022

2021-08-04_Terabase-Map of Visual Simulation Viewpoints

2021-07-21_FAA-Notice Criteria Tool Screening Result

2021-06-10_Terabase-Conceptual Gen Tie Alignment with Indicative Tower Locations

2021-03-31_NNHHPD-Cultural Resources Compliance Form

2021-03-29_USACE-Determination of Need for Department of the Army Permit

2021-03-18_NNEPA-Letter Regarding Clean Water Act Section 401 Water Quality Certification

2021-02-08_NNDFW-Biological Resources Compliance Form

2021-02-04_NNDFW-Conditional Approval

2020-11-13_Ecosphere-Letter Requesting Approved Jurisdictional Determination

2020-11-13_Ecosphere-Request for Jurisdictional Determination Form

2020-11_Ecosphere-Aquatic Resources Delineation Report

2020-10-14_Terabase-Visual Simulation Viewpoint A

2020-10-14_Terabase-Visual Simulation Viewpoint B

2020-10-14_Terabase-Visual Simulation Viewpoint C East

2020-10-14_Terabase-Visual Simulation Viewpoint C West

2020-09-24_Terabase-Visual Simulation Viewpoint A Before

2020-09-24_Terabase-Visual Simulation Viewpoint B Before

2020-09-24_Terabase-Visual Simulation Viewpoint C East Before

2020-09-24_Terabase-Visual Simulation Viewpoint C West Before

2020-06-17_SWCA-Phase I Environmental Site Assessment

2020-06_Ecosphere-Biological Evaluation

2020-05-28_iiná bá-Land Survey Phase I - Parcel B

2020-05-28_iiná bá-Land Survey Phase I - Parcel A

2020-05-22_Stantec-Draft Preliminary Geotechnical Investigation Report

2020-04-30_Haley&Aldrich-Preliminary Uranium Exclusion Area Mapping and Existing Site Condition Assessment

2020-04-09_AP-Corrosion Test Results

2020-04_Love Appraisals-Restricted Appraisal Report

2020-04_Stantec-Pile Load Test Field Forms

2020-03-23_Stantec-Pile Test Locations

2020-03-13_Stantec-Test Pits Piles

2020-03-09_Stantec-Radiation Monitoring Field Report

2020-02-25_NNHP-Biological Resources Analysis

2020-02-11_SEAS-Cultural Resource Survey Reconnaissance Results

2019-11-07_Stuart Consulting & ZGlobal-Power Flow Studies

2019-10-25_Arrowhead-Desktop Review of Cameron, Arizona Drainage

2019-10-02_Terabase Energy-Topographic Drone Survey

2019-09-05_Arrowhead-Desktop Review of Potential Flooding Areas of Arizona and New Mexico Locations

2019-08-19_Stuart Consulting & ZGlobal-Interconnection and Transmission Study

2019-08-06_ATEK-Geotechnical Desktop Study

2019-08-06_ATEK-Geotechnical Desktop Study Appendix

2019-08-06_ATEK-Desktop Geotechnical Study Shapefiles

2019-07-12_Ecosphere-Biological Resources Review

2019-05-29_SEAS-Class I Records Review for Cultural Resources

2019-05-23_NNHP-Biological Resources Analysis