Application for Site Certification

HOP HILL SOLAR AND STORAGE PROJECT

Submitted by

HOHI bn, LLC
13123 E Emerald Coast Pkwy, Suite B #158
Inlet Beach, FL 32461

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Acronyms and Abbreviations

°F	degree Fahrenheit
AC	alternating current
ADT	average daily traffic
ALI	Arid Land Initiative
amsl	above mean sea level
APE	Area of Potential Effect
Applicant	HOHI bn LLC, a subsidiary of BNC DEVO, LLC, a joint venture between BrightNight LLC and Cordelio Power
ASC	Application for Site Certification
ASCE	American Society of Civil Engineers
ASOS	Automated Surface Observing System
BCC	Benton County Code
BESS	battery energy storage system
bgs	below ground surface
BLM	U.S. Bureau of Land Management
BMP	best management practice
BPA	Bonneville Power Administration
CAA	Clean Air Act
CadnaA	Computer Aided Noise Abatement
CAO	Critical Areas Ordinance
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CO	carbon monoxide
COD	Commercial Operations Date
CRP	Conservation Reserve Program
CSWGP	Construction Stormwater General Permit
CUP	Conditional Use Permit
DAHP	Department of Archaeology and Historic Preservation
dBA	A-weighted decibels
DC	direct current
DEM	digital elevation map
DNR	Washington Department of Natural Resources
Ecology	Washington State Department of Ecology
EDNA	Environmental Designation for Noise Abatement
EFSEC	Energy Facility Siting Evaluation Council
EPA	U.S. Environmental Protection Agency

ESA	Environmental Site Assessment
ESCP	Erosion and Sediment Control Plan
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
gen-tie line	generation-tie transmission line
GHG	greenhouse gas
GMA/AG	Growth Management Act - Agriculture
GMAAD	Growth Management Act Agricultural District
HCA	habitat concentration area
HMP	Habitat Mitigation Plan
HPA	Hydraulic Project Approval
I	Interstate
IDP	Inadvertent Discovery Plan
ISO	International Organization for Standardization
JARPA	Joint Aquatic Resources Permit Application
km	kilometer
KOP	key observation point
kV	kilovolt
L_{eq}	equivalent sound level
LICA	Landscape Integrity Core Area
LiDAR	light detection and ranging
MVA	megavolt ampere
MOVES3	Motor Vehicle Emissions Simulator
MW	megawatt
MWAC	alternating current megawatt
NAAQS	National Ambien Air Quality Standards
NEC	National Electric Code
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NESC	National Electrical Safety Code
NFPA	National Fire Protection Association
NHD	National Hydrography Dataset
NLCD	National Land Cover Dataset
NO_2	nitrogen dioxide
NOI	Notice of Intent
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places

Ns	Non-Fish Seasonal
NSR	noise sensitive receptor
NWI	National Wetlands Inventory
O_3	ozone
O&M	operations and maintenance
OA	Ordinance Amendment
PBS	PBS Engineering and Environmental
PCS	power conversion system
PGIS	pollution-generating impervious surfaces
PHS	Priority Habitat and Species
PLA	Priority Linkage Area
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
POI	point of interconnection
Project	Hop Hill Solar and Storage Project
PSD	Prevention of Significant Deterioration
PV	photovoltaic
RCW	Revised Code of Washington
RV	recreational vehicle
SC	state candidate
SCADA	supervisory control and data acquisition
SCAQMD	South Coast Air Quality Management District
SEMS	Superfund Environmental Management System
SEPA	State Environmental Policy Act
SO_2	sulfur dioxide
SPCC Plan	Spill Prevention, Control, and Countermeasure Plan
SR	State Route
SWCA	SWCA Environmental Consultants
SWMMEW	Stormwater Management Manual for Eastern Washington
SWPPP	Stormwater Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WHR	Washington Historic Register
WNHP	Washington Natural Heritage Program

WOTUS	waters of the United States
WSDOT	Washington State Department of Transportation

PART 1 – OVERVIEW/SUMMARY

A. Basic Information

A.1. Applicant

Name/Contact:
HOHI bn, LLC[1] c/o Lindsey Hesch

Mailing address:
13123 E. Emerald Coast Pkwy, Suite B#158
Inlet Beach, FL 32461

Phone: (925) 457-5937
Email: lindsey@brightnightpower.com

A.2. Preparer

(if different from applicant)

Name/Contact:
Tetra Tech, Inc.
c/o Paul Hicks

Mailing address:
1750 S Harbor Way, Suite 400
Portland, OR 97201

Phone: (503) 221-8636
Email: paul.hicks@tetratech.com

A.3. Property Owner

(if different from applicant; attach a list of owners if applicable; identify if the property is under lease, and identify any nonprivate owners)

Name/Contact: See the Applicant's response to Part 1, Section A.4 below.
Mailing address: See the Applicant's response to Part 1, Section A.4 below.
Phone: N/A
Email: N/A

Figure A-1 in Attachment A shows the location of the 58 assessor parcels encompassed by the Siting Area (see Part 2 Section A.2 for definition of terms used in this Application for Site Certification [ASC]). The Applicant has executed or is pursuing a Lease or Easement Option Agreements with each identified property owner within the Siting Area. Three of the 58 assessor parcels are nonprivate and owned by the U.S. Bureau of Land Management (BLM). In addition, an approximately 1.6-mile segment of the Transmission Line Corridor Siting Area occurs on federal land owned by the U.S. Department of Energy (DOE) that does not have an associated Benton County assessor parcel number. One nonprivate assessor parcel owned by the State of Washington and managed by the Washington Department of Natural Resources (DNR) is

[1] HOHI bn, LLC is a subsidiary of BNC DEVCO, LLC, which is a joint venture between BrightNight and Cordelio Power. BrightNight is the lead developer for this project.

located within the Siting Area but is excluded from the Project and is not subject to this ASC. The Applicant is also pursuing transmission interconnection agreements with the Bonneville Power Administration (BPA) (refer to Part 2, Section A.2 Project Description for additional details). Attachment B identifies the property owners of the 58 assessor parcels encompassed by the Siting Area based on Benton County Assessor data obtained on July 20, 2022.

A.4. Location of Proposed Site

(attach a list of additional properties, if applicable)

Street address: N/A
County: Benton County
County Assessor's number(s): See below
Township/Range/Section Number: See below
Legal description: See Attachment B

Attachment B provides the current description of the assessor parcels encompassed by the Siting Area as collected from the Benton County Assessor. The location of these assessor parcels is shown on Figure A-1 in Attachment A.

B. Project Summary

HOHI bn, LLC (Applicant), a subsidiary of BNC DEVCO, LLC, which is a joint venture between BrightNight, LLC and Cordelio Power, proposes to construct and operate the Hop Hill Solar and Storage Project (Project) located in unincorporated Benton County, Washington (Attachment A, Figure A-2). The Project is an up to 500-megawatt[2] (MW) solar photovoltaic (PV) generation facility coupled with an up to 500-MW battery energy storage system (BESS), as well as related interconnection and ancillary support infrastructure. This streamlined solar ASC uses the following terms to describe areas associated with Project development: Siting Area, Solar Array Siting Area, Transmission Line Corridor Siting Area, and Project Area. Each of these terms is defined in Part 2, Section A.2.a of this ASC.

The Project was developed with four main goals in mind:

- **Low Cost Reliable Energy:** Deliver low cost and dispatchable renewable energy near the Columbia River's Northwest hub to complement existing hydroelectric and nuclear resources and help meet the region's growing electrical needs.
- **Avoid Expensive and Lengthy Infrastructure Projects:** Utilize existing electrical infrastructure more wisely to reduce customer energy costs, minimize the need to build new large transmission lines throughout the region, and deliver energy to end customers in the near term instead of waiting for 10 to 15 years for transmission projects to be built.
- **Minimizing Natural Resource Impacts while Maximizing Community Benefits:** Build on non-irrigated low productivity disturbed grazing land outside of high value habitat areas while generating long-term economic benefits.
- **Maintain Productive Nature of Land:** Construct a project that helps create a new standard for Washington solar energy in which PV generation and agricultural production can work in concert with each other instead of conflict.

The Applicant used these four goals to site, develop, and design the Project. The Project is composed of two main components: a PV generation and storage site and electrical interconnection infrastructure as more fully described below.

The Project's solar PV generation system will convert energy from the sun into electric power. The solar PV generation system consists of a series of solar PV panels mounted on a solar tracker racking system, posts, and related electrical equipment such as collector lines and power conversion systems (PCS) which consist of the BESS, inverters, and transformers. The BESS can either store electricity for future use or, as required based on grid demand, convert direct current (DC) electricity to alternating current (AC) electricity and send the AC electricity to the step-up transformer. The solar PV generation system and BESS are further described in Part 2, Section A.2.a. Project typicals showing examples of the solar PV panels, tracker racking system, and PCS under consideration for development are identified in Attachment C.

The Project also includes the following supporting components: Project collector substation, overhead 230-kilovolt (kV) / 500-kV generation-tie transmission line (gen-tie line), operations and maintenance (O&M) structure, associated Project access roads, and perimeter fencing. Fencing will be installed around the perimeter of the solar PV array, Project collector substation, O&M building area, and BESS. The Project's proposed point of interconnection (POI) with the regional electrical grid is the BPA transmission system at the Midway Substation on federal U.S. DOE land (Attachment A, Figure A-2). The Project includes two additional POI options near the BPA Wautoma Substation. An approximately 17.8-mile-long overhead 230-kV/500-kV gen-tie

[2] Megawatt rating provided in alternating current (MWac)

line will extend from the Project collector substation to the proposed POI at the Midway Substation. Project-supporting components are further described in Part 2, Section A.2.a.

Project construction is anticipated to begin as early as the first quarter of 2024, with a Commercial Operations Date (COD) planned for the last quarter of 2025 (24-month construction schedule). The Project can be built in two phases.

C. Site Summary

The Project is approximately 11 miles north of the city of Prosser and 7 miles east of the State Route (SR) 241 and SR 82 interchange and the city of Sunnyside in Benton County, Washington (see Attachment A, Figure A-2). The Siting Area encompasses approximately 22,020 acres within the boundaries of 58 assessor parcels listed in Attachment B. The Applicant has executed or is pursuing a Lease or Easement Option Agreements with the underlying properties within the Siting Area. The Applicant is also pursuing transmission interconnection agreements with the BPA.

The Siting Area consists of the Solar Array Siting Area (approximately 11,179 acres) and the Transmission Line Corridor Siting Area (approximately 10,841 acres) that runs north to the proposed POI. The respective Solar Array Siting Area and Transmission Line Corridor Siting Area are subsets of the Siting Area within which surveys have been conducted, or will be completed prior to final design, and Project components may be constructed, in compliance with conditions that may be imposed by the Site Certification Agreement. The Solar Array Siting Area encompasses approximately 11,179 buildable acres and the overhead 230-kV gen-tie line will be developed within a 150-foot-wide corridor and microsited within the approximately 10,841-acre Transmission Line Corridor Siting Area. The final Project Area subject to development is anticipated to be approximately 6,000 acres and includes the permanent and temporary construction disturbance areas associated with the solar array and associated supporting components, as described in Part 2 of this ASC and shown on Figure A-2 in Attachment A. The overhead 230-kV / 500-kV gen-tie line will transmit the electricity generated by the Project to the electrical grid via three POI options. The Project will use existing roads to the extent practicable but will also construct new Project service roads within the Solar Array Siting Area. Fencing will be installed around the perimeter of the solar PV array, collector substation area, O&M structure area, BESS area, and the temporary laydown areas. Project supporting components are further described in Part 2, Section A.2.a. The Project's COD is planned for the last quarter of 2025 and Project construction is anticipated to begin as early as the first quarter of 2024. The Project can be built in two phases.

Lands in the Solar Array Siting Project Area have historically been used for agricultural activities (primarily grazing with some crop cultivation). The Project is located entirely on land within the Benton County Growth Management Act Agricultural District (GMAAD). Existing land uses in the Solar Array Siting Area include crop cultivation, rangeland, undeveloped areas, local roads, a rural residence, and interspersed agricultural structures such as storage structures. Adjacent land uses surrounding the Solar Array Siting Area are similar and also include interspersed rural residences, agricultural land such as rangelands and crop cultivation, state highways, and the Hanford Reach National Monument. Project consistency with Benton County's land use code and policies is addressed in Part 4, Section 14 and in Attachment D.

The Project will not be a permanent source of regulated air emissions. Project construction will result in fugitive air emissions associated with exhaust from heavy equipment, worker vehicle commutes, delivery and haul trucks, as well as fugitive dust from earth-moving and material handling activities. The Applicant will implement best management practices and standard construction practices identified in Part 4, Section 2 to limit fugitive emissions. Additional discussion of emissions, climate, and regional air quality is provided in Part 4, Section 2.

Habitat surveys identified eight habitat types within the Siting Area, including herbaceous grassland, shrubsteppe, cultivated crops, developed, hay/pasture, barren land, and open water. As shown in Table 4.8-2 (Part 4, Section 8), approximately 14,676 acres of herbaceous grassland and 4,312 acres of shrubsteppe occur within the Siting Area. As shown on Figure 4 in Attachment E, herbaceous grassland is prevalent throughout the Siting Area and the

shrubsteppe habitat is most prevalent in the northeast corner of the Solar Array Siting Area and the southern and northern edges of the Transmission Line Corridor Siting Area. The Wildlife and Habitat Survey Report (Attachment E) provides additional details on habitat types observed within the Solar Array Siting Area as well as their distribution in the area. The majority of the Project within the solar array perimeter fence is anticipated to occur on pasture, grassland, and developed environments (approximately 3,124 acres) and a smaller portion on shrubsteppe (approximately 1,475 acres). The anticipated permanent disturbance to shrubsteppe habitat over the life of the Project is about 58 acres or 0.4 percent of shrubsteppe identified within the Siting Area.

As discussed in Part 4, Section 3, there are 3 palustrine emergent wetlands, 17 ephemeral stream segments, and one irrigation canal within the Solar Array Siting Area. A desktop review of the Transmission Line Corridor Siting Area found two drainages with likely wetland complexes and approximately 62 other drainages. The Project is designed to avoid and minimize impacts to ephemeral streams to the extent feasible.

The majority of the Solar Array Siting Area is mapped with slopes from 0 to 15 percent. Slopes greater than 30 percent account for approximately 13 percent of the Project Siting Area, 4.7 percent of the Solar Array Siting Area, and 22 percent of the Transmission Line Corridor Siting Area. Slopes exceeding in the Solar Array Siting Area are primarily located along the drainage slopes and Sage Brush Ridge. Geology, soils, slope, topography, and potential geological hazards relative to the Solar Array Siting Area are evaluated in Part 4, Section 1 and in Attachment F.

The visual setting of the Solar Array Siting Area is agricultural land with a mix of cropland and open rangeland with a low number of related agricultural buildings and rural residential development. Where the Project is visible, the Project components would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape lines (fencing, roadway, substation, transmission towers and lines, utility poles and lines, agricultural structures) and would not block views of the surrounding hills. The Project will not introduce a significant source of light that will impact views in the area. The glare analysis (Attachment G) concluded the Project will not introduce a source of glare that will significantly impact motorists, residents, or views in the area. Additional discussion of light, glare, and aesthetics are addressed in Part 4, Section 16b and in Attachments G and H, respectively.

Some changes to stormwater drainage may occur as a result of new impervious surfaces developed as part of this proposal (e.g., gravel roads, foundations for solar array posts, battery storage container pads, pads for substation components, etc.). Overall, impervious surfaces are a low percentage of the total Solar Array Siting Area (approximately 1.6 percent of the Solar Array Siting Area; see Part 2, Section B.2). The Project will be designed and constructed to comply with Benton County and the Washington State Department of Ecology (Ecology) requirements in retaining stormwater on-site and maintaining natural drainage patterns for conveyance of upland flow, and the Project's Erosion and Sediment Control Plan (ESCP), Construction Stormwater Pollution Prevention Plan (SWPPP), Permanent Stormwater Control Plan, and Vegetation and Weed Management Plan will provide specific measures to minimize erosion and sedimentation during and after construction. Additional discussion of stormwater best management practices (BMPs) and design considerations for stormwater runoff are addressed in Part 4, Section 5.

During siting and design, the Applicant took several measures to avoid and minimize impacts to botanical resources. The Applicant minimized impacts to shrubsteppe habitat and will avoid, to the extent possible, suitable habitat for Umtanum desert buckwheat. In addition, the Applicant incorporated passageways through the Project to allow wildlife and big game to pass through the Project Area.

Incorporating a number of conservative assumptions, acoustic modeling results indicate that the Project will comply with the 50-decibel nighttime limit at all non-participating noise sensitive receptors (i.e., residences). In addition, the Project is predicted to comply with all the applicable Washington Administrative Code (WAC) regulatory limits at the Siting Area for the BESS. WAC 173-60-050 exempts temporary construction noise from the state noise limits; however, BMPs will be implemented to reduce off-site construction noise impacts. Noise associated with Project construction and operation is addressed in Part 4, Section 4.16a.

The Project has been designed to avoid direct impacts to cultural resources that are eligible or unevaluated/potentially eligible for listing on the National Register of Historic Places (NRHP). As currently designed, the Project has no direct impacts to such resources, which are avoided by a minimum of 30 meters (100 feet), except for site HH-S11, which has a smaller buffer proposed. The Applicant would continue to coordinate with the Tribes regarding the archaeological sites and the potential impacts of the Project on these sites. Unsurveyed portions of the Project Area include the up to 150-foot-wide gen-tie easement within the Transmission Line Corridor Siting Area. These areas may include eligible archaeological and historic property sites. If such resources are identified during future planned surveys, the Applicant intends to avoid those resources by establishing a 30-meter buffer of the resource and continuing to coordinate regarding impacts to resources with traditional significance. If any pre-contact-era archaeological site or any NRHP-eligible or unevaluated/potentially eligible historic-era site would be impacted by the Project's final design, the Applicant would obtain a Washington Department of Archaeology and Historic Preservation (DAHP) excavation permit and perform all necessary archaeological work in order to comply with Revised Code of Washington (RCW) 27.53. Archaeological and historic resources and cultural resources are addressed in Part 4, Section 18 and Section 19, respectively.

The Applicant addresses standards concerning potential release of hazardous materials and fire prevention and control in Part 4, Section 13.

A Traffic Control Plan will be prepared in coordination with the Washington State Department of Transportation (WSDOT) and the Benton County Public Works Departments to mitigate transportation hazards during the construction of Project access to public right-of-way. Operations traffic would be negligible since there will be approximately five permanent employees and the limited number of daily trips anticipated during Project operations would be negligible relative to current and projected level of services. Traffic management during Project construction is addressed in Part 4, Section 20.

Based on the information provided herein, the State of Washington Energy Facility Siting Evaluation Council (EFSEC) may find that the Project complies with applicable laws under RCW 80.50 for energy facility site locations and with applicable rules under WAC 463-60 for evaluation of this streamlined solar ASC. EFSEC may also find under WAC 197-11 that with mitigating conditions and compliance with applicable County, state, and federal regulations and permit requirements, the Project will not result in significant adverse impacts on the environment.

D. Screening Summary

Note to applicant:
- This is an active, changing list and on-going focus for discussion.
- This information must match with the information in Part 3.
- This information is very important in the pre-application stages.

	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
1. Earth	Yes	Yes	Yes	Yes	Yes
2. Air Quality	Yes	Yes	Yes	Yes	Yes
3. Water Quality – Wetlands and Surface Waters	Yes	Yes	Yes	Yes	Yes
4. Water Quality – Wastewater Discharges	No	N/A	Yes	Yes	N/A
5. Water Quality – Stormwater Runoff	Yes	Yes	Yes	Yes	Yes
6. Water Quantity – Water Use	No	N/A	Yes	Yes	N/A
7. Water Quantity – Runoff, Stormwater, Point Discharge	No	N/A	Yes	Yes	Yes
8. Plants	Yes	Yes	Yes	Yes	Yes
9. Animals	Yes	Yes	Yes	Yes	Yes
10. Energy and Other Natural Resources	No	N/A	Yes	Yes	N/A
11. Waste Management	No	N/A	Yes	Yes	N/A
12. Environmental Health – Existing Site Contamination	No	N/A	Yes	Yes	N/A
13. Environmental Health – Hazardous Materials	Yes	N/A	Yes	Yes	Yes

	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
14. Land Use, Nat. Resource Lands & Shoreline Compatibility	Yes	Yes	Yes	Yes	Yes
15. Housing	No	N/A	Yes	Yes	N/A
16. Noise, Light, Glare, and Aesthetics	Yes	Yes	Yes	Yes	Yes
17. Recreation	No	N/A	Yes	Yes	N/A
18. Archaeological and Historical Resources	Yes	Yes	Yes	Yes	Yes
19. Cultural Resources	Yes	Yes	Yes	Yes	Yes
20. Traffic and Transportation	Yes	Yes	Yes	Yes	Yes
21. Public Services and Facilities	No	N/A	Yes	Yes	N/A
22. Utilities	No	N/A	Yes	Yes	N/A

E. List of Studies

Note to applicant:
- This is an active, changing list and on-going focus for discussion.
- This information must match with the information in Part 3.
- This information is critical to the pre-application stage.

Report No.	**Topic**	**Name of Report and Location for Review**	**Status** (e.g., scoping, contracting for, started)	**Date of Completion** (past or expected)
Attachment D	Land Use	Land Use Consistency Review	Complete	December 2022
Attachment E	Wildlife and Vegetation	Wildlife and Habitat Study Report	Complete	September 2022
Attachment F	Earth	Updated Geologically Hazardous Area Assessment	Complete	July 2022
Attachment G	Glare	Glint and Glare Analysis	Complete	October 2022
Attachment H	Visual and, Aesthetics	Visual Resources Technical Report	Complete	October 2022
Attachment I	Socioeconomic	Socioeconomic Review	Complete	December 2022
Attachment J	Decommissioning	Decommissioning and Site Restoration Plan	Complete	March 2022
Attachment K	Decommissioning	Decommissioning Cost Estimate	Complete	December 2022
Attachment L	Wildlife and Vegetation	Draft Habitat Mitigation Plan	Complete	November 2022
Attachment M (Confidential)	Archaeological, Historical, and Cultural	Cultural Resources Survey Report and Inadvertent Discovery Plan	In progress	To be provided as supplemental submittal
Attachment N	Soil Table	Soil Table	Complete	August 2022
Attachment O	Wetlands and Surface Waters	Joint Aquatic Resource Permit Application	Complete	December 2022
Attachment P	Wetlands and Surface Waters	Wetland and Non-Wetland Waters Delineation Report	Complete	December 2022
Attachment Q	Noise	Acoustic Assessment Report	Complete	December 2022
Attachment R	Environmental Health	Fire Protection Emergency Response Plan	Complete	March 2022

F. List of Stakeholders

Note to applicant:
- This is an active, changing list and on-going focus for discussion.
- This information is critical to the pre-application stage.

Type	Specific[1/]	Contact (name, program)	Areas of Discussion	Status of Engagement[2/]
Federal Government	Bonneville Power Administration	Eric Carter	Project interconnection	Ongoing engagement
Federal Government	U.S. Dept. of Defense	Kim Peacher	Military airspace	Ongoing engagement
Federal Government	U.S. Dept. of Energy	Assigned point of contact to be determined	ROW grant, environmental review	Ongoing engagement
Federal Government	U.S. Fish and Wildlife Service (USFWS)	To be determined	Wildlife, surveys, and general biological resources.	Intend to contact
State Government	Washington Department of Fish and Wildlife (WDFW)	Mike Ritter and Jason Fidorra	Wildlife, surveys, and general biological resources.	Ongoing engagement
State Government	Washington Energy Facility Siting Evaluation Council (EFSEC)	Amí Hafkemeyer	General, permitting, project description, and application process.	Ongoing engagement
State Government	Washington State Department of Ecology (Ecology)	Lori White and Gary Graff	Wetland and waters delineation.	Ongoing engagement
State Government	Washington Department of Archaeology and Historic Preservation (DAHP)	Sydney Hanson	Review of Cultural Resource Survey Report.	Ongoing engagement
Tribal Government	Confederated Tribes of the Warm Springs	Robert “Bobby” Brunoe	Cultural resources, surveys, and general introduction to the Project.	Ongoing engagement
Tribal Government	Nez Perce Tribe	Nakia Williamson-Cloud, Cultural Resource Program Director	Cultural resources, surveys, and general introduction to the Project.	Ongoing engagement
Tribal Government	Confederated Tribes and Bands of the Yakama Nation	The Honorable JoDe Goudy, Chair Kate Valdez, THPO	Cultural resources, surveys, and general introduction to the Project.	Ongoing engagement
Tribal Government	Confederated Tribes of the Umatilla Indian Reservation	Carey Miller	Cultural resources, surveys, and general introduction to the Project.	Ongoing engagement
Local Government	Benton County	Greg Wendt, County Commissioners, County Communications Officer	Land use and local permits.	Ongoing engagement

Type	Specific[1/]	Contact (name, program)	Areas of Discussion	Status of Engagement[2/]
Property Owners	Property Owners	See Part 1, Section A.4	The Applicant has executed a Lease Agreement or is in the process of executing a Lease Agreement with each identified property owner within the Siting Area.	Ongoing engagement

1/ Entities typically consulted include Ecology, WDFW, Washington Department of Natural Resources (DNR), DAHP, tribal governments, the Department of Defense, neighboring property owners, local government, etc. Not all of these may be required for each project but should serve as a starting point for applicant contacts for coordination.
2/ For example: Intend to contact, contacted, ongoing engagement, engagement complete

PART 2 – CORE INFORMATION

A. Project Basics

A.1. Project Name

Hop Hill Solar and Storage Project (Project)

A.2. Project Description

A.2.a Describe Proposal

Include all components of land use.
Include activities occurring during project phases.

1.0 INTRODUCTION

The Applicant proposes to construct and operate the Project located in unincorporated Benton County, Washington (Attachment A, Figures A-1 and A-2). The Project is an up to 500-MW[3] solar PV generation facility coupled with an up to 500-MW BESS, as well as related interconnection and ancillary support infrastructure. The Project is generally located approximately 11 miles north of the city of Prosser and 7 miles east of the SR 241 and SR 82 interchange and the city of Sunnyside in Benton County, Washington.

This streamlined solar ASC uses the following terms to describe areas associated with Project development:

- **Siting Area**: The approximately 22,020-acre area that encompasses the boundaries of 58 assessor parcels for which the Applicant has executed or is pursuing Lease or Easement Option Agreements with the underlying property owner (Attachment A, Figure A-1 and Attachment B). Construction and operation of the Project are limited to the smaller Project Area described below and shown on Figure A-2 in Attachment A.

- **Solar Array Siting Area:** This is a subset of the "Siting Area" described above. The Solar Array Siting Area is the approximately 11,179-acre buildable area encompassed by the boundaries of 21 privately owned assessor parcels within the Siting Area. The Solar Array Siting Area is the focus of analysis provided in this ASC. The Applicant is requesting flexibility to microsite the Project and its associated supporting components anywhere within the Solar Array Siting Area so long as the final layout does not exceed the Solar Array Siting Area evaluated in this ASC and allowed for in the Site Certification Agreement. The Solar Array Siting Area is also the field survey area for many of the resource-specific surveys conducted in preparation of this ASC.

- **Transmission Line Corridor Siting Area:** This area is a subset of the "Siting Area" described above. The Project's overhead 230-kV / 500-kV gen-tie line, approximately 150-foot-wide gen-tie line corridor, three POI options, and two switchyard options are within the Transmission Line Corridor Siting Area. The Project will use up to two POI and switchyard options depending on the outcome of the Applicant's interconnection studies with BPA. These interconnection facilities will be located along the proposed gen-tie

[3] Megawatt rating provided in alternating current (MWac)

routes and the final design will be located within the approximately 340-acre 150-foot-wide gen-tie line corridor that occurs within the approximately 10,841-acre Transmission Line Corridor Siting Area. The Transmission Line Corridor Siting Area includes additional area along the gen-tie line corridor to accommodate siting flexibility for development of the final POI and selected switchyard option(s). The Transmission Line Corridor Siting Area is larger than the Project's anticipated final developed footprint to allow for minor rerouting and optimization of the overhead 230-kV / 500-kV gen-tie line at final design.

- **Project Area:** This area is a subset of the "Solar Array Siting Area" and "Transmission Line Corridor Siting Area" described above, and includes up to approximately 6,000 acres where the solar array and associated supporting components, which incorporate the overhead 230-kV / 500-kV gen-tie line, will be sited during final engineering design. The Applicant is considering various solar array design layouts within the Project Area and the final design of the solar array and associated supporting components will not exceed approximately 6,000 acres. The Project Area may shift within the Solar Array Siting Area to allow for site optimization of the final design.

Current land uses in the Solar Array Siting Area include rangeland, crop cultivation, undeveloped land, local roads, and existing electrical utility infrastructure. Lands within the Siting Area and to the north, west, and south are zoned for agricultural purposes in Benton County with similar land uses as the Siting Area, as well as several rural residences. The Hanford Reach National Monument Rattlesnake Unit is located to the east.

The Applicant is also considering a number of similar design layout options within the Solar Array Siting Area. The preliminary layout of the PV solar system and supporting components accounts for the Project's generating capacity, topography, and other constraints; however, the precise equipment and layout have not yet been finalized and the Applicant seeks to permit a range of technology to preserve design flexibility. Therefore, this ASC analyzes the largest anticipated temporary and permanent disturbance area within the Siting Area. While the final Project design is not anticipated to disturb the entire Siting Area, the entire Siting Area is evaluated through a combination of desktop and field surveys to allow for design flexibility. For these reasons, the Applicant is requesting flexibility to microsite[4] the Project Area and its associated supporting components anywhere within the Solar Array Siting Area and Transmission Line Corridor Siting Area, provided the final layout does not exceed the Siting Area evaluated in this ASC and allowed for in the Site Certification Agreement.

The Solar Array Siting Area was selected by the Applicant following the four goals to site, develop, and design the Project identified in Part 1, Section B and for its favorable site suitability characteristics such as high solar energy resource, topography, proximity to electrical infrastructure, minimal visual impact to the community, compatibility with adjacent land uses, and low resource conflicts. The Project will have a number of benefits to the local community and Washington state. Based on similar projects, it is anticipated that the construction of the Project will support approximately 300 jobs during peak construction and approximately 5 permanent jobs during operations. The Applicant will solicit experienced Washington-based contractors with the intention of a proportionally high locally hired workforce. The Applicant is developing a strategy for local benefits to reach the community, local landowners, local skilled workers, as well as local businesses. The Project will also provide Benton County with additional tax revenue identified in the Land Use Consistency Review (Attachment D). For

[4] Micrositing is the process of placing facilities (such as solar panels) in locations that achieve optimal power production while considering land constraints such as but not limited to terrain, geologic considerations, cultural resources, and sensitive environmental areas.

example, the Project would generate up to an estimated $55 million over the life of the Project for an up to 280-MW layout or up to an estimated $98 million over the life of the Project for an up to 500-MW layout. Total tax revenues over the life of the Project (including sales and use tax during construction and property tax payments) are estimated at about $65 million for the up to 280-MW layout and about $116 million for the up to 500-MW layout. In addition, construction of this renewable energy resource will help Washington meet its goal of 100 percent clean electricity supply as set forth in the Clean Energy Transformation Act, passed by the Washington legislature in 2019.

2.0 PROJECT COMPONENTS

This section identifies the components, structures, and systems incorporated in the Project's design. The Project solar PV system and associated supporting components are shown on the Preliminary Site Plan (Attachment A, Figure A-2). The Preliminary Site Plan is based on studies and facility design done to date and is subject to change following outstanding technical studies and design and stakeholder consultations. A set of Construction Plans and Specifications will be provided to the State of Washington EFSEC for approval approximately 60 days prior to the beginning of construction.

2.1 Solar Photovoltaic System

The solar PV system will consist of a series of solar panels mounted on a solar tracker racking system and related electrical equipment. The system includes the solar panels, tracker racking system, posts, collector lines, and PCS, which consists of the DC-coupled BESS, inverters, and transformers. The Applicant is considering a range of technologies to preserve design flexibility and incorporate rapidly changing advances in solar technology. During the final engineering design, the Applicant will consider micrositing factors and solar technology available at that time to design the most efficient and effective solar PV system. However, the actual equipment and layouts included in the final design will be selected so that they do not exceed the Solar Array Siting Area evaluated in this ASC.

2.1.1 Solar Panels and Racking Systems

The solar PV panels, or modules, will be bifacial panels comprising cells of mono-crystalline, poly-crystalline, cadmium telluride, or a combination thereof, used to generate electricity by converting sunlight into DC electrical energy. The electrical generation from a single module varies by module size and the number of cells per module. The cells are contained within antireflective glass panels and a metal frame and are linked together with factory-installed wire connectors. The solar PV panels in portrait orientation will be organized in rows (or "tables") within several solar array areas (or "blocks") mounted on a racking system. The length of each row may vary by topography and the number of panels that the racking system can hold. The row-to-row spacing will be approximately 25 feet (with approximately 15 to 21 feet of open space between adjacent rows). The panels themselves will be approximately 7 feet long by 4 feet wide and 2 inches thick.

The racking system will be on a single axis, oriented on a north-south axis that will allow the panels to follow the sun in order to maximize power output. The racking system will be designed to support the panels, snow loads, and prevent wind uplift. Once mounted on the racking system, the highest point of the panels is expected to extend on average approximately 8 to 12 feet above the ground surface with a maximum of 20 feet depending on topography conditions, with an average of approximately 2 to 5 feet of ground clearance below the panels. Project impact assumptions in this ASC are based on the use of 16,400 racking systems for the 500-

alternating current megawatt (MWAC) solar array. The actual number of racking systems will depend on the system selected.

The racking system will be supported by 12 to 13 steep posts per 300 feet of racking system, spaced approximately every 30 feet and installed to an average depth of approximately 6 to 7 feet, with a maximum depth of 20 feet depending on specific soil conditions. Steel posts could be round hollow posts or pile-type posts. For the purposes of this ASC, the Applicant assumes that approximately 213,200 posts will be installed. The actual number of posts and foundation method may vary depending on the final racking system, topography, height of the solar modules, and site-specific geological conditions. Post locations will be determined based on geotechnical investigations and will be installed in soil or in concrete foundations, depending on geological conditions.

Figure A-2 in Attachment A depicts the Project's proposed solar array layout for purposes of analyzing impacts. The preliminary design incorporates key components and assumptions for currently available technology. The final number of panels will be determined by power ratings and optimization (in watts) of the specific panels chosen prior to construction and may be fewer than the number of panels included in the preliminary design. As a result, the Project impact assumptions in this ASC are conservatively based on the use of 1,328,400 panels, which is anticipated to be the maximum number of panels needed. For the purposes of illustration, an example solar PV panel and racking system is presented in Attachment C.

2.1.2 Direct Current Electrical Collector Lines

The solar panels will produce DC electricity at a low voltage. Within each solar PV array, the DC electricity from the panels will be transmitted to one of the power conversion systems distributed throughout the solar PV array areas via electrical wiring mounted on the racking or buried underground. The underground DC electrical wiring will be installed within trenches approximately 3 feet wide and 4 feet deep; however, final trench design will be determined by thermal resistivity studies. In areas where the desired depth cannot be achieved (due to bedrock or other prohibitive subsurface conditions), the collector lines may be housed in above-ground cable trays or covered with concrete slurry in accordance with the applicable National Electric Code (NEC) provisions. Installation of buried cables associated with the fenced solar array will temporarily disturb a corridor for each cable. Because the entire area inside the fence line will be temporarily disturbed during construction, this temporary impact is not calculated separately. Areas inside the fence line are included in the estimated altered habitat associated with the fenced solar array (i.e., no separate temporary impacts are calculated for buried cables inside the perimeter fence).

2.1.3 Power Conversion Systems

The Project layout includes 150 PCSs distributed throughout the solar PV arrays. Each PCS includes up to a step-up transformer installed on a foundation approximately 8 feet (wide) by 8 feet (length). A DC-coupled BESS unit is a self-contained and standalone unit that combines a battery system (such as nickel manganese cobalt, nickel cobalt aluminum, lithium-ion, or lithium iron phosphate), inverter, and controller that can either store electrical energy for future use, or as required based on grid demand, convert DC electricity to AC electricity and send the AC electricity to the step-up transformer. Lithium-ion batteries are a type of rechargeable battery in which lithium ions, suspended in an electrolyte, move from negative to positive electrodes and back when charging and recharging. Batteries experience a degradation of performance over time and are gradually replaced over time.

Each AC-coupled BESS unit is approximately 10 feet (height) by 10 feet (width) by 40 feet (length). The AC-coupled BESS will be positioned in groups of up to five around a single step-up transformer, which is approximately 8 feet (height) by 8 feet (width) by 8 feet (length). The step-up transformer increases the AC voltage from the DC-coupled BESS units to 34.5 kV where it will then be conveyed via AC medium voltage collector lines and combiner boxes to the Project collector substation where it is transformed to grid voltage. Components of the PCSs will be mounted on concrete pads or beam foundations. Each PCS unit will include and incorporate multiple layers of protection to avoid failures and risks of fire or spills and will comply with the applicable requirements of the NEC, National Fire Protection Association (NFPA) Standards, and Institute of Electrical and Electronics Engineers Standards.

For the purposes of this ASC, the Applicant conservatively assumes that up to 150 PCSs will be needed to convert the DC from the modules to produce up to 500 MWAC. The final number of PCSs may vary depending on final design of the solar array and selection of PCS technology.

2.1.4 Alternating Current Medium Voltage Collector Network

The AC medium voltage (34.5 kV) collector network will convey the electricity from the medium voltage step-up transformers located at each PCS to the Project substation where the electricity will be transformed to 230 or 500 kV by one or more main power transformer(s) for final distribution to the grid via the Project's gen-tie line. Similar to the underground DC electric collector lines, the AC medium voltage collector lines will be installed underground within a trench approximately 3 feet wide and 4 feet deep, with final design determined by thermal resistivity studies. Areas with multiple circuits running in parallel will have typically 5 feet between each circuit, resulting in a wider temporary trench area. At stream crossings, collector lines will be bored underneath the streambed to a minimum depth of 36 inches.

Similar to the DC collector network, the buried cables included in the estimated altered impacts associated with the fenced solar array (i.e., no separate temporary impacts are calculated for buried cables inside the perimeter fence). Buried cables exterior to the perimeter fence will be constructed within a 25-foot-wide construction corridor. A larger constriction corridor is required where multiple cables run in parallel to one another

2.1.5 Project Substation

The Project collector substation will function to further increase the voltage in order to match the voltage of the BPA transmission system of 230 or 500 kV. The Project collector substation and associated interconnection infrastructure will include equipment such as free-standing steel switch-rack structures, one or more main power transformer(s), breakers, power meters, and associated electrical lines. Backup power for the Project substation will be provided by sealed 12-volt valve-regulated lead-acid cell battery packs housed in the control enclosure building. The Project collector substation will be constructed on an approximately 6-acre area and will include concrete foundations. The Project collector substation will be separately fenced for electrical safety. The collector substation equipment will generally range in height from 30 feet to 60 feet above ground level.

2.1.6 Overhead Transmission Line

The Project collector substation will be connected to the grid via three alternative overhead 230-kV / 500-kV gen-tie lines and POIs to the grid:

- **Option 1 POI**: An approximately 17.8-mile-long overhead 230-kV or 500-kV transmission line will extend from the Project collector substation to the POI with the existing BPA transmission system at the BPA Midway Substation, which is located on

BPA federal U.S. Department of Energy (DOE) lands. Interconnection to a BPA transmission system is subject to review under the National Environmental Policy Act (NEPA). BPA will lead this process as a separate action from the site certification process. This federal process is not within the jurisdiction of EFSEC and is not addressed in this ASC.

- **Option 2 POI**: An approximately 15-mile-long overhead 230-kV or 500-kV transmission line will extend from the Project collector substation to the POI with the existing BPA transmission system through a transmission line interconnection southwest of the Midway Substation. Interconnection to a BPA transmission system is subject to review under NEPA. BPA will lead this process as a separate action from the site certification process. This federal process is not within the jurisdiction of EFSEC and is not addressed in this ASC.
- **Option 3 POI**: An approximately 11.2-mile-long overhead 230-kV or 500-kV transmission line will extend from the Project collector substation to the POI with the existing BPA transmission system through a transmission line interconnection northeast of the Wautoma Substation. Interconnection to a BPA transmission system is subject to review under NEPA. Either the BPA or the DOE will lead this process as a separate action from the site certification process. This federal process is not within the jurisdiction of EFSEC and is not addressed in this ASC.

A preliminary transmission line alignment is shown on Figure A-2 in Attachment A. The route alignment will be finalized prior to construction. The line will be suspended above ground on H-frame or single steel structures that will be approximately 60 to 150 feet tall and installed on concrete piers. The transmission line will span numerous ephemeral drainages located between the Project collector substation and the POI options. A temporary up to 150-foot-wide access corridor will be used during construction of the overhead line. To minimize impacts to this area, only vehicles equipped to carry the transmission wires (conductor, shield wire, etc.) and matting will be allowed.

The gen-tie line will be constructed in compliance with codes and standards from the following: National Electrical Safety Code (NESC; 2017 Edition, Grade B Construction), WAC, American National Standards Institute, National Electrical Manufacturers Association, American Society for Testing and Materials, Avian Power Line Interaction Committee, as well as other applicable laws and construction codes. Ground clearances for the suspended portion of the line will conform to the NESC standards.

2.1.7 Operations and Maintenance Structure

The Project will include an unoccupied O&M structure that will consist of a single-story storage structure. The O&M structure could be approximately 5,000 square feet in size on an approximately 8-acre area including an on-site 4-square-foot graveled area for parking for employees and visitors (approximately 10 parking spaces) and an open staging area. The O&M structure will be surrounded by a security fence separate from the solar array perimeter fence.

The O&M structure will be equipped with fire extinguishers as well as smoke detectors tied to the supervisory control and data acquisition (SCADA) system. In addition to fire extinguishers, the O&M structure will have basic firefighting equipment for use on-site during maintenance activities including shovels, beaters, portable water for hand sprayers, and personal protective equipment. In addition, the Project's O&M area may include a water cistern to store water for fire suppression needs.

Water for operations use will be hauled to the site from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right) and will be using less than 5,000 gallons per day. Wastewater will be managed using portable restrooms. Local utilities will provide electrical and communications/telephone connections.

Relevant building permits will be obtained for the O&M structure (see the Land Use Consistency Review [Attachment D] for additional permitting details).

2.1.8 Access Roads

The Project will be accessed primarily from SR 241 to Sheller Road or along Interstate (I) 82 from the east.

Access roads within the Solar Array Siting Area will consist of improvements to existing roads and new access roads. Improvements to existing roads may include drainage upgrades, smoothing, and graveling as needed to accommodate construction vehicles. New access roads may require excavation and fill to achieve acceptable grades. Access roads will have a compacted gravel surface, with a permanent width of approximately 24 feet as well as the required clearance and turning radius needed for emergency response vehicles, in accordance with fire code. The final layout will be provided to the Benton County Fire Marshal's Office. The access roads will provide primary access to each of the solar array blocks, including each PCS, as well as the Project substation. The spacing between the rows of panels will allow for localized access within each of the solar array areas.

2.1.9 Fencing and Lighting

Fencing will be installed around the perimeter of the Project for general security purposes and public safety. The fence is expected to be an approximately 7-foot-tall chain-link fence, or other fence meeting the requirements of the NESC. Fencing around the Project substation will extend to the ground and will be topped by barbed wire consistent with the fencing around the existing BPA substation. Solar array perimeter fencing will not be topped with barbed wire. Gates 12 to 24 feet wide will be installed for approved pedestrian and vehicular access. An access road and gates will be used to provide pedestrian and vehicular access between these fenced areas.

While the Project will include lighting at limited infrastructure areas such as but not necessarily limited to the Project collector substation, inverters, entrances, and O&M structure for security and limited after-hours work, lighting will mitigated through measures such as being downward shielded and motion-detector-activated to minimize the amount of time lights are active. Lighting is also needed at the Project substation in accordance with North American Electric Reliability Corporation (NERC) standards.

2.1.10 Temporary Laydown Areas

Five temporary laydown (i.e., staging) areas (approximately 40 acres each) will be established within the fenced solar array area. Some grading may be needed to level the ground surface, with geotextile materials and compacted gravel installed as needed. Temporary laydown areas will be replaced by the solar array as the Project is built out.

3.0 CONSTRUCTION

The Project's construction is anticipated to begin as early as the first quarter of 2024, with a COD planned for the last quarter of 2025 (24-month construction schedule). The Project may be built in two phases up to the maximum Project generation capacity of 500 MWAC. Construction phasing will be determined based on final offtake discussions with energy customers and

contractual arrangements. If the Project is built in phases, the initial phase will likely include construction of the substation, transmission line, and O&M structure, along with a subset of solar arrays, PCSs, and access roads, and site entrance road improvements. Subsequent phases will then consist of construction of the remaining solar panels with their associated PCSs and access roads. If construction is phased, the average and peak number of construction workers on site at a given time may be less than estimated here, but the total duration of construction may be longer and may include an interim period during which little construction work is done. The construction of the Project will include transport and delivery of Project equipment and materials, site preparation, equipment installation, and revegetation and landscaping. Each of these activities is generally described below.

3.1 Construction Staff

During construction, an estimated peak of 300 people will be employed at the Project. Most construction workers will be employees of construction and equipment manufacturing companies under contract to the Applicant. Sufficient workforce is available locally to constitute approximately 75 percent of locally hired workers (Attachment I). Construction workforce will be hired locally to the extent workers are available and a limited number of specialized workers for specific construction tasks (for example, construction management) may be hired regionally or from outside the area. The Applicant will solicit experienced Washington-based contractors with the goal of hiring construction workers from local communities. Employees hired directly by the Applicant may go through U.S.-wide background checks, including criminal record check, credit rating check, and employment/professional references, as applicable.

3.2 Transport and Delivery

Heavy vehicles delivering equipment and materials are expected to travel from ports in western Washington and Oregon (Port of Vancouver, Port of Portland, Port Westward, Port of Seattle, etc.) or driven to the Solar Array Siting Area from manufacturing facilities or warehouses in the United States. Deliveries will access the Project via SR 241 or I-82 from the east. Approximately 35 percent of the workers commuting are assumed to arrive from the west via Interstate I 82 and SR 241 (Yakima area). The other 65 percent are assumed to come from the southeast via I-82 to N Gap Road (Tri-Cities or Sunnyside areas). Traffic on SR 24 is anticipated to increase temporarily during construction. Average daily traffic (ADT) counts on SR 24 west of the intersection with SR 241 will increase from 3,574 to an average of 3,618 near the Project. The western portion of SR 24 near I-82 at Yakima has a current ADT of 23,060, which is estimated to increase to an average ADT of 23,104 during Project construction. However, this equates to less than a 1 percent increase and will not occur at peak times. Additional delays during construction could occur on SR 24 near I-82, but given the percentage of traffic increase, these delays will be minimal. Significant impacts to traffic flow along the remaining portions of SR 24 are not expected given the uncongested nature of the current state.

Some workers commuting from the Tri-Cities area will travel along I-82 near N Gap Road to McCreadie Road. Considering the current 16,000 to 17,000 trips per day on I-82 in the vicinity of N Gap Road, the possibility of an additional 390 trips at peak construction will not significantly impact the current uncongested state of this roadway. Given the current uncongested state of roads, the temporary increase in traffic counts, and the Applicant’s proposed traffic control measures described in ASC Part 4, Section 20, significant impacts to traffic flow are not expected. Refer to Part 4, Section 20 for further details on transportation and delivery, including detailed traffic estimates over the course of the construction period.

3.3 Site Preparation

Initial site preparation will involve grubbing and vegetation clearing within the Project Area, along with installation of BMPs as described in Section A.5. Clearing and grubbing will be phased, and soil will be temporarily stabilized. Following clearing and grubbing, laydown/staging areas and access roads will be established. Some grading may be needed to level the ground surface of the laydown/staging areas and geotextile materials and compacted gravel will be installed as needed. Similarly, installation of new access roads will also involve grading, subgrade preparation and compacted gravel. Clearing, grubbing, and grading will be conducted using equipment such as bulldozers, excavators, compactors, graders, and front-end loaders. Water trucks will be used to provide moisture for compaction as well as dust control during construction as required. Depending on the moisture levels, up to approximately of 66 million gallons of water could be used throughout the construction for dust suppression. Water use for Project construction will be hauled to the site from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right). Refer to Section B.8d for further discussion of water use and source. Construction activities that include the use of major excavating and earth-moving machinery will be conducted during normal weekday hours to the extent feasible.

3.4 Installation of Project Equipment

Following site preparation activities, the general sequence for construction will involve installation of the following equipment: foundations, the racking system, solar PV panels and associated wiring, electrical collector lines, concrete equipment pads and foundations, DC-coupled BESS units, step-up transformers, collection substation equipment, and transmission line.

Overall, the extent of ground disturbance associated with the solar array areas is expected to be relatively minimal since the single axis tracking system will be installed using structural steel posts (as opposed to larger foundations) and can tolerate slopes up to 15 percent (based on the manufacturers' specifications). The Project is being designed to accommodate as much as possible the existing topography of the site in order to minimize the amount of earthwork needed. In general, grading for the Project will primarily occur in areas where new access roads, concrete equipment pads, retention areas, and the Project substation will be sited. Where grading is required, soils excavated from one area will be used as fill for other areas to minimize or eliminate the need for imported fill material.

The foundation posts for the racking system will be installed using a hydraulic pile driver and/or auger for pre-drilling to depths of approximately 6 to 7 feet, with a maximum depth of 20 feet depending on soil conditions. In areas where the desired depth cannot be achieved, foundations will be pre-drilled and supported with concrete slurry or cast in place concrete spread footings.

The panel frames and other components of the racking system will be bolted to the posts, with the solar PV panels affixed to the frames. For any electrical wiring or collector lines to be installed belowground, trenches will be excavated with track-mounted excavators (or similar) or specific trenching machines, and will be approximately 3 feet wide and 4 feet deep; following placement of the electrical lines, the excavated soil will be backfilled into the trench and tamped back to the appropriate level of compaction per the design specifications. In areas where the desired depth cannot be achieved (due to basalt rock or other prohibitive subsurface conditions), the collector lines may be placed in above-ground cable trays in accordance with the applicable NESC provisions. In cases where adequate space for undergrounding the collector lines is limited, the collection system may go overhead similar to a transmission line.

The equipment pads and Project substation foundation will involve excavation up to approximately 4 feet in depth and installation of concrete. Excavated soil will be used elsewhere within the Project Area. Concrete for the pads and foundations will be delivered in ready-mix concrete trucks; the Project will not include a concrete batch plant. Once the concrete equipment pads and Project substation foundation have been installed, the DC-coupled BESS units, transformers, and various electrical equipment will be installed. Electrical equipment and wiring will be installed and inspected in accordance with applicable code requirements and best industry practices.

3.5 Revegetation and Post-Construction Site Control

Following construction, areas that have been temporarily disturbed will be revegetated for soil stabilization and erosion control purposes. It is anticipated that revegetation will involve application of hydroseeding, with a suitable mix of non-invasive grass species and/or species currently found throughout the site. In addition to revegetation of temporarily disturbed areas, permanent BMPs will be implemented to address long-term stormwater requirements.

4.0 OPERATIONS AND MAINTENANCE

Periodic maintenance and inspection of the infrastructure will occur intermittently over the course of Project operations. Typical maintenance will follow basic monthly inspections, preventative quarterly inspections, and an in-depth annual maintenance program. Approximately five full-time personnel will be based at the site, and limited additional temporary staff will be on site periodically depending on the type of maintenance scheduled per month. Approved technicians will service electrical equipment, primarily the DC-coupled BESS units and transformers, on average once per month. A performance audit and inspection to assess the quality of equipment will be conducted annually. If any equipment needs to be replaced before the Project's end-of-life, the Applicant will seek the most environmentally responsible route for reuse, recycling, or disposal. No material quantities of chemicals of fuels will be stored at the O&M facility. Only negligible amounts of lubricating oils, greases, and hydraulic fluids for solar tracking arrays, and negligible amount of raw materials for component parts maintenance of solar panels and batteries, will be stored onsite at the O&M facility.

Typical maintenance of the solar PV panels will include surface cleaning to remove accumulated dust and dirt to optimize performance. Based on environmental conditions and rainfall, it is anticipated panel washing may occur once per year. A variety of equipment is available on the market for cleaning solar panels. Typical utility-scale solar projects utilize water trucks with an assortment of hoses and support personnel to scrub down panels with heavier soiling. If panel washing occurs, the wash water will not contain additives and will not be discharged into nearby water bodies (i.e., it is expected infiltrate into the ground surface at and near the point of application). The amount of water needed for cleaning will be dependent on the extent of the soiling but is estimated to be approximately 266,000 gallons per wash. During operations panel washing, approximately 7 to 10 water truck trips are anticipated per day over a period of 2 to 3 weeks. Other more innovative waterless and dry brushing techniques will be explored as an option.

Vegetation within the Project fence line will be managed throughout the life of the Project. A Vegetation and Weed Management Plan that will be developed prior to construction (Part 3, Section 8 and Part 4, Section 8) will be followed during operation so that vegetation does not overgrow the solar panels, preventing solar radiation from reaching them. Vegetation management will also establish and maintain fire breaks around each solar array, PCS, the Project collector substation, and along the Project's fence line.

The Applicant plans to use a mix of sheep grazing and mechanical methods to control vegetation to maintain the productive nature of the Project Area. Through a local grazing partnership the Applicant will utilize sheep to control vegetation around the panel racking system whenever possible. When grazing as a means of vegetation control is deemed not feasible by the Applicant, mechanical vegetation control such as mowing, trimming, and pruning will be the secondary means for vegetation management. Mowing frequency is anticipated to be as frequent as once per month during the growing season. Herbicides may be utilized for vegetation control; however, an effort will be made to minimize use and only apply bio-degradable, U.S. Environmental Protection Agency (EPA) registered, organic solutions that are non-toxic to wildlife and used in a manner that fully complies with all applicable laws and regulations.

5.0 DECOMMISSIONING

The Project is expected to have an operational life of approximately 50 years, following which the Project may be re-powered with new equipment (under subsequent permits/certification) or retired and restored adequately to a useful condition desired by the landowner. The Project will be decommissioned following the end of its useful life. Pursuant to WAC 463-72-040, the Applicant will provide EFSEC with an Initial Site Restoration Plan at least 90 days prior to beginning Project site preparation. The Initial Site Restoration Plan will follow the proposed retirement steps provided in the Applicant's Decommissioning and Site Restoration Plan (Attachment J). The Initial Site Restoration Plan will address provisions for funding or bonding arrangements to meet the retirement costs identified in Attachment K.

Decommissioning will be conducted in accordance with EFSEC's rules and the Site Certification Agreement for this Project and will involve removal of equipment associated with the Project and returning the area to substantially the same condition as existed prior to Project development. Decommissioning will include consideration of local environmental factors to minimize effects such as erosion during the removal process, and the recycling of materials demolished or removed from the site to the extent feasible. The activities that may occur as part of decommissioning are summarized below.

- Decommissioning will commence once the Project has been fully de-energized and isolated from external electrical connections.

- Consistent with the measures described for construction and operation of the Project, BMPs will be implemented and maintained throughout the decommissioning phase as needed to avoid and minimize potential impacts to the surrounding environment, particularly those related to dust, erosion, and stormwater.

- Once the site has been adequately prepared for decommissioning, the following equipment will be removed: solar PV panels and racking system, including steel piles, power conversion systems (including BESS units and step-up transformers), electrical wiring and connections, Project substation components, communication equipment, and fencing. Above-grade foundations will be removed to a level of no less than 3 feet below the ground surface unless requested to be maintained by the property owner. The extent of which access roads will be removed will be coordinated with the landowners at the time of decommissioning.

- Equipment and materials will be salvaged or recycled to the extent feasible and in coordination with licensed subcontractors, local waste haulers, and/or other facilities that recycle construction/demolition waste; the remaining materials will be disposed of by the

contractor at authorized sites, in accordance with applicable laws. Reuse or recycling of materials will be prioritized over disposal. Recycling is an area of great focus in the solar industry, and programs for both batteries and solar panels are advancing every year. Panels and batteries will most likely be shipped to recycling facilities. Waste requiring special disposal (e.g., transformers) will be handled according to regulations that are in effect at the time of disposal.

- Following removal of Project equipment, site restoration will be conducted such that the physical conditions of the area are returned to substantially the same condition that existed prior to Project development, or as desired by the landowner. These activities will include removal of gravel and other aggregate material, localized grading and disking to match surrounding elevations, replacement of topsoil from on-site stockpiles, and revegetation of disturbed areas with an appropriate hydroseed mix.

During decommissioning, the Applicant will adhere to federal, state, and local requirements, including obtaining and adhering to applicable permits and authorizations. The Applicant's Decommissioning and Site Restoration Plan and Cost Estimate is provided in Attachments J and K and will inform the Initial Site Restoration Plan.

6.0 SOCIOECONOMIC REVIEW

The Applicant prepared a Socioeconomic Review (Attachment I) for consideration under WAC 463-60-535. The document contains information about population and labor force impacts as well as housing. The document demonstrates that, at peak construction, the locally available workforce will be sufficient to meet demand for local direct workers, which are expected to account for about 75 percent of the total construction workforce. Local workers are those who normally reside within daily commuting distance of the Project site (within 1 hour of the site) and will commute daily to the Project site from their homes. Non-local workers hired from outside the area are expected to temporarily relocate to the vicinity of the Project for the duration of their employment. There is sufficient capacity in the region to house permanent and temporary workers.

A.2.b Project Schedule, Employees, and Public Access

Phase	Proposed Timing	Duration	Employee Numbers on Site & Frequency	Public Access (yes/no)
Site preparation	Q1 2024	60 days		No
Construction	Q1 2024 – Q4 2025	24 months	A peak construction workforce of 300.	No
Operation/use	Q4 2025	50 years	Approximately 5	No
Closure/reclamation	2075	6 months	Similar to, or less than, those required for construction (a peak of 300).	No

A detailed Construction Schedule will be submitted to EFSEC at least 30 days prior to start of site preparation.

A.3. Phased and Future Projects

Is this project an addition, continuation, or expansion of a previous proposal or are there other related actions planned?

☒ No ☐ Yes

A.4. Site Maps and Plans

Attachment A contains site maps referenced in this ASC. Additional maps are included in the detailed studies and reports provided in other attachments. The list below consists of the maps provided in Attachment A.

Map #	Map Name	Purpose and Description	Completed?
A-1	Project Assessor Parcels	Provide parcel numbers for Site Area	Yes
A-2	Preliminary Site Plan	Preliminary layout and map book showing Project components	Yes
A-3	Soils	Mapped soil types throughout the Site Area	Yes
A-4	FEMA Floodplains and Critical Aquifer Recharge Areas	National Hydrographic Database, National Wetlands Inventory, and FEMA flood hazard mapping within the Project Area and vicinity	Yes
A-5	Habitat and Species	Mapped habitat classifications based on site-specific habitat survey	Yes

A.5. Mitigation Measures Summary

Mitigation Measure	Description	Expert Agency Participation
Earth		
Implementation of Geotechnical Recommendations	The Applicant will follow all geotechnical recommendations provided in the Final Geotechnical Engineering Report.	EFSEC
Best Management Practices (BMPs) - Erosion	As further described in Part 4, Section 5, the Applicant will implement an Erosion and Sediment Control Plan (ESCP) and a Construction Phase Stormwater Pollution Prevention Plan (SWPPP) and Operations Phase SWPPP in compliance with local stormwater regulations. These plans will address stormwater runoff, flooding, and erosion to address compliance with state and federal water quality standards. The ESCP will include BMPs such as the appropriate use of silt fencing	Ecology, EFSEC

Mitigation Measure	Description	Expert Agency Participation
	to avoid or eliminate runoff of contaminants. The SWPPP will include BMPs from Ecology's Stormwater Management Manual for Eastern Washington (SWMMEW; Ecology 2019). Per Revised Code of Washington (RCW) 17.10.140, the Applicant will prepare and submit a Vegetation and Weed Management Plan to the Energy Facility Site Evaluation Council (EFSEC) for the control of noxious and problem weeds prior to construction. The plan will be implemented to revegetate temporarily impacted areas and minimize erosion.	
Building Permits	The Applicant will provide grading plans and obtain necessary building permits from the Benton County Building Division if needed. Seismic design parameters that will be used to design the Project are included in the 2018 International Building Code and American Society of Civil Engineers (ASCE) 7-10 and ASCE 7-16. These parameters are consistent with the Washington State Building Codes. The Project will comply with the current codes at the time of construction, demonstrating compliance with Washington Administrative Code (WAC) 463-62-020.	Benton County Building Division and Washington State Building Code Council
Air Quality		
Implementation of Best Management Practices (BMPs) and Standard Construction Practices	Washington Administrative Code (WAC) sections addressing air quality include: • WAC 173-400-040(3) Fallout • WAC 173-400-040(4-4a) Fugitive emissions • WAC 173-400-040(5) Odors • WAC 173-400-040(9)(a) Fugitive Dust To adhere to these codes, the Applicant will implement BMPs and standard construction practices, including the following: • Vehicles and equipment used during construction will be properly maintained to minimize exhaust emissions. • Operational measures such as limiting engine idling time and shutting down equipment when not in use will be implemented. • Watering or other fugitive dust-abatement measures will be used as needed to	N/A

Mitigation Measure	Description	Expert Agency Participation
	control fugitive dust generated during construction. When applied, the Applicant will use water or a water-based environmentally safe dust palliative such as lignin for dust control. • Construction materials that could be a source of fugitive dust will be covered when stored. • Traffic speeds on unpaved roads will be limited to 25 miles per hour to minimize generation of fugitive dust. • Truck beds will be covered when transporting dirt or soil. • Carpooling among construction workers will be encouraged to minimize construction-related traffic and associated emissions. • Erosion-control measures will be implemented to limit deposition of silt to roadways, to minimize a vector for fugitive dust. • Replanting or graveling disturbed areas will be conducted during and after construction to reduce wind-blown dust.	
Water Quality – Wetlands and Surface Waters		
Avoidance	The Project will not impact wetlands or wetland buffers and is consistent with Washington Administrative Code (WAC) 463-62-050. Ephemeral streams and stream buffers were avoided to the greatest extent feasible as described above.	N/A
Stream crossing construction best management practices	Minimization of temporary water quality impacts (WAC 220-660-120; Stormwater Management Manual for Eastern Washington (SWMMEW; Chapter 173-204 WAC); and Construction Stormwater General Permit (Chapter 90.48 RCW) will be implemented on site during construction and operations and include the following best management practices (BMPs): • Staging of materials and equipment to prevent contamination of waters of the state; • Development of the Stormwater Pollution Prevention, Erosion and Sediment Control,	Ecology, Washington Department of Fish and Wildlife (WDFW)

Mitigation Measure	Description	Expert Agency Participation
	and Spill Prevention, Control, and Countermeasure (SPCC) Plans; • Installation and maintenance of temporary erosion and sediment control measures; and • Completing work in the dry with no water present.	
Hydraulic Project Approval (HPA)	The Applicant is using the Joint Aquatic Resources Permit Application (JARPA) to obtain an HPA permit per WAC 20-660-050.	WDFW
Water Quality – Stormwater Runoff		
Construction Stormwater General Permit	In compliance with WAC 173-200, the Applicant will obtain a Construction Stormwater General Permit (CSWGP) from the Washington Department of Ecology (Ecology). The CSWGP requires an Erosion and Sediment Control Plan (ESCP) and a Stormwater Pollution Prevention Plan (SWPPP). Benton County has adopted Ecology's Stormwater Management Manual for Eastern Washington (SWMMEW) as their basis of design and review. As the Project design advances, the post-construction stormwater management should be reviewed in further detail with the County Engineer. Stormwater quantity control will be provided so that proposed conditions peak runoff rates and volumes must be equal to or less than existing conditions. Runoff treatment best management practices (BMPs) will be sized based on the methodology identified in the SWMMEW. The aim of Core Element #5 of the SWMMEW is to treat at minimum 90 percent of runoff from pollution-generating impervious surfaces (PGIS). A surface is considered a PGIS if it is being regularly used by vehicles. Since the access roads on the Project site are primarily for operations and maintenance (O&M) and will be used irregularly, it is assumed that this Project is exempt from the Core Element #5 requirements. Water quality will be addressed using the Full Dispersion BMP (SWMMEW, Table 6.10). Proposed culverts and low water crossings will be sized for the 10-year 24-hour stormwater event.	Ecology
BMPs -	The ESCP and SWPPPs (for construction and	Ecology

Mitigation Measure	Description	Expert Agency Participation
Stormwater	operation) will address stormwater runoff, flooding, and erosion to address compliance with state and federal water quality standards. The ESCP will include erosion and sediment control BMPs such as the appropriate use of silt fencing to avoid or eliminate runoff of contaminants. The SWPPPs will include BMPs from Ecology's SWMMEW (Ecology 2019). A Vegetation and Weed Management Plan will be developed prior to construction and implemented to revegetate temporarily impacted areas and minimize erosion and sedimentation during and after construction.	
Preventative procedures to avoid spills	Substantial quantities of oils, fuels, and other potential contaminants are not expected to be stored on-site during construction or operation. The Applicant will prepare a Construction Phase SPCC Plan, consistent with requirements of 40 Code of Federal Regulations (CFR) Part 112, to prevent spills during construction and to identify measures to expedite the response to a release if one were to occur. Preventative procedures and rapid response measures will address and prevent potential water quality issues. The Applicant will also prepare an Operations Phase SPCC Plan in consultation with Ecology and pursuant to the requirements of CFR Part 112, Sections 311 and 402 of the Clean Water Act, Section 402 (a)(1) of the Federal Water Pollution Control Act, and RCW 90.48.080.	N/A
Plants		
Avoidance and Minimization Measures	During siting and design, the Applicant took several measures to avoid and minimize impacts to botanical resources. The Applicant minimized impacts to shrubsteppe habitat (i.e., Priority Habitat). The Applicant will conduct botanical surveys and document known populations of suitable habitat of Umtanum desert buckwheat and woven-spore lichen. If documented, the Project siting would attempt to avoid and then minimize the impacts to the critical habitat or known populations of Umtanum desert buckwheat and woven-spore lichen.	WDFW
Habitat Management Plan	Per WAC 463-60-332(3) and consistent with requirements in Benton County Code (BCC) 15.14.030 for the Applicant to provide a habitat	WDFW

Mitigation Measure	Description	Expert Agency Participation
	assessment and discuss the habitat avoidance, minimization, and mitigation measures proposed for the Project, the Applicant has prepared a Draft Habitat Mitigation Plan (Attachment L). This plan will provide details regarding mitigation measures for impacts to habitat types from Project construction and operation including impacts to "habitats and species off local importance" (i.e., shrubsteppe habitat), per BCC 15.14.030. A Final Habitat Mitigation Plan will be prepared prior to construction.	
Revegetation and Noxious Weed Control	Per Revised Code of Washington (RCW) 17.10.140, the Applicant will develop a Vegetation and Weed Management Plan with input from EFSEC and the Benton County Noxious Weed Control Board prior to construction. Herbicide and pesticide applications will be conducted in accordance with manufacturer instructions and federal, state, and local laws and regulations; herbicides will only be directly applied to localized spots and will not be applied by broadcasting techniques (RCW 17.21).	EFSEC, Benton County Noxious Weed Control Board
BMPs	The Applicant will implement the Project's Erosion and Sediment Control Plan (ESCP), Construction Stormwater Pollution Prevention Plan (SWPPP), and Permanent Stormwater Control Plan. These plans will help reduce erosion and impacts to vegetation.	Ecology; WDFW
Animals		
Avoidance and Minimization Measures	During siting and design, the Applicant took several measures to avoid and minimize impacts to wildlife and habitat. The Applicant coordinated with the Washington Department of Fish and Wildlife (WDFW) prior to conducting surveys, and used the feedback obtained during this coordination to inform surveys and the assessment of impacts. The Project has been designed to avoid and minimize impacts on habitats associated with the special status species that were observed during surveys and/or are known to occur in the Project vicinity. In particular, these are shrubsteppe habitat, wetlands and streams, and talus slopes.	WDFW

Mitigation Measure	Description	Expert Agency Participation
	• Talus slopes are a Priority Habitat • Cliffs/bluffs (Priest Rapids Cliff line for nesting raptors and chukar partridge) • Suitable burrows for burrowing owl and Townsend's ground squirrel • Prairie falcon breeding areas • Sagebrush sparrow observations and breeding areas WDFW requires shrubsteppe mitigation, which will be a 2:1 mitigation ratio for permanent impacts and 1:1 for altered and temporary impacts. To the extent feasible, the solar array fence lines have been designed to enclose smaller solar arrays within the Project Area rather than enclosing one large fenced array, which will minimize habitat fragmentation and allow wildlife passage through the area. The layout of the perimeter fence was also modified to maintain open access to the ephemeral drainages within the Project Area (see Attachment P) that are used by mule deer and elk for movement corridors as well as for water sources; the existing transmission line right-of-ways through the Project would also be left unfenced to maintain movement corridors along these existing transmission lines. With the exception of fencing around the collector substation, which will extend to the ground, perimeter fencing will be designed to be at least 4 inches above ground. The fence design may be revised further based on ongoing coordination with EFSEC and WDFW. The Applicant is also in discussions with WDFW and affected landowners to see if existing artificial water sources that were primarily developed for livestock can be moved outside of the fenced areas in order to maintain wildlife access (including access for elk and mule deer) to these water sources.	
Construction and Operations BMPs	Unnecessary lighting will be turned off at night to limit the attraction of migratory birds to the area. This includes using lights with timed shutoff, downward-directed lighting to minimize horizontal or skyward illumination, and avoidance of steady-burning, high-intensity	WDFW

Mitigation Measure	Description	Expert Agency Participation
	lights. If construction occurs during the bird nesting season, nest clearance surveys will be conducted prior to site disturbance. Evening and nighttime construction activities will be avoided to the extent practicable, which will limit the impacts of construction noise to wildlife. Prior to construction, construction personnel will be instructed on wildlife resource protection measures, including: 1) applicable federal and state laws (e.g., those that prohibit animal collection or removal); and 2) the importance of these resources and the purpose and necessity of protecting these resources. Construction personnel will be trained in the following areas when appropriate: awareness of biological resources (including Priority Habitats and special status species), potential bird nesting areas, and general wildlife issues. The Applicant will prepare an Erosion and Sediment Control Plan (ESCP) that would include best management practices (BMPs) to minimize surface water runoff and soil erosion. Appropriate stormwater management practices will be implemented in accordance with the SWPPPs. The Applicant will prepare Spill Prevention, Control, and Countermeasure (SPCC) Plans to be implemented during construction and operation to reduce the likelihood of an accidental release of a hazardous or regulated liquid and, in the event such a release occurs, to expedite the response to and remediation of the release (see Part 4, Section 3 for more details). Vehicle speeds will be limited to 25 miles per hour on internal Project access roads to avoid wildlife collisions. Existing posted speed limits on county and private roads will be followed outside of the Project Area. If any overhead power lines are required to connect the Project to the grid, these lines will be designed and constructed to minimize avian electrocution, according to guidelines outlined in Avian Power Line Interaction Committee standards (APLIC 2012).	

Mitigation Measure	Description	Expert Agency Participation
	Fire hazards from vehicles and human activities will be reduced via use of spark arrestors on power equipment, avoiding driving vehicles off roads, and allowing smoking only in designated areas per the requirements of WAC 463-60-352. The Applicant will prepare an Emergency Management Plan that contains fire safety measures, which will be developed with input from applicable agencies (see the "Fire" section above for more details). Following decommissioning, reclamation of the Project Area will begin as quickly as possible to reduce the likelihood of ecological resource impacts in disturbed areas. Part 4, Section 4.8.D contains additional measures targeted at successfully restoring vegetation communities. Implementation of these Vegetation mitigation measures will have indirect benefits to wildlife species as well.	
Compensatory Mitigation	In order to achieve "no net loss of habitat functions and values" as required by WAC 463-62-040, the Applicant will continue to work with the WDFW and EFSEC to determine appropriate compensatory mitigation. The Applicant has prepared a Draft Habitat Mitigation Plan (Attachment L), which provides a framework for determining the compensatory mitigation required to achieve "no net loss." A Final Wildlife Habitat Mitigation Plan will be prepared prior to construction.	WDFW
Environmental Health – Hazardous Waste		
Emergency Management Plan	During Project construction and operations, the Applicant will implement and maintain a Fire Protection Emergency Response Plan to address worker health and safety, standards concerning potential release of hazardous materials, and fire prevention and control (see Attachment R). This plan provides safety guidelines and procedures for potential emergency-related incidents during the Project's construction, operation, and decommissioning phases. This includes coordination with emergency service providers and fire suppression measures associated with the Project. The Applicant will coordinate with Benton County Emergency Management, Benton County Sheriff, Benton County Fire	Benton County Emergency Management, Benton County Sheriff, Benton County Fire Protection District, and DNR Wildland Fire Management Division

Mitigation Measure	Description	Expert Agency Participation
	Protection District, and DNR Wildland Fire Management Division as necessary for proper implementation. Applicable laws/codes include: • WAC 463-60-352 (2 through 4), which addresses fire and explosion, hazardous materials release, and safety standards compliance. • WAC 463-60-352(6), which describes emergency plans to address public safety and environmental protection. • 49 CFR §173.185, which regulates the transportation of lithium-ion batteries. • 49 CFR §173.159, which regulates the transportation of lead-acid batteries. • International Fire Code	
Best Management Practices (BMPs) – Fire Prevention	To minimize the risk of fire or explosions, the Project will implement BMPs detailed in the Fire Protection Emergency Response Plan noted above (see Attachment R). Typical BMPs include, but are not limited to, the following: • Equip construction vehicles with fire extinguishers, spark arrestors and heat shields, as appropriate. • Establish roads before accessing the site to minimize vehicle contact with grass. • Use diesel construction vehicles instead of gasoline vehicles, where feasible, to prevent potential ignition by catalytic converters. • Prohibit vehicles from idling in grassy areas. • Restrict the use of high-temperature equipment in grassy areas. • Install lightning protection measures to protect generators and other equipment. • Install fire protection equipment in accordance with Washington state fire code. • Notify the local fire district of construction plans and access to Project equipment. • Provide mutual assistance in the case of fire in or around the Project during construction. • Monitor wildfire activity during Project construction and operations and, if	Benton County Fire Protection District and DNR Wildland Fire Management Division

Mitigation Measure	Description	Expert Agency Participation
	necessary, modify Project activities, change the schedule, cease construction operations, or remove equipment. • Prevent and control potential fires inside the Siting Area with trained staff who have 24-hour access to the site. • Prevent the storage of combustible material in or within 10-feet of the solar power conversion system or battery enclosures. A Vegetation and Weed Management Plan will be prepared and will include revegetation management and noxious weed control measures.	
Battery energy storage system (BESS) design	The BESS will contain a fire suppression and detection system in accordance with fire code and National Fire Protection Association (NFPA) standards, specifically NFPA 855 “Standard for the Installation of Stationary Energy Storage Systems.” The system will include monitoring equipment and alarm systems with remote shut-off capabilities. The Fire Protection Emergency Response Plan includes fire prevention procedures related to battery enclosures (see Attachment R).	NFPA
Construction Stormwater General Permit (CSWGP), Construction Phase Stormwater Pollution Prevention Plan (SWPPP), and Erosion and Sediment Control Plan (ESCP)	As described in Part 4, Section 5, the Applicant will obtain a CSWGP from Ecology, which requires a SWPPP and ESCP. These plans will contain measures to minimize the risk of spills and stormwater pollution, as well as to reduce the effects of erosion to address compliance with state and federal water quality standards. Applicable laws/codes include the following: • Revised Code of Washington 90.48, which establishes general stormwater permits for Ecology under the Water Pollution Control Act • Washington Administrative Code 173-201A, Water Quality Standards for Surface Waters of the State of Washington • Clean Water Act (33 United States Code 1251)	Ecology
Spill Prevention, Control, and Countermeasure	The Applicant will prepare an SPCC Plan, consistent with requirements of 40 Code of Federal Regulations Part 112, to prevent spills	Ecology

Mitigation Measure	Description	Expert Agency Participation
(SPCC) Plan	during construction and to identify measures to expedite the response to a release if one were to occur. Preventative procedures and rapid response measures will address and prevent potential risks to water quality.	
Use of approved herbicides	In compliance with Revised Code of Washington 17.10.140, the Applicant will only use herbicides that are approved for use in the state of Washington by the U.S. Environmental Protection Agency.	Ecology
Land Use		
Based on the information provided above in Section 4.14.C and in the Land Use Consistency Review (see Attachment D), the Project will have no significant adverse effects on land use. Therefore, no land use mitigation or monitoring measures are proposed. Mitigation measures specific to other topics (e.g., wetlands and surface waters, wildlife habitat, or geological hazards) are addressed in their respective resource sections in Part 3 and Part 4 of this application and are summarized in Part 2, Section A.5.		
Noise, Light, Glare, and Aesthetics		
Best Management Practices (BMPs) - Noise		
Best Management Practices (BMPs) – Light, Glare and Aesthetics	The following are recommended BMPs to reduce visual impacts for Project components and activities: • Locate and operate solar collectors to avoid off-site glare. • Screen solar collectors to avoid off-site glare. • Use panels with anti-reflective coatings. • Maintain color-treated surfaces of solar collectors. • Maintain and utilize natural vegetation barriers for mitigation of solar glare where possible. • Avoid complete removal of vegetation beneath solar collector array. • Maintain and preserve the existing vegetation within the siting area to the greatest extent possible to reduce overall project impact. • If additional vegetation is used to enhance mitigation of project components, it should	N/A

Mitigation Measure	Description	Expert Agency Participation
	be natural and native to the surrounding area to complement existing vegetation. • Color treat structures to reduce contrasts with existing landscape. • Color treat grouped structures using the same color. • Color treat transmission line poles to reduce contrasts with existing landscape. • Maintain painted, treated, stained, or coated surfaces properly. • Direct lights properly to eliminate light spill and trespass. • Use timers or motion sensors on building lighting to minimize unnecessary lighting. • Minimize lighting usage during construction and operations.	
Archaeological, Historic, and Cultural Resources		
Complete cultural resources survey	Revised Code of Washington (RCW) 27.53.060 (Disturbance of archaeological resource without permit) is addressed through identification of precontact archaeological resources and National Register of Historic Places (NRHP)-eligible historic-era archaeological resources in portions of the Project that were not identified in the field at the time of the Project's Cultural Resources Survey Report (confidential Attachment M). The entirety of the Project Area proposed for development within the up to 150-foot-wide gen-tie easement within the Transmission Line Corridor Siting Area was not accessible to the cultural resources survey conducted by GeoVisions at the time of its completion. In addition, an access road was identified to be needed for the solar array following completion of surveys by GeoVisions. The Applicant will have this access road surveyed at the time of the additional surveys for the Transmission Line Corridor Siting Area. The Applicant will survey any unsurveyed portions of the Project Area where development will occur for cultural resources prior to construction, boundary testing will occur in order to confirm identified surface boundaries, and identified sites will be avoided in the construction of Transmission Line Corridor Siting Area with a minimum avoidance buffer of 30 meters (100	Department of Archaeology and Historic Preservation (DAHP), EFSEC, Confederated Tribes and Bands of the Yakama Nation (CTBYN), Confederated Tribes of the Umatilla Indian Reservation (CTUIR), Nez Perce Tribe (NPT), Confederated Tribes of Warm Springs (CTWS)

Mitigation Measure	Description	Expert Agency Participation
	feet) around the site boundaries and adherence to the Project-specific Inadvertent Discovery Plan (IDP) in order to ensure the Project's policy of avoidance. In areas determined to be areas of high potential for subsurface materials an intensive subsurface survey will occur in order to determine the presence of sites. Any additional survey work by GeoVisions will continue to be conducted in coordination with the Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of Warm Springs.	
Avoidance of National Register of Historic Places (NRHP)- and Washington Historic Register (WHR)-eligible or unevaluated sites as well as sites protected by RCW 27.53.060 when feasible and obtainment of Department of Archaeology and Historic Preservation (DAHP) excavation permit, if necessary.	The Project, as currently designed, avoids direct impacts on precontact archaeological sites and untested isolates by a minimum of 30 meters (100 feet). All sites and untested isolates are unevaluated for listing on the NRHP and WHR and are protected by RCW 27.53. Not all of the Project Area was accessible at the time of the cultural resources survey and additional such resources may be identified in the unsurveyed portions of the Project. The Preliminary Site Plan on Figure A-2 in Attachment A demonstrates the Project's intent to avoid identified resources. In order to avoid effects to unidentified archaeological sites, a Project-specific Inadvertent Discovery Plan (IDP) will be established prior to Project implementation. Briefing regarding the contents and the importance of the IDP will be provided to Project staff. If any pre-contact archaeological site or NRHP-eligible historic-era archaeological site related to Native American activities is impacted by the Project, IDP procedures will be followed and the Applicant will consult with the tribes regarding the resolution of any adverse effects caused by project implementation. The Applicant will obtain a DAHP excavation permit to perform any necessary archaeological work in order to comply with RCW 27.53.	DAHP, EFSEC, CTBYN, CTUIR, NPT, CTWS

Mitigation Measure	Description	Expert Agency Participation
Inadvertent Discovery Plan (IDP)	Revised Code of Washington (RCW) 27.53.060 (Disturbance of archaeological resource without permit) is addressed through stop work orders if an unanticipated archaeological resource is discovered during construction. RCW 27.44.040 (Protection of Indian graves) is addressed through stop work orders in the instance of an unanticipated discovery of an unidentified archaeological deposit, human remains, funerary items, or items of cultural patrimony. In the event unrecorded archaeological resources are identified during Project construction or operation, work within 30 meters (100 feet) of the find will be halted and directed away from the discovery until it can be assessed in accordance with steps in the IDP provided with confidential Attachment M. This plan does not contain any confidential information and can be shared with Project personnel and contractors.	DAHP, EFSEC, CTBYN, CTUIR, NPT, CTWS
Ongoing Communication with Tribes	The Applicant will continue to coordinate with the Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of Warm Springs regarding Tribal resources that may be affected by the Project. Additionally, the Applicant will continue to coordinate with the Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, and the Nez Perce Tribe regarding final design in relation to Native American cultural resources. Communication will remain open to better facilitate any response to inadvertent discoveries during construction.	DAHP, EFSEC, CTBYN, CTUIR, NPT, CTWS
Traffic and Transportation		
Washington State Department of Transportation (WSDOT) Oversize and Overweight Permit	A permit will be obtained for heavy or oversized loads in accordance with WSDOT regulations including Revised Code of Washington 46.44 and Washington Administrative Code 468-38.	WSDOT
Washington State Department of Transportation (WSDOT) Right of Way Access	Per Washington Administrative Code 468-51, the Applicant will obtain a General Permit from WSDOT to upgrade the portion of the approach off State Route (SR) 241 that is within the	WSDOT

Mitigation Measure	Description	Expert Agency Participation
Permit	WSDOT right-of-way, as needed.	
Benton County and/or Yakima County Right of Way Access Permit	Based on final Project design, the Applicant will obtain access permits to construct approaches to county road right-of-way from Benton County pursuant to County Standards, as needed.	Benton County Public Works Department
Traffic Control Plan	A Traffic Control Plan will be prepared in consultation with Washington State Department of Transportation for traffic management during improvements of highway access. This plan will contain measures to facilitate safe movement of vehicles in the vicinity of the construction zone and will be in accordance with 23 Code of Federal Regulations §655 Subpart F that provides for the Federal Highway Administration to maintain the Manual on Uniform Traffic Control Devices for Streets and Highways, which defines standards for traffic control. A Traffic Control Plan will be prepared in coordination with the Benton County Public Works Department for traffic management during construction and for construction of access approaches from county right-of-way.	WSDOT, Benton County Public Works Department

A.6. Project Plans and Submittals

Submittal Name	Description	Submittal Timing	Expert Agency Participation
Preliminary Site Plan	Shows the preliminary Project design in relation to the Siting Area and Solar Array Siting Area.	Completed (Attachment A; Figure A-1)	N/A
Construction Stormwater General Permit (CSWGP) and Notice of Intent (NOI)	In compliance with WAC 173-200 and WAC 463-76, the Applicant will obtain a CSWGP. The Construction Stormwater General Permit requires an ESCP and a SWPPP.	Prior to site preparation	Ecology, EFSEC with input from EPC
ESCP	The ESCP will be prepared to control erosion and sediment discharges during construction and will include BMPs such as the appropriate use of silt fencing to avoid or eliminate runoff of contaminants.	Prior to site preparation	EFSEC with input from EPC

Submittal Name	Description	Submittal Timing	Expert Agency Participation
Construction Phase SWPPP	The Construction Phase SWPPP will be based on Ecology's SWPPP template and will address stormwater runoff, flooding, and erosion to meet compliance with state and federal water quality standards. The SWPPP will include BMPs from Ecology's (2019) Stormwater Management Manual for Eastern Washington (SWMMEW).	Prior to site preparation	Ecology, EFSEC with input from EPC
Construction Phase Spill Prevention, Control, and Countermeasure Plan (SPCC Plan)	The Construction Phase SPCC Plan will be prepared to prevent spills during construction and to identify measures to expedite the response to a release if one were to occur. Preventative procedures and rapid response measures will address/prevent potential water quality issues. The plan will be prepared pursuant to the requirements of Code of Federal Regulations (CFR) Part 112, as well as Sections 311 and 402 of the Clean Water Act, and Section 402(a)(1) of the Federal Water Pollution Control Act.	Prior to site preparation	EFSEC with input from EPC
Emergency Management Plan	The Emergency Management Plan will address worker health and safety, as well as fire prevention and control measures for construction and operation.	Prior to site preparation	Benton County Emergency Management, Benton County Sherriff, Benton County Fire Marshall, and DNR Wildland Fire Management Division.
Traffic Control Plan	A Traffic Control Plan will be prepared in coordination with Washington State Department of Transportation, Benton County, and Yakima County for traffic management during construction and for construction of access approaches from WSDOT right-of-way. The plan will be developed consistent with WDOT and Benton County design standards.	Prior to site preparation	With input from WSDOT and Benton County

Submittal Name	Description	Submittal Timing	Expert Agency Participation
Construction Schedule	Final construction schedule.	Prior to site preparation	EFSEC
Construction Plans and Specifications	A set of construction plans, specifications, drawings, and design documents that demonstrate the Project is in compliance with applicable conditions of the Site Certificate Agreement.	Prior to site preparation	EFSEC
Operations Phase SWPPP	The Operations Phase SWPPP will be based on Ecology's SWPPP template and will address stormwater runoff, flooding, and erosion to meet compliance with state and federal water quality standards. The SWPPP will include BMPs from Ecology's (2019) SWMMEW.	Prior to commercial operations	Ecology, EFSEC with input from EPC
Operations Phase SPCC Plan	The Operations Phase SPCC Plan will be prepared to prevent spills during operations and to identify measures to expedite the response to a release if one were to occur. Preventative procedures and rapid response measures will address/prevent potential water quality issues. The plan will be prepared pursuant to the requirements of CFR Part 112, Sections 311 and 402 of the Clean Water Act, Section 402(a)(1) of the Federal Water Pollution Control Act, and RCW 90.48.080.	Prior to commercial operations	EFSEC with input from EPC
Habitat Mitigation Plan (HMP)	The HMP will specify the avoidance, minimization, and mitigation obligations and implementation plans, including those for Project construction, operations, and decommissioning. The plan will address the applicable requirements of WAC 463-60-332 and applicable guidelines such as the Washington Department of Fish and Wildlife's (WDFW) Mitigation (M-5002) Policy.	The Draft HMP is provided with this ASC (Attachment L) The HMP will be revised in coordination and with input from EFSEC and WDFW and completed prior to site preparation	EFSEC with input from WDFW

Submittal Name	Description	Submittal Timing	Expert Agency Participation
Revegetation and Weed Management Plan	The Revegetation and Weed Management Plan will address vegetation management activities related to the Project's construction and operation and specify methods that will be implemented for effective revegetation of temporarily disturbed areas and noxious weed control.	Prior to site preparation	EFSEC with input from WDFW and the Benton County Noxious Weed Control Board
Inadvertent Discovery Plan	Plan to address situations when an unanticipated archaeological resource is discovered during construction. In the event unrecorded archaeological resources are identified during Project construction or operation, work within 30 meters (100 feet) of the find will be halted and directed away from the discovery until it can be assessed per the measures outlined in the plan.	Completed (confidential Attachment M)	EFSEC, DAHP, and Tribes
Initial Site Restoration Plan	Consistent with WAC 463-72-040, the Applicant will provide EFSEC with an Initial Site Restoration Plan at least 90 days prior to beginning Project site preparation. The Initial Site Restoration Plan will generally follow the proposed retirement steps provided in the Applicant's Decommissioning Summary and Cost Estimate (Attachments J and K). The plan will include provisions for dismantling and removing aboveground solar array components and other aboveground associated supporting components described in Part 2, Section A.2.a. In areas where foundations are removed, the surface will be recontoured reasonably similar to the pre-construction condition, and the area will be reseeded with a seed mixture reasonably acceptable to the property owner.	At least 90 days prior to site preparation	EFSEC

A.7. Federal and State Requirements

Per WAC 463-60-297, Table A.7-1 below lists the federal and state statutes, rules, and permits potentially applicable to the Project, and where compliance is addressed in the ASC. The Applicant's Land Use Consistency Review addresses local statutes and requirements (Attachment D).

Table A.7-1. List of Federal and State Permits and Regulations Potentially Applicable to the Project

Permit or Requirement	Agency Code, Ordinance, Statute, Rule, Regulation, or Permit	ASC Section Reference
Federal		
Record of Decision/ National Environmental Policy Act Compliance	Bonneville Power Administration NEPA, Section 102 (42 United States Code [U.S.C.] § 4332); 40 CFR § 1500. The POI with the BPA transmission system is subject to review under the National Environmental Policy Act. BPA will lead this process as a separate action from the site certification process. This federal process is not within the jurisdiction of EFSEC and is not addressed in this ASC.	Part 2, Section A.2.a
Threatened or Endangered Species	U.S. Fish and Wildlife Service (USFWS) Endangered Species Act of 1973 (16 U.S.C. Section 1531, et seq.) and implementing regulations. Designates and provides for protection of threatened and endangered plants and animals and their critical habitat. Section 7, 9, and 10 Consultation under the Endangered Species Act and Bald and Golden Eagle Protection Act (BGEPA).	Part 4, Sections 8 and 9
Migratory Birds	USFWS Migratory Bird Treaty Act (16 U.S.C. 703-711).	Part 4, Sections 8 and 9
Eagles	USFWS BGEPA (16 U.S.C. 668-668c). Eagle permit regulations (50 CFR 22)	Part 4, Sections 8 and 9
Air Quality	EPA Clean Air Act (42 U.S.C. 85, Section 7401, et seq.; 40 CFR 60).	Part 4, Section 2
Waters of the United States	U.S. Army Corps of Engineers (USACE), Seattle District Clean Water Act of 1972 (40 CFR 230) Section 404. The need for a Section 404 permit is pending coordination with the USACE. The Applicant will submit a request for a jurisdictional determination to the USACE.	Part 4, Section 3

Permit or Requirement	Agency Code, Ordinance, Statute, Rule, Regulation, or Permit	ASC Section Reference
Aviation	Federal Aviation Administration Construction or alteration requiring notice (14 CFR 77.9), Form 7460-1.	Part 4, Section 16b
State		
Electrical Construction Permit	Washington Department of Labor and Industries WAC 296-46B, Washington Department of Labor and Industries Safety Standards—Installing Electrical Wires and Equipment— Administration Rules.	Part 2, Section A.7
Noise Control	Washington Department of Ecology RCW 70A.20 Noise Control; WAC 173-58, Sound Level Measurement Procedures. WAC 173-60, Maximum Environmental Noise Levels; WAC 463-62-030, Noise Standards.	Part 4, Section 16a
Air Quality	Washington Department of Ecology WAC-173-400, General Regulations for Air Pollution Sources. WAC 173-441, Reporting of Emissions of Greenhouse Gases. WAC 173-476, Ambient Air Quality Standards.	Part 4, Section 2
Water Quality Storm Water Discharge	Washington Department of Ecology RCW 90.48, Water Pollution Control Act, establishes general stormwater permits for the Washington Department of Ecology National Pollutant Discharge Elimination System (NPDES) Permit Program. Construction Stormwater General Permit for NPDES (through EFSEC jurisdiction, WAC 463-76). WAC 173-201A, Washington Department of Ecology Water Quality Standards for Surface Waters of the State of Washington, which regulates water quality of surface waters. Federal statute(s) and regulations implemented by the above state statute(s) and regulations include: Federal Clean Water Act, 33 U.S.C. 1251; 15 CFR 923-930.	Part 3, Sections 3 and 5; Part 4, Sections 3 and 5
Water Quality Waters of the State	Washington Department of Ecology Section 401 Water Quality Certificate, Joint Aquatic Resource Permit Application (JARPA).	Part 4, Section 3

Permit or Requirement	Agency Code, Ordinance, Statute, Rule, Regulation, or Permit	ASC Section Reference
Shorelines of the State	Washington Department of Ecology WAC 173-18, Shoreline Management Act, Streams and Rivers Constituting Shorelines of the State. WAC 173-22, Adoption of Designations of Shorelands and Wetlands Associated with Shorelines of the State. JARPA and shoreline Conditional Use Permit for fill in wetlands associated with Shorelines of the State.	Part 2, Section B.6; Shoreline permitting is not anticipated to be required for the Project. The JARPA is provided as Attachment O.
Fish and Wildlife	WDFW WAC 220-610, defines State species status and protections. RCW 77.55, Hydraulic Code for in-water work; Hydraulic Project Approval (HPA).	Part 4, Sections 8 and 9 (*for WAC 220-610*) Part 4, Section 3 (*for RCW 77.55 and HPA*)
SEPA	RCW 43.21C, Washington Environmental Policy Act WAC 197-11, Washington Department of Ecology State Environmental Policy Act (SEPA) Rules, which establish uniform requirements for compliance with SEPA.	Parts 3 and 4
Archaeology and Historic Preservation	Washington State Department of Archaeology and Historic Preservation RCW 27.53, Archaeological Sites and Resources.	Part 4, Section 18
Energy Site Certification	Energy Facility Site Evaluation Council RCW 80.50 Energy Facilities – Site Locations.	This ASC addresses the site location review requirements for a Site Certification Agreement

Permit or Requirement	Agency Code, Ordinance, Statute, Rule, Regulation, or Permit	ASC Section Reference
Transportation	Washington State Department of Transportation (WSDOT) General Permit, WAC 468-51. Oversize and Overweight Permit, WAC 468-38-075.	Part 4, Section 20
Local		
Special Flood Hazard Development Permit	Benton County Development within special flood hazard area, Benton County Code (BCC) Chapter 3.26.	Part 3, Section 3 and Part 4, Section 3

B. Project and Site Information

B.1. Earth and Ground Disturbance

B.1.a. Soils and Slopes

Soil types	Attachment A includes figures of the soils in the Project Siting Area (Figure A-3) while Attachment N includes a table listing the soils and related soils information within the Project Siting Area. Silt loam soils or variants of silt loams are the primary underlying soil type within the Project Siting Area accounting for over 95 percent of the soil types.
Steepest slope	66.7%
Range of Slopes	0 to 66.7%

B.1.b. Demolition, Grade and Fill

Would any demolition or renovation occur during construction?	
☒ **No**	☐ **Yes**
	Method: N/A
	Waste Use or Disposal site: N/A

Would any demolition or renovation occur during operation?	
☒ **No**	☐ **Yes**
	Method: N/A
	Waste Use or Disposal Site: N/A

Would any grade, fill, or excavation in upland areas occur during construction?		
☐ **No**	☒ **Yes** The extent of grading and fill that will be used as well as the source of fill material is pending final Project design. The Applicant will specify the final quantity and source of fill in the Construction Plans and Specifications that will be provided to EFSEC for review prior to site preparation and once the final engineering design is completed.	
	☒ Grading	Cubic yards proposed: To be determined
	☒ Filling (import material to site)	Cubic yards proposed: To be determined
		Source of fill: Unknown
		Cubic yards proposed: N/A

	☐ Excavating (Export material off site)	Disposal site or use: N/A

Would any grade, fill, or excavation in upland areas occur during operation?		
☒ **No**	☐ **Yes**	
	☐ Grading	Cubic yards proposed: N/A
	☐ Filling (import material to site)	Cubic yards proposed: N/A
		Source of fill: N/A
	☐ Excavating (Export material off site)	Cubic yards proposed: N/A
		Disposal site or use: N/A

Is fill or excavation proposed within surface waters, wetlands, or frequently flooded areas?		
☐ **No**	☒ **Yes** The Project has been designed to avoid wetlands, and no wetland or wetland buffer impacts (temporary or permanent) will occur. Ephemeral streams were avoided by Project design to the greatest extent practicable. The Applicant applied a conservative 100-foot buffer to drainages from Project components within the Project Area described in Part 4, Section 3. However, there are 10 locations where the collector lines and roads will cross an ephemeral drainage. Permanent impacts associated with the installation of subsurface collector lines will occur either via trenching adjacent to the roadway or via directional boring. If directional boring is selected, the entrance and exit locations will be located outside of the floodplain. Permanent impacts associated with the road crossings will include installation of either a low water crossing, an armored low water crossing, or a culvert in each ephemeral waterway. The impacts associated with these components are described in greater detail in Part 4, Section 3 and Attachment O, Joint Aquatic Resources Permit Application (JARPA). The final extent of excavation and fill that will be used is pending final Project design, which will be completed once the construction contractor has been selected following issuance of the Project Site Certification Agreement. The values provided below are preliminary and will be revised with final Project design. The Applicant will specify the final quantity in the Construction Plans and Specifications which will be provided to EFSEC for review prior to site preparation and once the final engineering design is completed. As described in Part 4, Section 4.3.C, because ephemeral streams within the Project Area are not fish-bearing, the Applicant will engage with the WDFW to determine if an HPA is necessary based on final Project design (i.e., per WAC 220-660-010, the purpose of the HPA is to ensure that construction or performance of work is done in a manner that protects fish life). A JARPA has been prepared as part of this ASC (Attachment O).	
	☒ Fill	Cubic yards:

		• Wetlands: No fill is proposed within wetlands or wetland buffers. • Ephemeral streams, stream buffers, and frequently flooded areas: No fill is proposed within ephemeral streams, stream buffers, and frequently flooded areas. • The small amount of fill may be required for permanent road widening and culverts.
	☒ Excavation/ Dredging	Cubic yards: • Wetlands: No excavation is proposed within wetlands or wetland buffers. • Ephemeral streams, stream buffers, and frequently flooded areas: No excavation is proposed within ephemeral streams, stream buffers, and frequently flooded areas.
	Describe area(s) where this would occur: See Part 4, Section 3 and Attachment O	

B.2. Surface Types and Acreage

Project Site Areas		**Acreage**	
		Pre-Construction, within the Project Area	**Post-Construction, within the Project Area**
Roads, buildings, and other impervious surfaces		3	188
Altered Habitat (revegetated area inside the solar array fenceline)		--	4,599
Wetlands	**Wetlands**	1	1
	Open Water *(do not include any area already listed in previous categories)*	--	--
Vegetated Uplands	**Cultivated Crops**	78	77
	Hay/Pasture	--	--
	Herbaceous	3,444	199
	Shrub/Scrub	1,597	64
Unvegetated *such as rock, earth, or fill*		--	--
Other	**Ephemeral Streams**	5	--
TOTAL:		**5,128**	**5,128**

B.3. Plants and Habitats

Are there any plants or habitats present on the site?			
☐ **None**	☒ **Yes** See the Wildlife and Habitat Study Report (Attachment E) for additional details regarding plants and habitats found within the Project Area.		
	Deciduous trees: *such as alder, maple, aspen*		
	☐ **No**	☒ **Yes**	
		Specify: Tall trees are negligible and only occur in one small stand in the far south of the solar array siting area near Spring Creek and in cultivated orchards in the north of the transmission line area.	
	Evergreen trees: *such as fir, cedar, pine:*		
	☒ **No**	☐ **Yes**	
		Specify:	
	Shrubs, grass, pasture		
	☐ **No**	☒ **Yes**	
		Specify: Grassland habitat is the most predominant habitat type in both the solar array and transmission line siting areas. Dominant plant species observed included downy cheatgrass (*Bromus tectorum*), redstem stork's bill (*Erodium cicutarium*), with some scattered Lupin sp., Phlox sp., Lomatium sp., and common larkspur (*Delphinium nuttallianum*) flowering at the time of survey. Due to past and ongoing livestock grazing, much of the natural vegetation has been disturbed and exotic cheatgrass is common throughout.	
	Shrub-steppe: *such as sage brush, native grasses*		
	☐ **No**	☒ **Yes**	
		Specify: Shrub-steppe habitat is most dominant in the southern portion of the transmission line siting area and in the northeastern portion of the solar array siting area. Dominant plant species included big sagebrush (*Artemisia tridentata*) and downy cheatgrass.	
	Wet soil plants: *such as cattail, buttercup, bulrush, skunk cabbage*		
	☐ **No**	☒ **Yes**	
		Specify: Wet soil plants were observed in wetlands that formed from leaking livestock trough pipes. Species observed include lesser duckweed (*Lemna minor*), reed canary grass (*Phalaris arundinacea*) and tall scouring-rush (*Equisetum hyemale*).	
	Water plants: *such as water lily, eelgrass, milfoil*		
	☒ **No**	☐ **Yes**	
		Specify:	
	Other vegetation types: Planted grassland; Agricultural lands		

☐ No	☒ Yes		
Specify: Herbaceous grassland dominates the Siting Area with cultivated crops covering portions of the Transmission Line Corridor Siting Area. Dominant plant species observed included downy cheatgrass, redstem stork's bill, with some scattered Lupin sp., Phlox sp., Lomatium sp., and common larkspur flowering at the time of survey. Due to past and ongoing livestock grazing, much of the natural vegetation has been disturbed and exotic cheatgrass is common throughout.			
Other habitat types:			
☐ No	☒ Yes		
Specify: Developed/disturbed: includes roads, structures, and other areas disturbed in association with agricultural and ranching activities.			

Do you know of any at-risk plant species on the site*:*

- *Threatened or endangered*
- *Species of local importance*
- *Federal or state listed*
- *Federal or state priority*
- *Tribal-specific plant resources present on the site where abundance is limited elsewhere*

☐ None known	☒ Yes	
	Species Name	**Listing Status**
	Species-specific surveys for special status vascular plants have not yet occurred in the Siting Area and are planned to occur in 2023. There are 29 special status vascular plant species (i.e., species listed as endangered, threatened, or sensitive in Washington by the Washington Natural Heritage Program [WNHP]) known to occur or potentially occur within Benton County (WNHP 2021c), with 3 of those species having current element occurrences within the Siting Area including Columbia milkvetch (*Astragalus columbianus*), Umtanum desert buckwheat, and Hoover's desert-parsley (*Lomatium tuberosum*) (WNHP 2021b). Of the 29 special status vascular plant species, 21 species (Part 4, Section 8, Table 4.8-1) were considered to have a potential of occurring within the Siting Area based on the proximity of known occurrences and the anticipated likelihood of suitable habitat, often associated with shrubsteppe (WNHP 2021a, 2021b, 2021d).	

Name the sources that were checked, or work done to identify the at-risk species:
See the Wildlife and Habitat Study Report (Attachment E).

B.4. Forest Harvest

Is a forest practice or timber harvest proposed on any sites associated with the proposal?		
☒ **No**	☐ **Yes**	
	Acres proposed:	

B.5. Fish and Wildlife

Are there any animals that have been observed or are known to be on or near the site?			
☐ **None known**	☒ **Yes** See the Wildlife and Habitat Study Report (Attachment E) for additional details regarding animals found within the Project Area.		**List species that use the site as a travel corridor.**
	Birds: *such as hawk, heron, eagle, songbirds*		
	☐ **No**	☒ **Yes**	See Part 4 Section 9 for a detailed discussion of migration routes. Also, please see the 2021 Wildlife and Habitat Study Report (Attachment E)
		Specify: Fourteen bird species were observed (seen or heard) within the Solar Array Siting Area (Attachment G): prairie falcon (*Falco mexicanus*), sagebrush sparrow (*Amphispiza nevadensis*), long-billed curlew (*Numenius americanus*), western meadowlark (*Sturnella neglecta*), common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), western kingbird (*Tyrannus verticalis*), cliff swallow (*Petrochelidon pyrrhonota*), Brewers sparrow (*Spizella breweri*), vesper sparrow (*Pooecetes gramineus*), lark sparrow (*Chondestes grammacus*), White-crowned sparrow (*Zonotrichia leucophrys*), night hawk (*Chordeiles minor*), and Swainson's hawk (*Buteo swainsoni*).	
	Mammals: *such as deer, bear, elk, beaver*		
	☐ **No**	☒ **Yes**	See Part 4 Section 9 for a detailed discussion of migration routes. Also, please see the 2021 Wildlife and Habitat Study Report (Attachment E)
		Specify: Incidental observations of other wildlife species were limited to coyote (*Canis latrans*), black-tailed jack rabbit (*Lepus californicus*) and vole (*Microtus* spp.). Although no elk were observed during field surveys, the Siting Area intersects two elk areas, Corral Canyon and Blackrock (WDFW 2022b), the Rattlesnake elk wintering area (WDFW 2022a), and a habitat concentration area (HCA) for both elk and mule deer, which are important habitat patches (WHCWG 2010, 2012).	
	Fish: *such as bass, salmon, trout, herring, shellfish*		
	☒ **No**	☐ **Yes**	

	Specify: N/A
Other:	
☒ **No**	☐ **Yes**
	Specify:

Do you know of any at-risk animal species on or near the site?

• *Threatened or endangered* • *Species of local importance* • *Federal or state listed*	• *Federal or state priority* • *Tribal-specific fish, plant, or wildlife resources present on the site where abundance is limited elsewhere*

☐ **None known**	☒ **Yes**

Species Name	**Listing Status**[1]
Birds	
Prairie Falcon	PHS
Sagebrush Sparrow	SC, PHS
Mammals	
black-tailed jack rabbit	SC, PHS

C = State Candidate; E = State Endangered; PS = WDFW Priority Species; BGEPA = Bald and Golden Eagle Protection Act; BCC = Bird of Conservation Concern.

Name the sources that were checked, or work done to identify at-risk species:

The list above indicates the special status species identified during surveys (i.e., "known" to occur "on or near the site"); however, Attachment E lists the special status wildlife species with a potential to occur at the Project. The following data sources were used to develop the list of special status wildlife species with a potential to occur at the Project.

- USFWS Information for Planning and Consultation (IPaC) Resource List, accessed July 5, 2022.
- WDFW. 2022a. Priority Habitat and Species (PHS) on the Web, accessed May 2021.

B.6. Property/Site Designations

Provide information for these 7 items	
Comprehensive Plan (name, date, pertinent sections):	Benton County Comprehensive Plan (Benton County 2018, as amended though 2021) Pertinent sections include: Chapter 2, Goals and Policies

	Chapter 3, Land Use Element Chapter 4, Natural Resources Element Chapter 5, Economics Element Chapter 6, Housing Element Chapter 7, Transportation Element Chapter 10, Utilities Element Consistency with the Benton County Comprehensive Plan is reviewed in Part 4, Section 14 and Attachment D.
Current Zoning:	GMAAD – GMA Agriculture
Planning Area:	GMAAD
Shoreline Master Plan:	There are no shorelines designated under the Benton County Shoreline Master Program within the Project Area
Designation:	Growth Management Act – Agriculture (GMA/AG)
Closest Surface Water:	The closest named stream is Spring Creek located within the Project Area. Spring Creek and other unnamed stream segments in the Project Area are ephemeral streams as described in the wetland delineation report (Attachment P; Part 4, Section 3).
Distance:	See above.
WRIA #:	37 – Lower Yakima

Is the site within a mapped FEMA Flood Zone?	
☐ **No**	☒ **Yes**
	Zone name: The Solar Array Siting Area has one mapped Zone A (100-year floodplain) area and the Transmission Line Corridor Siting Area has two mapped Zone A areas associated with surface water drainage features (Attachment A Figure A-4).

Is the site a designated Natural Resource Land? *Designated by the county or city*	
☒ **No** ☐ **Yes**	**Forest land:**
☐ **No** ☒ **Yes**	**Agriculture:** The Project is located in the GMAAD zone, which is a designated agricultural land of long-term commercial significance by Benton County (Benton County 2021).
☒ **No** ☐ **Yes**	**Mineral:**

Is the site, or land within 300 feet of the site, in a designated Critical Area? *Designated by the county or city*	
☐ **No** ☒ **Yes**	**Wetland:** See Part 4, Section 3 for additional details.

☐ **No** ☒ **Yes**	**Frequently flooded:** See Part 4, Section 3 for additional details.
☐ **No** ☒ **Yes**	**Aquifer recharge:** See Part 4, Section 5 for additional details.
☐ **No** ☒ **Yes**	**Geologic hazard:** See Part 4, Section 1 for additional details.
☐ **No** ☒ **Yes**	**Fish/wildlife habitat conservation:** See Part 4, Section 9 for additional details.
☒ **No** ☐ **Yes**	**Other**

On a Local, State, or Federal Historic Register?		
☒ **No**	☐ **Yes**	See Part 4, Sections 18 and 19.
	☐ **Listed**	☐ **Proposed**

Identified as a Local, State, or Federal Cultural Site?		
☒ **No**	☐ **Yes**	See Part 4, Sections 18 and 19.
	☐ **Listed**	☐ **Proposed**

Are there tribes that may have or claim particular rights to all or part of the project area?		
☐ **None known**	☒ **Yes**	
	Tribe	**Contact Made or Attempted, Who/When/method of contact** **Outcome of Contact including Right Asserted (*if any*)**
	Confederated Tribes and Bands of the Yakama Nation	The Honorable JoDe Goudy, Chair and Kate Valdez, Tribal Historic Preservation Officer, via letter dated August 24, 2022, to discuss cultural resources, surveys, and general introduction to the Project. GeoVisions is continuing to perform ongoing communications on behalf of the Applicant.
	Confederated Tribes of the Umatilla Indian Reservation	Carey Miller, via letter sent on December 9 2022, to discuss cultural resources, surveys, and general introduction to the Project. GeoVisions is continuing to perform ongoing communications on behalf of the Applicant.
	The Nez Perce Tribe	Nakia Williamson-Cloud, Cultural Resource Program Director, via letter dated November 1, 2022, to discuss cultural resources, surveys, and general introduction to the Project. GeoVisions is continuing to perform ongoing communications on behalf of the Applicant.
	The Confederated	Robert “Bobby” Brunoe, via letter dated November 16, 2022, to discuss cultural resources, surveys, and general introduction to

	Tribes of Warm Springs	the Project.
		GeoVisions is continuing to perform ongoing communications on behalf of the Applicant.

Other applicable plans or local/state/federal designations that apply to the site?		
☐ **None known**	☒ **Yes**	
	Names:	A portion of the gen-tie line will connect with the existing BPA transmission system at the BPA Midway Substation, which is located on BPA federal U.S. Department of Energy (DOE) lands (Hanford Reach National Monument). Interconnection to a BPA transmission system is subject to review under the National Environmental Policy Act (NEPA). Either BPA or U.S. DOE will conduct this process as a separate action from the site certification process. This federal process is not within the jurisdiction of EFSEC and is not addressed in this ASC.

B.7. Land Uses

Identify the following.

Existing Land Uses	Dryland agriculture, rangeland, undeveloped areas, local roads, electrical infrastructure (e.g., transmission and distribution lines, substations), interspersed unoccupied structures (e.g., agricultural storage).	
Past Known Land Uses	Agriculture, rangeland, undeveloped land, scattered unoccupied structures.	
Existing Adjacent Uses	**North:**	Vacant federal land and the Columbia River north of the existing Midway Substation and associated electrical infrastructure.
	South:	Dispersed rural development and agriculture
	West:	Dryland agriculture, rangeland, vineyard, state highway, and electrical infrastructure.
	East:	Dryland agriculture, rangeland and vacant federal land associated with the Hanford Reach National Monument (Rattlesnake Unit of the Fitzner/Eberhardt Arid Lands Ecology Reserve).

B.8. Utilities

Answer all yes/no options. Check boxes that apply and answer any items associated with the checked box.

B.8.a Stormwater Management - Construction

Would there be stormwater runoff during construction?

<table>
<tr><td>☐ No</td><td colspan="4">☒ Yes</td></tr>
<tr><td rowspan="7"></td><td>Source of runoff:</td><td colspan="3">See Part 3, Section 5 for additional information.</td></tr>
<tr><td>Quantity of runoff:</td><td colspan="3">A Stormwater Management Report will be developed as part of the Project design and will include erosion control measures required to address construction stormwater runoff.</td></tr>
<tr><td>Method of collection:</td><td colspan="3">Drainage basins and other erosion control measures will be incorporated into the Project design to address construction runoff, retaining stormwater on-site and maintaining natural drainage patterns for conveyance of upland flow.</td></tr>
<tr><td rowspan="5">Drain/ discharge to:</td><td rowspan="3">☒ Onsite</td><td colspan="2">☐ Overland flow</td></tr>
<tr><td colspan="2">☒ Engineered infiltration</td></tr>
<tr><td colspan="2">Describe: A Stormwater Management Report will be developed as part of the Project design and will include erosion control measures required to address construction stormwater runoff.</td></tr>
<tr><td rowspan="2">☐ Offsite</td><td>☐ Utility</td><td>Name:</td></tr>
<tr><td colspan="2">☐ Other</td></tr>
<tr><td colspan="3">Describe: N/A</td></tr>
<tr><td colspan="4">Is a new facility, system, or line required?</td></tr>
<tr><td></td><td>☒ No</td><td colspan="3">☐ Yes</td></tr>
<tr><td colspan="2"></td><td colspan="3">Describe and locate on site map:</td></tr>
</table>

B.8.b Stormwater Management - Operations

Would there be stormwater runoff during operations?

☐ No	☒ Yes	
	Source of runoff	New impervious surfaces will be developed as part of this proposal (e.g., gravel roads, solar array posts, O&M facility and parking, substation components, etc.). However, these impervious surfaces are a small percentage of the total Project Area and stormwater will generally infiltrate across the site by infiltrating through vegetation or, where necessary, through permanent detention basins with outlet culverts to allow water to slowly release and infiltrate. Overall impervious surfaces are anticipated to be approximately 188 acres or about 3.6 percent of the Project Area based

		on preliminary design (see Part 2, Section B.2). See Part 3, Section 5 for additional information.		
	Quantity of runoff	A Stormwater Management Report will be developed as part of the Project design and will include erosion control measures required to address operation stormwater runoff.		
	Method of collection	In general, there will be minimal grading across the site and existing drainage patterns and natural infiltration will be retained. Temporary disturbance areas will be revegetated following construction. Permanent detention basins will be provided at each discharge location that has an increase in runoff due to the proposed development.		
	Drain/ discharge to:	☒ **Onsite**	☐ **Overland flow**	
			☒ **Engineered infiltration**	
			Describe: Permanent detention basins will be provided at each discharge location that has an increase in runoff due to the proposed development.	
		☐ **Offsite**	☐ **Utility**	**Name:**
			☐ **Other**	
			Describe: N/A	
	Is a new facility, system, or line required?			
	☒ **No**	☐ **Yes**		
		Describe and locate on site map: N/A		

B.8.c Energy

Would there be energy consumption?

☐ **No**	☒ **Yes**
	☐ **Electricity** ⇒ **Utility name:** Local utility, Benton County Rural Electric Association
	☐ **Natural gas** ⇒ **Utility name:** N/A
	☐ **Fuel** ⇒ **type:** N/A
	Is a new facility, generator, line, or connection required?
	☐ **No** ☒ **Yes**
	Describe and locate on site map: Local utility connection to Benton Rural Electric Association and an on-site backup diesel generator at the Project O&M structure. The Project O&M area is shown on Figure A-2 in Attachment A.
Would there be energy production?	
☐ **No**	☐ **Yes**

	☒ **Electricity ⇒ Receiving utility name:** Unknown at this time. The Applicant is actively pursuing offtake discussions with customers for delivery of the Project's power generation.	
	Is a new facility, generator, line, or connection required?	
	☐ **No**	☒ **Yes**
		Describe and locate on site map: An approximately 11.2- to 17.8-mile-long overhead 230-kV or 500-kV transmission line will extend from the Project collector substation to a POI on the existing BPA transmission system or at the BPA Midway Substation, which are located on BPA federal lands. The line will be suspended above ground on H-frame steel structures that will be approximately 60 to 150 feet tall and installed on drilled concrete piers.

B.8.d Water Use - Construction

Would there be water use during construction?

☐ **No**	☒ **Yes**	
	Gallons per day proposed: Depending on soil moisture levels, up to approximately 66 million gallons of water could be used throughout Project construction for dust suppression and other construction water needs.	
	Water source: The Applicant is evaluating options to purchase Project construction water from a permitted off-site source (i.e., municipal water source or vendor with a valid water right). If water is purchased from an off-site source, it will be hauled to the site over the life of the Project. The Applicant or the Applicant's construction contractor will verify the availability of water from a permitted source prior to Project construction and operations.	
	☒ **Utility**	**Name:** Unknown (Yet to be determined)
	☐ **Surface water**	**Name:** N/A
	☐ **Private well** N/A	
	☐ **Private water system**	**Name:** N/A
	Is a new well, diversion, line, or connection required?	
	☒ **No**	☐ **Yes**
		Describe and locate on site map: N/A

B.8.e Water Use - Operation

Would there be water use during operation?

☐ **No**	☐ **Yes**	
	Gallons per day: Panel washing is not anticipated to be conducted at regular intervals but may occur at least once prior to Project commissioning and if needed, may use up to approximately 266,000 gallons of water per year. Water will be used during operation for domestic uses at the O&M structure and during operations for panel washing. In addition, the Project may include a water cistern to store water for fire suppression needs.	
	Water source: The Applicant is evaluating options to purchase Project operations water from a permitted off-site source (i.e., municipal water source or vendor with a valid water right). If water is purchased from an off-site source, it will be hauled to the site over the life of the Project. The Applicant will verify the availability of water from a permitted source prior to Project construction and operations.	
	☒ **Utility**	**Name:** Unknown (Yet to be determined)
	☐ **Surface water**	**Name:** N/A
	☐ **Private well** N/A	
	☐ **Private water system**	**Name:** N/A
	Is a new well, diversion, line, or connection required?	
	☒ **No**	☐ **Yes**
		Describe and locate on site map: N/A

B.8.f. Sanitary Waste Management

Would there be a need for sanitary waste management?

☒ **No**	☐ **Yes**	
	Gallons per day:	
	Discharge to:	
	☐ **Utility**	**Name:** N/A
	☐ **Septic system:**	
	☐ **Other**	
	Is a new system, line, or connection required?	
	☒ **No**	☐ **Yes**
		Describe and locate on a site map: Portable restrooms will be used during Project construction and throughout Project operation.

B.9. Emergency Service Providers

Identify the providers for the following services for the project site:

Police Services:	Benton County Sheriff's Office
Fire Services:	DNR Wildland Fire Management Division
Other Emergency Services:	Benton County Emergency Management Astria Sunnyside Hospital Prosser Memorial Hospital

B.10. Transportation

Will transportation methods other than roads/motorized vehicles be used to access the site? (air, water, rail, pedestrians, bicycles, etc.)	
☒ **No**	☐ **Yes**
	Describe: N/A

What are the arterial roads serving the area of the project site?	The Project will be accessed primarily from SR 241 to Sheller Road or I 82 from the east. See Part 3, Section 20 and Part 4, Section 20 for additional details.

Vehicular traffic generated by project:				
	Round trips per day		**Peak hour trips/day**	**Timing of peak hours**
During:	**Vehicles**	**Heavy equipment/material deliveries**		
Construction	232 (average)	20 (average) equipment deliveries 44 (average) water truck deliveries	690 trips (i.e., 345 roundtrips) per day	6 a.m. to 7 a.m., 5 p.m. to 6 p.m.
Operation/use	1 to 5	Infrequent, as needed 7 to 10 water truck deliveries per day during panel washing (once per year over a period of 2 to 3 weeks)	N/A	N/A

Are new public roads proposed?	
☒**No**	☐ **Yes**

Are any public road improvements proposed?	
☐ No	☒ Yes
	Location/description: There are no anticipated changes or improvements to existing transportation infrastructure except for the proposed temporary access road improvements at site entrances from SR 241 and Sheller Road. The Applicant will obtain County Right of Way Access Permits and a WSDOT Right of Way Access Permit for the proposed Project approaches on County and State Routes within the Project Area based on final design.
Parking	**Existing spaces:** N/A
	Spaces after project: Parking for O&M employees will be provided at the O&M structure.

B.11. References

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PART 3 – SCREENING QUESTIONS

3.1 Earth

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

3.1.a Screening Question – Earth

Will the project occur in an area that contains steep slopes, unstable soils, surface indications or history of unstable soils; or other geologic hazard with the potential of landslide, mass wasting erosion, faulting, subsidence, or liquefaction, or identified in local ordinance as a designated geologic hazard critical area?	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Explain below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
Portions of the Solar Array Siting Area are mapped by Benton County as geologically hazardous areas, including areas with erosion hazard potential, steep slopes greater than 15 percent, and a range of no to high liquefaction susceptibility. The Applicant prepared an Updated Geologically Hazardous Areas Assessment for the Solar Array Siting Area that describes the geology, topography and slope conditions, and existing erosion patterns of the area (Attachment F). The Updated Geologically Hazardous Areas Assessment provides information regarding geologic hazards that may affect the Project, including erosion, landslide, and seismic hazards. The Transmission Line Corridor Siting Area crosses Benton County mapped geologically hazardous areas including erosion hazard and steep slopes greater than 15 percent, and areas with a range of low, low to moderate, and moderate to high liquification (Benton County 2022a).

The analysis in Part 4, Section 1 describes the following within the siting area: geological and soil conditions, geologically hazardous areas designated by Benton County as critical areas, and mitigation strategies to minimize risks associated with potential geological hazards.

As you complete the Detailed Analysis in Part 4 - 1. Earth, make sure you consider and address:

How the project could/would:

- Disturb the area(s)

And considering other relevant factors addressed in:

- Be at risk from the area(s) in their current condition
- Be at risk from the area(s) if it degrades further
- Increase water flow over or through the area(s)

- WAC 463-60-265: describe the means to be employed for protection of the facility from earthquakes, volcanic eruption, flood, tsunami, storms, avalanche or landslides, and other major natural descriptive occurrences.
- WAC 463-60-302, (1) and (2)
- WAC 463-62-020 regarding seismicity standards

3.2 Air Quality

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

3.2.a Screening Question – Air Quality

Will the project have:		
• Indoor or outdoor air pollution emissions including dust, during operation, other than those related to vehicle emissions • The potential to produce an odor nuisance • Dust during construction	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
The Project will result in temporary air pollution and dust emissions from heavy construction equipment within construction areas and along Project roads during construction. Dust emissions will be mitigated using dust control practices identified in Part 4, Section 2.

The analysis in Part 4 addresses the anticipated air pollution emissions generated during Project construction and operation and identifies the measures that will be implemented to avoid or minimize these impacts. The Part 4 analysis evaluates topics under WAC 463-60-312 including air quality, odor, climate, climate change, and dust. Pursuant to WAC 463-60-225(1), emissions subject to regulation by local, state, or federal agencies are also quantified in Part 4.

As you complete the Detailed Analysis in Part 4 - 2. Air Quality, make sure you consider and address:

- Health hazards
- Area's existing/potential air quality issues (failure to meet standards, haze, aesthetics, etc.)
- Proximity to populated areas, recreational areas, or other areas of sensitivity

See guidance regarding information required by WAC 463-60-312.

And considering other relevant factors addressed in:

- WAC 463-62-070 regarding air quality laws and regulations
- WAC 463-60-225 (1) through (3)

3.3 Water Quality – Wetlands and Surface Waters (Buffers, Fill, Dredging, & Sedimentation)

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

3.3.a Screening Question – Water Quality (Wetlands and Surface Waters)

Will the proposal involve any activities on a steep slope, area of unstable soils, or within a surface water body, wetland, or within 300 feet of those areas, within a floodplain, or an area known to flood?	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
The Solar Array Siting Area is not located in a Federal Emergency Management Agency (FEMA) designated floodway or flood hazard area. A portion of the Transmission Line Corridor Siting Area is adjacent to FEMA-mapped Flood Zone A associated with Dry Creek (Figure A-4, Attachment A). Flood Zone A is defined as an area with a 1 percent annual change of flooding (FEMA 2022). The Project will be designed to avoid the placement of Project components in drainage areas or areas with a high flood risk.

The Siting Area contains some steep slopes and areas of unstable soils (see response to Part 3 Section 1 above). An Updated Geologically Hazardous Areas Assessment was conducted to determine the extent of these areas within the Solar Array Siting Area (Attachment F). The geologically hazardous areas assessment recommends avoidance and minimization strategies on how site-specific geotechnical hazards present at the site can be addressed based on review of Benton County Code (BCC) 15.12 as adopted from WAC 365-190-120. Additional geotechnical investigation will be conducted as needed based on refinement of the Project's engineering design.

A wetland delineation was conducted within the Solar Array Siting Area from June 28 to July 1, 2022, to determine the extent of wetlands and waterbodies within the area. No field surveys of wetlands and surface waters have been conducted in the Transmission Line Corridor Siting Area. However, desktop review of the National Wetland Inventory (NWI) database and the National Hydrography Dataset (NHD) indicates that mapped wetlands and waterbodies occur within the area. The Project-specific wetland delineation identified only ephemeral streams

within the Solar Array Siting Area and no wetlands, intermittent, or perennial streams. The Project will be designed to avoid ephemeral streams where possible; however, some ephemeral streams will likely be affected by the Project (i.e., electrical collector line or access road crossings). These potential crossings will be determined at final Project design.

The analysis in Part 4 provides a description of the full extent of waterbodies within the Siting Area and details the methods used to confirm that there are three delineated palustrine emergent wetlands and two desktop delineated riverine wetland complexes within the Solar Array Siting Area and two drainages with likely wetland complexes within the Transmission Line Corridor Siting Area. Wetlands within the Siting Area and associated buffers can be avoided. It further describes the extent of steep slopes and areas of unstable soils (based on information developed for the Part 4, Section 1 analysis), documents that Project components can avoid flood zones, and describes the potential impacts the Project will have to ephemeral streams and the proposed avoidance, minimization, and mitigation strategies that will be implemented.

As you complete the Detailed Analysis in Part 4 – 3. Water Quality (Wetlands and Surface Waters), make sure you consider and address:

- Erosion/erosion control
- Existing/potential water quality issues (temperature, turbidity, sedimentation, etc.)
- Loss of wetland/surface water functions and values (flood control, groundwater recharge, water quality, fish and wildlife habitat, aesthetics, recreation, etc.)
- Existing/potential flood risks

And considering other relevant factors addressed in:

- WAC 463-62-050 starts for wetland impact mitigation
- WAC 463-62-060-060 regarding water quality standards
- WAC 463-60-255, 463-60-322 (1-5), and 463-60-333

3.4 Water Quality – Wastewater Discharges

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	N/A	Yes	Yes	Yes

3.4.a Screening Question – Water Quality (Wastewater Discharges)

Will the proposal discharge wastewater (septic systems, process waters, washing of solar panels, etc.) to onsite or offsite surface waters, wetlands, or the ground? (do not include discharges to utilities, and county approved septic systems)	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
Portable restrooms will be used during Project construction and throughout Project operation. No freshwater or wastewater facilities will be used at the Project O&M building. No septic system will be needed or developed at the Project. If it is determined that an on-site septic system is needed, the system will be permitted, installed by a licensed professional, and maintained in compliance with applicable regulations including WAC 246-272A and Benton-Franklin Health District rules and regulations for on-site sewage systems. No wastewater will be discharged to on-site or off-site surface waters, wetlands, or the ground.

Panel washing is not anticipated to be conducted at regular intervals but may occur at least once prior to Project commissioning and if needed, may use up to approximately 266,000 gallons of water per year. Panel washing assumes 0.5 gallon of water per panel, per wash, and assumes that 20 percent of the panels are washed twice a year. Panel washing would not be expected to generate runoff from the site or cause erosion. Most water used for washing will evaporate from the panels before reaching the ground. The total amount of water used for panel washing (266,000 gallons) is equivalent to 0.82 acre-foot. Spread over the approximately 4,800-acre fenced solar array, even if no evaporation occurs and all panel washing water reached the ground at one time, the depth of water on the ground would be approximately 0.0001 inch. Although the water dripping off panels will be concentrated over smaller areas, the conservative calculation demonstrates the relatively small quantity of water involved in this process relative to the size of the area containing solar panels. This amount of water would easily infiltrate into the vegetated ground around the panels and is not expected to run off to surface water bodies or impact aquifers. Furthermore, washing of solar panels, if required, will be done with water only, and no surfactants or other chemicals will be added.

Because the panel wash water will not contain added chemicals and the water is expected to evaporate with only minimal amounts potentially reaching the ground, no adverse impacts to water quality will occur, and therefore no mitigation will be required.

Therefore, a detailed Part 4 analysis is not required for wastewater discharges.

As you complete the Detailed Analysis in Part 4 – 4. Water Quality (Wastewater Discharges), make sure you consider and address:

- Existing/potential water quality issues (nutrients, bacteria, metals, turbidity, temperature, etc.)
- Loss of wetland/surface water functions and values
- Discharge type, volume, potential contaminants, location, and method of discharge.
- Sole source aquifers

And considering other relevant factors addressed in:

- WAC 463-62-060 regarding water quality standards
- WAC 463-60-322 and 463-60-333.

3.5 Water Quality - Stormwater Runoff

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

3.5.a Screening Question – Water Quality (Stormwater Runoff)

Does the proposal involve any potential sources of stormwater contamination from: ☒ Drainage from impervious surfaces ☒ Erosion from disturbed soils, lost vegetation, etc. ☐ Animal wastes ☐ Fertilizers or decomposing organic material ☒ Pesticides or other chemical usage Other _Herbicides___	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
The Project may result in some stormwater drainage as a result of new impervious surfaces developed and identified in Part 2, Section B.2 (e.g., gravel access roads, solar array posts, inverter and transformer foundation pads, O&M building area, collector substation area, BESS area, and overhead gen-tie line poles). Because solar panels are spaced apart from each other and the full area including the surface under the rotating panels will be revegetated, allowing natural infiltration of rainwater, the panels themselves are not considered impervious surfaces and are not included in the impervious surface calculation. Although the Project's gravel service roads within the Solar Array Siting Area are classified as impervious surfaces, stormwater will generally infiltrate through the gravel roads but at a reduced rate compared to most soils in the area. Overall, impervious surfaces are a low percentage (approximately 188 acres or 3.6 percent) of the total Project Area based on preliminary design (Part 2, Section B.2) and stormwater will generally infiltrate across the site.

The Project's proposed tracking system (Attachment C) is designed to follow the grade of the terrain and reduce grading and earthworks across the site so that existing drainage patterns and natural infiltration will be retained. Space between the solar panel rows and underneath the panels will allow for infiltration. The panels themselves will rotate, meaning the area underneath the panels will receive rainwater directly depending on the rotational status of the tracker system at the time of rainfall. Runoff from panels will flow onto and across vegetation, so infiltration is maintained.

The Applicant will prepare stormwater designs as the Project's engineering design is refined that will be developed to meet the requirements of Benton County and the State of Washington for stormwater management. Existing drainage patterns will be maintained to the extent practicable, and the ESCP and SWPPP will meet the requirements of Ecology's (2019) SWMMEW. The Applicant will prepare an ESCP, SWPPP, and Vegetation and Weed Management Plan prior to construction that will include measures to minimize soil erosion and stormwater runoff.

The Part 4 analysis provides information regarding the type and extent of impervious surfaces that will be created; the infiltration rates of the soils within the affected areas; and the best management practices from the ESCP, the construction and operations SWPPP, and the Vegetation and Weed Management Plan that will be implemented to minimize the effects of stormwater runoff.

As you complete the Detailed Analysis in Part 4 - 5. Water Quality (Stormwater Runoff), make sure you consider and address:

- Existing/potential water quality issues (oil and grease, turbidity, sedimentation, nutrients, metals, and other pollutants)
- Loss of wetland/surface water functions and values

And considering other relevant factors addressed in:

- WAC 463-62-060 regarding water quality standards
- WAC 463-60-215 and 463-60-322

3.6 Water Quantity – Water Use

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	Yes	Yes	Yes	N/A

3.6.a Screening Question – Water Quantity (Water Use)

Will the proposal involve a new withdrawal, diversion, retention, or use for water not received from a utility?	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
Water use for construction is primarily associated with dust control and will be minimized by surfacing and maintaining Project access roads, using approved dust palliatives, maintaining existing ground cover, and using BMPs such as mulching and seeding to minimize areas that require water for dust control. Concrete used for the Project will be brought to the site by ready-mix trucks, and water is not anticipated to be used on-site for the mixing of concrete. Water trucks will be used to provide moisture for compaction as well as dust control during construction as required. Depending on soil moisture levels, up to approximately 66 million gallons of water could be used throughout Project construction for dust suppression and other construction water needs. The water trucks on site for dust control will also be available for fire suppression if needed. Construction water use will include an initial wash of each installed panel prior to performance testing.

The Applicant is evaluating options to purchase Project construction and operations water from a permitted off-site source (i.e., municipal water source or vendor with a valid water right). If water is purchased from an off-site source, it will be hauled to the site over the life of the Project.

Water will possibly be used during operation for panel washing. Panel washing is not anticipated to be conducted at regular intervals but may occur at least once prior to Project commissioning and if needed, may use up to approximately 266,000 gallons of water per year, assuming 0.5 gallon of water per panel, per wash, and assuming that 20 percent of the panels are washed twice a year. In addition, the Project may include a water cistern to store water for fire suppression needs.

The Applicant or the Applicant's construction contractor will verify the availability of water from a permitted source prior to Project construction and operations. Therefore, a detailed analysis of water use under Part 4 is not warranted.

As you complete the Detailed Analysis in Part 4 – 6. Water Quantity (Water Use), make sure you consider and address:

- Changes in flow or volume
- Existing/potential water quantity/ availability issues (water right controversy, endangered aquatic species, high ground water table, etc.)

And considering other relevant factors addressed in:

- WAC 463-60-165 (1) and (3), 463-60-322 and 463-60-333

3.7 Water Quantity – Runoff, Stormwater & Point Discharges

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	Yes	Yes	Yes	N/A

3.7.a Screening Question – Water Quantity (Runoff, Stormwater & Point Discharges

Is the project likely to result in changes in flow or volume in any water body or aquifer? Consider changes in vegetation, blocking of recharge by new impervious surfaces, grading, filling, discharges, water use, etc.	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
No changes to the flow or volume of any water body or aquifer are anticipated as a result of the Project because erosion and sediment controls will be implemented during construction as part of the ESCP, disturbed soils will be revegetated, impervious surfaces will be a small percentage of the overall area (see Part 3, Section 5 above), and the grading required will maintain existing drainage patterns. As a result, no potential loss of groundwater recharge or change in seasonal stream flow is anticipated as a result of the Project's construction or operations. Furthermore, the Project will avoid FEMA-designated flood areas and the Project does not pose a flood risk. Details regarding potential panel washing in the Solar Array Siting Area are addressed above in Part 3, Sections 5 and 6.

Because construction and operations of the Project will not change the flow or volume in any waterbody or aquifer, a detailed analysis of water quantity under Part 4 is not warranted. Mitigation actions will be implemented during construction, such as revegetating disturbed soils to minimize erosion/runoff; and implementing an ESCP, Construction and Operations SWPPP, Vegetation and Weed Management Plan, and associated BMPs identified in Part 2 (Section A.5).

As you complete the Detailed Analysis in Part 4 – 7. Water Quantity (Runoff, Stormwater & Point Discharges), make sure you consider and address:

- Potential loss of groundwater recharge
- Change in seasonal stream flow
- Existing/potential flood risks
- Existing/potential water quantity/ availability issues

And considering other relevant factors addressed in:

- WAC 463-60-215, 463-60-322 and 463-60-333

3.8 Plants

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

3.8.a Screening Question – Plants

Will the project occur in or near an area with special status plants, (e.g. DNR natural heritage program or WDFW Priority Habitats and Species (PHS))?	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
Wildlife habitat surveys were conducted in 2021 (ERM 2021) and in 2022 (SWCA 2022a), and habitat types were field verified in the Siting Area. The Project's Wildlife and Habitat Study Report is provided as Attachment E to this ASC (SWCA 2022a).

The Wildlife and Habitat Study Report includes details on habitat types observed within the Siting Area as well as their distribution in the area. Botanical surveys for special status plant species will be conducted within the Siting Area in 2023. Note that the term "special status plant species" in this context refers to federally listed and candidate vascular plant species, as well as vascular plant species that are listed in Washington state as endangered, threatened, or sensitive by the WDFW.

Special Status Plants
Based on WDFW-mapped PHS data, the northern edge of the Transmission Line Corridor Siting Area intersects the critical habitat for the Umtanum desert buckwheat (*Eriogonum codium*) in Section 14, Township 13 North, Range 24 East. This is the only designated critical habitat for the species. The Umtanum desert buckwheat is federally threatened and found only on the Hanford Reach of the Columbia River (USFWS 2013). It lives exclusively on soils over exposed basalt from the Lolo Flow of the Wanapum Basalt Formation. It was last fully censused in 2011, when 5,169 plants were observed.

Habitat
The majority of the Solar Array Siting Area is grazed by livestock, with some smaller areas of cultivated cropland; thus, much of the natural vegetation has been disturbed and cheatgrass (*Bromus tectorum*) is common throughout the site (ERM 2021). There are trees in the far south of the Solar Array Siting Area near Spring Creek and in cultivated orchards in the north

of the Transmission Line Corridor Siting Area (SWCA 2022a). The basalt cliff habitat (averaging 30 to 100 feet in height) was delineated within the Solar Array Siting Area along Black Canyon and Spring Creeks in the northeast (ERM 2021).

There are eight habitat types within the Solar Array Siting Area: herbaceous grassland, shrub steppe, cultivated crops, developed, wetland, hay/pasture, barren land, and open water (SWCA 2022a). Approximately 87 percent of the Solar Array Siting Area consists of two of these habitat types: herbaceous grassland (67 percent) and shrubsteppe (20 percent). This was consistent with the National Land Cover Dataset (NLCD). Herbaceous grassland is the most prevalent habitat type within the Solar Array Siting Area. Dominant plant species observed in the herbaceous grassland included downy cheatgrass, redstem stork's bill (*Erodium cicutarium*), with scattered *Lupin* sp., *Phlox* sp., *Lomatium* sp., and common larkspur (*Delphinium nuttallianum*) flowering at the time of survey (ERM 2021; SWCA 2022a).

Shrub-steppe was the second most prevalent habitat type and is most dominant in the northeastern portion of the Solar Array Siting Area. Shrub-steppe habitat was in the eastern half but was mostly converted to grassland in the western portion. Dominant plant species in the shrubsteppe included big sagebrush (*Artemisia tridentata*) and downy cheatgrass; average sagebrush canopy cover was between 25 and 50 percent and average height is 1 to 3 feet. The highest quality sagebrush populations were found in the northern portion of the Solar Array Siting Area where there was less evidence of cattle grazing activity (ERM 2021). The extent of shrubsteppe habitat mapped in 2021 (ERM 2021) was compared to historical and current aerial imagery and then re-digitized throughout the current Solar Array Siting Area (SWCA 2022a).

One of the seven habitat types found in the Solar Array Siting Area is considered a PHS by the WDFW (WDFW 2008). Shrub-steppe habitat is a priority habitat type under WDFW's PHS program, as well as a critical area under Benton County's Critical Areas Ordinance (CAO). Shrubsteppe is defined as a non-forested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs.

The habitat in the Transmission Line Corridor Siting Area has been digitized using historical and current aerial imagery (SWCA 2022a). The NLCD data for the Transmission Line Corridor Siting Area includes five land cover categories: herbaceous, cultivated crops, shrub/scrub, developed – open space, and developed – low intensity (SWCA 2021; NLCD 2019). Herbaceous is the dominant land cover category comprising 79 percent of the Transmission Line Corridor Siting Area. Based on WDFW-mapped PHS data, the Transmission Line Corridor Siting Area intersects multiple priority habitats including shrub steppe, cliffs/bluffs, and eastside steppe. As described above, field verification of WDFW-mapped PHS data including shrubsteppe habitat is anticipated to occur in 2023 with refinement of the Project's engineering design and prior to construction.

Noxious Weeds
Noxious weeds observed in the Solar Array Siting Area include houndstongue (*Cynoglossum officinale*), old man's beard (*Clematis vitalb*a), medusahead (*Taeniaterum caput-medusae*), and reed canary grass (*Phalaris arundinacea*) (ERM 2021). These are listed as noxious weeds on the 2021 Washington State Noxious Weeds List.

The Applicant met with and began coordination with WDFW on February 17, 2022. At this time the Applicant introduced the Project to WDFW and described planned habitat and rare plant surveys. At the meeting, WDFW concurred with the proposed survey timing and approach. The input from WDFW provided during this meeting was used to inform the biological background review and field surveys conducted for the Project. The Applicant

provided copies of the survey report to WDFW and met with WDFW representatives on October 7, 2022, to present survey results and solicit input on the Project. The input provided from WDFW during this meeting was used to inform the Part 4 analysis and Draft Habitat Mitigation Plan (Attachment L).

The Part 4 analysis is based on the information obtained during the rare plant and wildlife habitat surveys as well as site-specific feedback from WDFW. The Part 4 analysis also outlines applicable mitigation measures based on the survey results.

As you complete the Detailed Analysis in Part 4 – 8. Plants, make sure you consider and address:

- Alteration/loss of fish/wildlife habitat
- Endangered or other at-risk plant species
- Changes to critical areas identified in part C.1.

And considering other relevant factors addressed in:

- WAC 463-60-332

3.9 Animals

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

3.9.a Screening Question – Animals

Will the project occur in or near an area with migration areas, special status wildlife or habitats (e.g. WDFW Priority Habitats and Species (PHS)?	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
The Applicant conducted wildlife surveys of the Solar Array Siting Area in 2022. Surveys of the Transmission Line Corridor Siting Area will be completed in 2023. The Applicant conducted two rounds of ground-based raptor nest surveys within the raptor nest study area. The raptor nest study area is the Solar Array Siting Area and a 0.5-mile buffer. As requested by WDFW, the raptor nest surveys also encompassed the area within 2 miles of a ferruginous hawk (*Buteo regalis)* core nesting area located northwest of the Solar Array Siting Area to capture potential foraging areas used by those raptors (SWCA 2022a).

Surveys were completed from May 11 to 14, 2022, and June 28 to 29, 2022, to assess potential raptor nesting and foraging activity. Surveys focused on cliff-nesting habitat at Black Canyon and Spring Creek identified during previous site surveys (ERM 2021), potential raptor nesting habitat identified from desktop review (e.g., forested areas with suitable trees), as well as previously documented raptor nesting areas identified by WDFW. A total of 11 raptor nests were observed within the raptor nest study area, consisting of 2 occupied nests and 9 presumed unoccupied nests (SWCA 2022a). Occupied nest observations included one red-tailed hawk (*Buteo jamaicensis*) nest located near the southwestern edge of the raptor nest study area, and one barn owl (*Tyto alba*) nest located near the southern edge of the raptor nest study area. Details of the ground-based raptor nest surveys can be found in the Wildlife and Habitat Study Report (Attachment E).

The burrowing animal survey area encompassed two areas totaling 4,250 acres in the western portion of the Solar Array Siting Area where high burrowing animal activity was documented during previous Project area surveys and through coordination with WDFW (ERM 2021). The burrowing animal target species included Townsend's ground squirrel (*Urocitellus townsendii nancyae*) and burrowing owl (*Athene cunicularia*). The Applicant

conducted two rounds of protocol-level surveys for burrowing animals, completed 3 weeks apart. The first round of surveys was between April 11 and 13, 2022, and the second between May 9 and 12, 2022. This survey schedule corresponded with the period of highest likely ground squirrel activity when juveniles have emerged from burrows, and alarm calls are most frequent. The timing and methods used for these surveys are consistent with WDFW recommendations provided in February 2022. Although the first round of surveys was performed during the typical period of high ground squirrel activity, the weather was much colder and wetter than normal for the time of year and was also periodically windy, resulting in some interruptions to surveys. Due to snow accumulation, approximately one-third of the burrowing animal survey area (in southern area) was not able to be surveyed (SWCA 2022a).

During protocol-level surveys for burrowing animals, three locations with potentially active Townsend's ground squirrel burrows ranging from 2 to 3 inches in diameter were detected in the burrowing animal survey area. The first, located on the top of a grassland hill, had approximately 25 burrows, some with cobwebs and some that looked more freshly excavated, including one burrow with scat. The second had a similar grassland setting with four burrows. The third was located on the edge of shrub steppe and had four burrows, one of which had freshly excavated dirt. No ground squirrels or other burrowing animals were seen or heard during the surveys. None of the potentially active burrows exhibited characteristics or signs of use by other species such as burrowing owls (e.g., 4-6 inches diameter or lined with livestock manure, feathers, grass, or other materials). Incidental observations of other wildlife species were limited to coyote (*Canis latrans*) and vole (*Microtus* spp.). Two coyotes were seen on multiple days of survey, and coyote dens were observed toward the southwestern portion of the burrowing animal survey area.

Avian point counts were conducted by qualified avian biologists during the nesting season from May 11 to 14, 2022, and June 28 to 29, 2022, to characterize avian use of the Solar Array Siting Area. The avian survey area encompassed the Solar Array Siting Area. A total of 14, one-hour-long avian point counts were conducted at locations spaced throughout the avian survey area, and within representative habitat types. Per WDFW's recommendations to strategically place avian point counts within burrowing animal survey areas and shrubsteppe areas, avian point counts were more heavily focused in the northwestern and northeastern portions of the avian survey area. A total of 11 avian species were detected during point counts either audibly or visually. Of the species detected, only one species, the sagebrush sparrow (*Artemisiospiza nevadensis*), is a special status species (WDFW-designated priority species and a state candidate for listing in Washington). Three sagebrush sparrows were seen at two avian point count locations in the north-central portion of the avian survey area.

The Applicant reviewed Benton County critical areas with the potential to occur in the Siting Area (Attachment E).The Benton County critical areas relevant to wildlife are wetlands defined under BCC 15.04.010 and fish and wildlife conservation areas defined under BCC 15.14.010(a). Based on the analysis of habitat and special status species presented in Attachment E, fish and wildlife conservation areas that occur in the Siting Area include priority shrubsteppe habitat which is used by, and associated with, several priority or state-listed species with known or potential occurrence in the Siting Area (see Table 3 in Attachment E), suitable habitat for a federally threatened species (Umtanum desert buckwheat), and potential waters of the state (see Part 3, Section 3 and Attachment P). The Applicant's analysis of potential impacts to County defined fish and wildlife conservation areas is informed by Attachment E and provided in Part 4, Section 9.

As described in Part 3, Section 8, the Applicant met with and began coordination with WDFW on February 17, 2022. At this time the Applicant introduced the Project to WDFW and described planned wildlife, habitat, and rare plant surveys. At the meeting, WDFW concurred

with the proposed survey timing and approach and described sensitive biological resources that may occur in the Project vicinity. The input from WDFW provided during this meeting was used to inform the biological background review and field surveys conducted for the Project including for Townsend's ground squirrel, burrowing owl, and nesting raptor surveys which are described further in Part 4, Section 9. The Applicant provided copies of survey reports to WDFW and met with WDFW representatives on October 7, 2022, to present survey results and solicit input on the Project. The input provided from WDFW during this meeting was used to inform the Part 4 analysis and Draft Habitat Mitigation Plan (Attachment L).

The Part 4 analysis is based on the information obtained during surveys as well as site-specific feedback from the WDFW. The Part 4 analysis also outlines applicable mitigation measures based on the survey results.

As you complete the Detailed Analysis in Part 4 – 9. Animals, make sure you consider and address:

- Alteration/loss of fish/wildlife habitat
- Endangered or other at-risk animal species
- Obstructions/barriers to the movement of fish and wildlife
- Noise, light, or glare
- Changes to critical areas identified in part C.1.

And considering other relevant factors addressed in:

- WAC 463-62-040 regarding fish and wildlife mitigation
- WAC 463-60-332

3.10 Energy and Other Natural Resources

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	N/A	Yes	Yes	N/A

3.10.a Screening Question – Energy and Other Natural Resources

Will the project, because of type, size, or design, require the consumption or removal of substantial quantities of natural resources including energy (electricity, petroleum, etc.), rock minerals, trees/wood, peat, etc. during either construction or operation?	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
The Project is a solar generation facility coupled with a BESS and will provide a new source of clean, renewable electricity. The Project is designed to utilize the region's renewable solar energy resources and adjacent transmission interconnection with the existing BPA transmission system to benefit the region through energy production. The Project design minimizes impacts to adjacent properties and will not limit or otherwise affect the potential use of solar energy by adjacent properties.

The Project will not require consumption or removal of substantial quantities of natural resources during construction or operations; however, some natural resources will be consumed in the form of non-renewable construction materials (see Part 2). Non-renewable fossil fuels will be used to fuel construction vehicles, equipment, and operational vehicles. Fossil fuel quantities consumed will be typical of commercial construction facilities of a similar size. Electricity for the Project's O&M facility will be provided by the local utility, Benton Rural Electric Association and an on-site diesel generator would provide back-up power. Local service providers will be able to accommodate the materials, electricity, and fuel needs of the Project.

No detailed Part 4 analysis is warranted because the Project will not require the consumption or removal of substantial quantities of energy or natural resources during construction or operations. Furthermore, no mitigation is anticipated to be required for this resource.

As you complete the Detailed Analysis in Part 4 - 10. Energy and Other Natural Resources, make sure you consider and address:

- Existing/potential of resource supply not meeting demand
- Conservation methods
- Use of renewable vs. non-renewable resources

And considering other relevant factors addressed in:

- WAC 463-60-342(1)-(4)

3.11 Waste Management

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	N/A	Yes	Yes	N/A

3.11.a Screening Question – Waste Management

Will the project generate large quantities of waste during either construction or operation other than those listed as a discharge under D.3.WATER QUALITY or D.2.AIR QUALITY?	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
The Project will not generate large quantities of waste during construction or operations.

During Project construction, quantities of solid waste generated will be similar to commercial construction projects of a similar size. Wastes generated during construction will typically include discarded building materials such as metal, concrete, wood, and wiring scraps, and waste plastic packaging. Construction waste materials will be recycled to the extent practicable. Portable restrooms will be used during construction.

During operations, low volumes of solid waste will be generated at the O&M building, including paper, cardboard, plastic, and food waste. Portable restrooms will also be used during operations. Maintenance and replacement of Project components such as solar modules and batteries will also produce low volumes of solid waste during operations.

Minimal solid waste produced during construction and operation of the Project will be handled by a licensed contractor in accordance with applicable regulations (see also Part 3, Section 21).

The BESS described in Part 2 may generate incidental solid waste from repair or from the replacement of batteries made necessary by the normal degradation of those batteries over time. Required environmental, health, and safety protocols will be followed for disposal of battery components. Used batteries and components will be recycled or disposed of at an approved facility by a licensed vendor. With increasing demand for BESS technology, recycling companies are increasing capacity and advancing technology to respond to the growing use.

Solar modules typically have a useful lifetime of over 30 years and may be replaced infrequently if necessary. RCW 70.355 requires manufacturers of solar modules to provide effective recycling options for all solar modules purchased after July 1, 2017. As a result, recycling of the solar modules will be done to the extent that recycling is available and feasible.

The Project will not generate large quantities of waste during either construction or operation; therefore, a detailed Part 4 analysis or mitigation is not warranted for this resource.

As you complete the Detailed Analysis in Part 4 - 11. Waste Management, make sure you consider and address:

- Landfill capacity
- Loss of resources
- Opportunities to reduce, reuse, or recycle waste

3.12 Environmental Health – Existing Site Contamination

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	Yes	Yes	Yes	N/A

3.12.a Screening Question – Environmental Health (Existing Site Contamination)

Is there any evidence that the project site(s) contain(s) potentially hazardous materials including toxic chemicals, volatile gases or other poisonous or hazardous substances?	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
A review of Ecology's cleanup site database (Ecology 2022a) and historical aerial photographs (Google Earth 2021) found no evidence that the Siting Area contains potentially hazardous materials, including toxic chemicals, volatile gases, or other poisonous or hazardous substances. In addition, the Applicant completed a site-specific Phase 1 Environmental Site Assessment (ESA) for the Siting Area (SWCA 2022b).

The Siting Area contains a mix of rangeland, crop cultivation, undeveloped land, local roads, and existing electrical utility infrastructure. Based on available historic aerial imagery, the land use in the Siting Area has been consistent with current conditions for at least the past 30 years (Google Earth 2021). As a result, historical use of organic and inorganic fertilizers, pesticides, or herbicides has likely occurred in agricultural production areas in the Siting Area, which was confirmed in the Phase 1 ESA (SWCA 2022b).

The Phase 1 ESA revealed no evidence of *recognized environmental conditions* in connection with the Solar Array Siting Area except for the following: a trash and debris pit, intact and dismantled smudge pots, and a small chemical storage area that will be avoided during final Project siting.

The application of fertilizers, pesticides, and herbicides is assumed to have occurred according to manufacturer guidance, in a relatively uniform and generally consistent manner typical of agricultural practices. The concentrations of fertilizers and pesticides are likely to be similar to other rangeland and crop cultivation operations in the area. Risks to human health and the environment associated with soil disturbance during Project development are assumed to be low and similar to those associated with agricultural operations such as tiling.

Additionally, identified *recognized environmental conditions* shall be avoided during final Project siting. Therefore, potential past applications of fertilizer, herbicides, and pesticides pose little to no concern of adverse environmental impact with respect to Project development.

Because potentially hazardous materials are unlikely to occur within the Siting Area, a Part 4 analysis is not warranted.

As you complete the Detailed Analysis in Part 4 - 12. Environmental Health (Existing Site Contamination), make sure you consider and address:

- Public health and safety
- Environmental health (air, soils, ground water, surface waters, plants, and animals)
- Conflict /compatibility with planned land uses
- Include description of hazardous materials and the manner and extent of the contamination.

3.13 Environmental Health – Hazardous Materials

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	N/A	Yes	Yes	Yes

3.13.a Screening Question – Environmental Health (Hazardous Materials

Will the project involve the removal, use, or disposal of hazardous materials that involve toxic chemicals, asbestos, risk of fire or explosion, and/or spill or danger to public health and the environment?	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
Most materials used in construction of the Project will not be hazardous or dangerous, and the risk of fire, spills, or other dangers to public health and the environment will be low. However, the Project will include a PCS system with a DC-coupled BESS (refer to Part 2, Section A.2). The BESS units will be designed to incorporate multiple layers of protection to avoid failures and risks of fire or spills and will comply with the applicable requirements of the NEC, NFPA Standards, and Institute of Electrical and Electronics Engineers Standards.

If improperly handled or stored, the batteries in the BESS could be considered hazardous materials. Improperly stored or disposed of batteries could leak hazardous substances such as mercury, lead, cadmium, and sulfuric acid (Ecology 2022b). Spent batteries may be considered dangerous wastes; however, when properly recycled, batteries can be managed as universal wastes (Ecology 2022b). The Project will properly handle, store, and dispose of or recycle spent batteries at an appropriate facility in order to minimize risks to the public. With increasing demand for BESS technology, recycling companies are increasing capacity and advancing technology to respond to the growing use. As a result, recycling of Bess technology will be done to the extent that recycling is available and feasible.
The Part 4 analysis presents more detailed information regarding potential BESS technologies and their respective risks as well as the associated control measures that will be implemented to protect public health and the environment. The Part 4 analysis also discusses the Project's compliance with fire safety measures, spill control measures, and regulations for solar energy generation facilities. Mitigation measures are also discussed in the Part 4 analysis.

As you complete the Detailed Analysis in Part 4 – 13 Environmental Health (Hazardous Materials), make sure you consider and address:

- Public Safety
- Environmental health (air, soils, ground water, surface waters, plants and animals)
- Hazardous material sources, storage, identification, classification

And considering other relevant factors addressed in:

- WAC 463-60-352 (2) – (4), (6)

3.14 Land Use, Natural Resource Lands, & Shoreline Compatibility

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

3.14.a Screening Question – Land Use, Natural Resource Lands, & Shoreline Compatibility

Will the proposal involve or result in any of the following (include likely future proposals that will occur as a result of this action, such as increased development from newly created lots or extension of services, etc.) • Change in land use • Change in intensity of land use • Provide new or improved service to an area (e.g. transportation, utilities, entertainment, etc.)	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
The siting area is characterized by rural rangeland and agricultural land with limited residential or commercial development. Existing land uses in the Solar Array Siting Area include dryland agriculture, rangeland, undeveloped areas, local roads, electrical infrastructure such as transmission and distribution lines, and unoccupied agricultural structures. Existing land uses in the Transmission Line Corridor Siting Area are similar to the Solar Array Siting Area and consist predominately of dryland agriculture, rangeland, undeveloped areas and existing electrical infrastructure. Land uses adjacent to the siting area include vacant federal land and the Columbia River north of the existing Midway Substation and associated electrical infrastructure; dryland agriculture, rangeland and vacant federal land to the east associated with the Hanford Reach National Monument (Rattlesnake Unit of the Fitzner/Eberhardt Arid Lands Ecology Reserve); dispersed rural development and agriculture to the south; and, dryland agriculture, rangeland, vineyard, state highway, and electrical infrastructure to the west.

The proposed solar power generating facility will result in a change in the type and intensity of the existing land use in the siting area. The siting area is located entirely in unincorporated Benton County within the GMA/AG land use designation (Benton County 2018) and within the County's GMAAD zone.

The Project is consistent with Benton County's definition of a "solar power generator facility, major" under BCC 11.03.010(167) as codified prior to December 21, 2021. The Applicant submitted a Conditional Use Permit (CUP) application to Benton County Community

Development on December 20, 2021 when the Project required a CUP in the GMAAD zone pursuant to BCC 11.17.07(cc). On December 21, 2021, Benton County passed Ordinance Amendment 2021-004, which removed "solar power generation facility, major" from the list of uses requiring a CUP in the GMAAD zone and effectively prohibits this type of use in the GMAAD zone. Therefore, the Applicant requests that EFSEC review this application for land use consistency based on the applicable criteria adopted at the time of the Applicant's CUP submittal on December 20, 2021. The reasons for this request are presented in Part 4, Section 14 and Attachment D to this ASC.

The Land Use Consistency Review (Attachment D) provides a complete review of the Project's consistency with the Benton County Comprehensive Plan and County Code adopted at the time of the Applicant's CUP submittal on December 20, 2021. The Part 4 analysis addresses the Project's potential effects to existing and nearby land uses, as well as the Project's consistency with relevant local land use regulations. Outside of complying with landowner lease agreements and EFSEC conditions, no land use mitigation requirements are anticipated for the Project.

As you complete the Detailed Analysis in Part 4 – 14. Land Use, Natural Resource Lands, & Shoreline Compatibility, make sure you consider and address:

- Loss of designated natural resource lands (agriculture, forest, mineral) under RCW 36.70A.030; or other existing land uses
- Viability of existing or planned adjacent or nearby land or water uses
- Compatibility or conflict with intended land or shoreline uses
- Increased transportation, utility, or service demands

3.15 Housing

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	N/A	Yes	Yes	N/A

3.15.a Screening Question – Housing

Will the project be likely to displace or otherwise affect existing or future housing, particularly housing for low and moderate-income households?	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
The Project is located in Benton County outside of designed urban growth boundaries. It is anticipated that the construction of the Project will provide jobs for an estimated 300 workers during peak construction during the 24-month construction period. Up to five permanent jobs are expected during operations. The Applicant strives to hire locally wherever possible. The local share of the construction workforce will primarily be dependent on skilled workforce availability. Given the skilled workforce present in the Tri-Cities area, the Applicant has a goal to hire approximately 75 percent of the construction workforce locally, with the remaining 25 percent hired from outside the region. Non-local workers (i.e., those hired from outside the region) are expected to temporarily relocate to the vicinity of the Project for the duration of their employment. As a result, an estimated peak of 75 non-local workers are expected to seek temporary accommodation in the Project vicinity.

In compliance with WAC 463-60-535, a Socioeconomic Review that provides information regarding population, labor force, and housing impacts has been prepared for the Project (Attachment I). As described in Attachment I, the estimated normally available supply of temporary housing resources exceeds estimated construction-related demand and meeting the construction workforce's housing needs is not expected to constrain the housing market for existing residents or lead to changes in housing values, rents, or new housing construction.

Non-local workers are expected to seek a range of temporary accommodations, including rental housing (houses, apartments, mobile homes), hotel/motel rooms, and recreational vehicle (RV) parks/campgrounds, as well as other special living situations such as Airbnb units and spare bedrooms. The review of temporary housing resources presented in Attachment I indicates that temporary housing resources in the study area include

approximately 2,100 housing units that are vacant and available for rent, with additional units classified for seasonal, recreational, or occasional use that may also be available. Temporary housing is also available in the form of hotel and motel rooms. Available estimates indicate that there are about 7,100 hotel and motel rooms in the vicinity of the Project. Hotels in the Tri-Cities had an overall average occupancy rate of 62.5 percent from December 2016 to November 2017. The market is seasonal, with monthly occupancy rates ranging from 42 percent in December to 77 percent in June. In Yakima, there were 30 hotels and motels in 2017 with an estimated total of 2,400 guestrooms. Occupancy rates in the area have historically averaged around 55 to 60 percent. Assuming a peak occupancy of 77 percent suggests that a minimum of approximately 1,630 rooms are normally empty and available for rent. Temporary accommodation in the study area also includes RV parks and campsites. Facilities in Benton and Franklin counties within 1 hour of the Project Area include 19 RV parks and campgrounds, with a total of 2,030 RV spaces. Parks and campgrounds are located in Kennewick, Richland, West Richland, Pasco, Prosser, Benton City, and Vantage. An additional six RV parks and campgrounds, with a total of 390 spaces, are located within 1 hour of the Project Area in Yakima County, including locations in Yakima, Sunnyside, and Selah.

Operation and maintenance of the Project is anticipated to employ approximately five workers. These workers and their families are likely to reside within daily commuting distance and will either already reside in the area or permanently relocate. The approximately five workers and their family members could potentially relocate. The average U.S. family household consisted of 3.13 people per family in 2021 (U.S. Census Bureau 2021). Applying this average family household size results in an estimated maximum of 16 people in five households that could permanently relocate to the Project vicinity to support Project operation; in fact, some or all of the permanent operations staff may be hired locally. Therefore, given the available housing described in Attachment I, there is sufficient existing available housing to accommodate new permanent residents in the Project vicinity.

The Project is not anticipated to displace or otherwise affect existing or future housing during construction or operations; therefore, a Part 4 detailed analysis of housing impacts is not anticipated. Furthermore, no mitigation is anticipated to be required for this resource.

As you complete the Detailed Analysis in Part 4 – 15. Housing, make sure you consider and address:

- Decreased availability of housing for low to moderate income households
- Impediments to meeting fair housing and/or population growth goals

3.16 Noise, Light, Glare, and Aesthetics

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

3.16.a Screening Question – Noise, Light, Glare, and Aesthetics

Will the project transmit light, glare, or noise onto adjacent areas or alter or obstruct any views in the immediate area?	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
During construction, noise will be generated by construction equipment at levels typical for commercial projects of a similar size. During operations, minimal light and glare may be generated by the Project, and noise will be generated by transformers as well as potentially by heating, ventilation, and air conditioning equipment associated with battery storage. Views of the Project Area will be altered due to the change in land use from primarily open rangeland to a commercial solar facility.

The Applicant has completed a Visual Resources Technical Report (Attachment H), Glint and Glare Analysis (Attachment G), and an Acoustic Assessment (Attachment Q) and incorporated the results of these analyses into Part 4. Maximum Project noise levels were modeled to evaluate compliance with state noise regulations protecting sensitive noise receptors (WAC 173-60). The Applicant has identified potential effects of the Project related to noise, light, glare, and aesthetics and, where necessary, proposed mitigation measures in Part 4.

As you complete the Detailed Analysis in Part 4 - 16. Noise, Light, Glare, and Aesthetics, make sure you consider and address:

- Proximity to residential areas, or other areas with sensitivity
- Scenic views that could be blocked, altered, or impaired for existing or planned uses in adjacent areas

And considering other relevant factors addressed in:

- WAC 463-62-030 regarding noise standards
- WAC 463-60-352 (1), 463-60-362 (2) and (3)

3.17 Recreation

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	N/A	Yes	Yes	N/A

3.17.a Screening Question – Recreation

Will the project occur in an area or location that includes the following? ❑ Existing designated and informal recreation opportunities in the immediate vicinity ❑ Displace or otherwise affect any existing recreational uses during construction or operation	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
The Siting Area is located almost entirely on privately owned lands, with the exception of U.S. Department of Energy managed land occurring within the northern portion of the Transmission Line Corridor Siting Area. Approximately 2 miles of Transmission Line Option 1 – Midway traverses the northwest portion of the federal land in Benton County (Figure A-2, Attachment A). There are no formal recreation sites on the federal land crossed by the Project; however, some limited public use may occur, such as off-highway vehicle use or hunting. The gen-tie line will be limited to the proposed easement area and will not preclude access or use of public lands under the line.

Portions of the Transmission Line Corridor Siting Area are located within the Blackrock Valley hunting grounds (Site 295). The Blackrock Valley hunting grounds are part of a program that provides access to private lands where the WDFW has a management agreement with the landowner to regulate hunting (WDFW 2022b). Another private hunting ground that is part of the WDFW hunting access program abuts the Solar Array Siting Area to the west (Site 274; Van Belle Road). Hunters are required to obtain written permission from landowners prior to hunting in these areas. No known hunting blinds or tree stands are provided or allowed. Outside of hunting, there are no formal recreational opportunities within the Siting Area.

During construction, hunting would be excluded from the private lands within the Transmission Line Corridor Siting Area except in areas or times agreed upon by the landowners and the Applicant where hunting can be conducted without health and safety risks. During operations, hunting could be limited where the gen-tie line structures will occur within the eastern boundary of the Transmission Line Corridor Siting Area. Otherwise, hunting

will still be allowed with written permission from landowners throughout the Blackrock Valley hunting grounds.

Formal recreation areas on lands adjacent to or within 5 miles of the Siting Area include the U.S. Fish and Wildlife Service (USFWS) Hanford Reach National Monument (directly adjacent/east of the Transmission Line Option 1 – Midway), the WDFW Thornton Wildlife Area Unit (3.2 miles east of the Solar Array Siting Area), the Black Rock Creek Golf Course (4.1 miles southwest of the Solar Array Siting Area), and the Sunnyview Park in Sunnyside, Washington (4.5 miles southwest of the Solar Array Siting Area). The portion of the Hanford Reach National Monument that is adjacent to the Transmission Line Corridor Siting Area is part of the Fitzner-Eberhardt Arid Lands Ecology Reserve, use of which is limited to agency-approved ecological research and environmental education activities, and no general public use is allowed (Audubon 2022; USFWS 2022). The closest designated recreation site within the Monument is the Hanford Manhattan Project National Historical Park, located approximately 6 miles to the northeast of the Transmission Line Corridor Siting Area.

The 2,114-acre Thornton Wildlife Area Unit offers hunting and wildlife viewing opportunities and is part of the 21,400-acre Sunnyside-Snake River Wildlife Area, which includes 14 additional Wildlife Areas Units offering similar recreational opportunities. The closest unit in proximity is the larger, 3,592-acre Rattlesnake Slope Wildlife Area Unit (located 3 miles east of the Thornton Wildlife Area, 6.2 miles from the Solar Array Siting Area), which in addition to hunting and wildlife viewing, offers hiking, target shooting (at the Rattlesnake Mountain Shooting Facility, over 14 miles from the Siting Area), and horseback riding opportunities (WDFW 2022c).

The Black Rock Creek Golf Course is an 18-hole course, serving the cities of Grandview, Sunnyside, and Prosser (Black Rock Creek Golf Course 2022). Other golf courses are available within 25 to 30 miles of the Black Rock Creek Golf Course, including the Desert Aire Golf Club in Mattawa, Washington, and several golf courses in Richland, Washington (Google Earth 2021).

The 32-acre Sunnyview Park is one of 12 parks designated within the Sunnyside, Washington city limits and offers traditional park amenities (e.g., restrooms, playground, picnic areas) as well as a skate park, two soccer fields and 4-plex softball fields (City of Sunnyside Washington 2022). Other facilities and parks in Sunnyside offer these amenities as well as additional recreational opportunities (City of Sunnyside Washington 2022). The remaining Sunnyside parks are located at least 6 miles from the Siting Area.

There are several scattered DNR state trust and BLM-managed parcels located within 5 miles of the Siting Area (USGS 2022; WDFW 2022a; DNR 2022). There are no formal recreation sites available on these parcels; however, some limited public use may occur, such as off-highway vehicle use or hunting (BLM 2022; USGS 2022; WDFW 2022a). Due to a lack of formal recreation opportunities and limited roads accessing these parcels (Google Earth 2021), public use of these areas is likely minimal to low.

Given the limited designated or informal recreation opportunities within or near the Siting Area, the Project will not adversely affect existing recreational uses. Therefore, a detailed analysis of potential impacts to recreation opportunities under Part 4 is not warranted. Furthermore, no mitigation is anticipated to be required for this resource.

As you complete the Detailed Analysis in Part 4 - 17. Recreation, make sure you consider and address:

- Existing recreation uses (e.g. hunting) that could be removed

3.18 Archaeological and Historical Resources

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

3.18.a Screening Question – Archaeological and Historical Resources

Will the project occur in an area or location that includes the following? *Note: to answer these questions with a definite "yes" or "no" requires a Desktop Survey that must be conducted by a consultant. See guidance for more information.* ❑ Archaeological Site or Built Environment Property over 50 years in agricultural resource site ❑ Any known landmarks or evidence of historic, archaeological, scientific or cultural importance ❑ Is listed or is eligible to be listed on a local, state, or federal historic register	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
A review of the DAHP Washington Information System for Architectural and Archaeological Records Data database on the cultural resources within the 4,908-acre Area of Potential Effect (APE) did not identify any previously recorded resources within the APE. Four sites were previously recorded within one mile of the APE. A Pedestrian Surface Survey was performed on the 4,908-acre APE for cultural resources in August and September of 2022 (confidential Attachment M). The survey did not include the 150 feet wide gen-tie line corridor within the Transmission Line Corridor Sitting Area.

Fifty-five archaeological resources were identified over the course of the survey for the 4,908-acre APE. The 55 archaeological resources consist of 46 archaeological sites and 9 archaeological isolates.

The Applicant intends to avoid disturbing archeological and historical resources. However, if a resource is unavoidable, the Applicant will obtain the necessary permits prior to any direct impacts. An Inadvertent Discovery Plan has been prepared that set procedures in the event an unidentified archeological or historical resource is encountered during construction or operations of the Project (see confidential Attachment M). The Part 4 analysis discloses potential Project impacts to archaeological and historical resources as well as the archaeological mitigation measures.

As you complete the Detailed Analysis in Part 4 - 18. Archaeological and Historical Resources, make sure you consider and address:

- Effects on access to the site or to the resource
- Methods to protect/preserve cultural and historic resources
- Enhancement measures (improved public or tribal access, matching the character of the site, etc.)
- Include description of the cultural/historic resource and how it was identified.

And considering other relevant factors addressed in:

- WAC 463-60-362

3.19 Cultural Resources

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

3.19.a Screening Question – Cultural Resources

Will the project occur in an area or location that includes the following? • existing tribal hunting or fishing rights • existing tribal plant gathering • tribal cultural sites • a usual and accustomed area • material culture artifacts • activities on the site could impede views of tribal cultural sites	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
Archaeological field investigations were conducted within the Solar Array Siting Area in August and September 2022 and a desktop survey of the Transmission Line Corridor Siting Area was completed. The methods and results of the desktop and field surveys will be presented in a Cultural Resources Survey Report provided as a supplemental attachment to the ASC (confidential Attachment M), as well as in the Part 4 analysis.

The Part 4 analysis discloses potential Project impacts to archaeological and historical resources as well as the archaeological mitigation measures. The Applicant is conducting ongoing outreach to the Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of Warm Springs, and Nez Perce Tribe, which were identified as tribes with traditional interests in the Project Siting Area. Input provided by tribes will be incorporated into the confidential Cultural Resources Survey Report.

As you complete the Detailed Analysis in Part 4 - 19. Cultural Resources, make sure you consider and address:

- Whether you have talked to any tribal representatives
- Whether you have checked any tribal websites

3.20 Traffic and Transportation

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	Yes	Yes	Yes	Yes	Yes

3.20.a Screening Question – Traffic and Transportation

Will the project be likely to cause any of the following in relationship to the local and regional transportation system during construction or operation? • Reduce the level of service (LOS) in an area • Restrict vehicular use • Potential to create or increase local safety hazards • Conflicts with local, state or federal requirements related to traffic and transportation	☐ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☒ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
The Project will be accessed primarily from SR 241 to Sheller Road or from I 82. The Transmission Line Corridor Siting Area crosses SR 24 approximately 3 miles south of the Midway Substation. Within the Solar Array Siting Area public roads include Anderson Road, N Missimer Road, as well as several unnamed private roads. Project construction will involve temporary increased traffic to the site for delivery of materials and worker transportation, an improvement to the approach off SR 241, and road improvements to Sheller Road and potentially McCreadie Road. During Project operations, traffic will be limited to periodic maintenance visits and commutes of approximately five O&M employees. The Project is unlikely to reduce the level of service on area roads, except potentially for brief periods during construction. The Project will not restrict vehicular use or create local safety hazards and would not conflict with local, state, or federal requirements related to traffic and transportation. Given the current uncongested nature of the roadways, the temporary increase in traffic counts, and anticipated traffic control measures described in Part 4, significant impact to traffic flow is not expected. However, due to potential truck traffic and potential transportation of oversize or overweight loads during construction, a Part 4 analysis was completed.

The Part 4 analysis discloses the potential impacts to the existing level of service on transportation routes that will be used during construction and operations and identifies proposed mitigation measures for traffic impacts.

As you complete the Detailed Analysis in Part 4 - 20. Traffic and Transportation, make sure you consider and address:

- Existing/potential safety hazards
- Traffic delays or road closures during construction

And considering other relevant factors addressed in:

- Relevant factors addressed in WAC 463-60-372

3.21 Public Services and Facilities

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	N/A	Yes	Yes	N/A

3.21.a Screening Question – Public Services and Facilities

Will the project be likely to directly or indirectly increase use of public services and facilities such as fire protection, law enforcement, schools, parks and recreation, public open space, social services or general government?	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
The Project is a self-sufficient solar power generating facility and is unlikely to directly or indirectly increase use of public services and facilities during construction or operation. The Project is located in rural Benton County where many public services and facilities are unavailable and are not required for construction and operation of the Project. Potential impacts to public services and facilities will be minor and will primarily occur during the construction period, which is anticipated to take approximately 24 months. During construction, a peak of up to 300 workers may be employed. As described in Attachment I, the non-local share of the construction workforce is anticipated to be approximately 25 percent of the work force, or an average of 75 workers, with a peak of 150. Due to the temporary nature of these jobs, workers from outside the area would be unlikely to move their families to the area. This compares to an estimated population in Benton County of 210,025 in 2021, along with a population in Franklin County of 98,268, population in Yakima County of 256,035, and population in Grant County of 100,297 (U.S. Census 2021). During construction, if all peak construction workers temporarily reside in the Tri-Cities area (which is unlikely), the peak temporary increase in the population would be approximately 0.2 percent (U.S. Census 2021). If the peak amount of non-local workers temporarily reside in Sunnyside, the increase in population would be approximately 0.9 percent (U.S. Census 2021). During operations, the Project will be staffed by approximately five personnel. Considering these factors along with implementation of the mitigation measures outlined below, the Project will not significantly adversely affect the use of public services and facilities during construction or operation.

Fire Protection

Construction

The increased presence of construction workers (as many as 300 workers at peak) and construction activities in the Siting Area could increase the risk of wildland fires, resulting in a higher volume of calls for emergency fire services than currently exists. The highest expected fire risks are from grass fires during summer. Fire risk to existing structures within the Siting Area would be minimized through the implementation of fire protection and prevention measures described below and detailed in Part 4, Section 13:

- The Project will implement applicable state and local health and safety regulations, which will minimize the potential for fire hazards.
- The final layout will be provided to the Benton County Fire Marshal's Office and Project components will be designed to applicable requirements of the NEC, NFPA Standards, and Institute of Electrical and Electronics Engineers Standards.
- The Applicant will notify the local Benton County Fire Marshal's Office of construction plans and phasing, identify the location of and access to Project structures.
- Potential fires inside the Project area would be controlled by trained facility staff with 24-hour access to the facility.
- In the rare event of an electrical fire in the solar modules or BESS containers, it is likely that Project staff would monitor and contain the fire but contact local firefighting services to extinguish it.
- The Project will develop and maintain an Emergency Management Plan (which will be developed and finalized prior to construction) and implement best management practices for fire prevention. The Applicant will coordinate with the Benton County Sheriff's Office, Benton County Emergency Management, and DNR Wildland Fire Management Division, as needed, to collaboratively develop safety measures that will be incorporated into the Project's design and construction. The Applicant will coordinate with these entities regarding equipment or training that may be needed to provide fire protection services to the Project.
- Construction equipment will have spark-arresting mufflers, heat shields, and other protection measures to avoid starting fires.
- Fire extinguishers will be available in vehicles and on equipment, to quickly address any accidental fire issues.
- Work crews also would be trained about fire avoidance and response measures.
- During construction, water would be used to suppress fugitive dust during grubbing, clearing, grading, trenching, and soil compaction. If a fire were to occur, that water could be diverted for firefighting purposes.
- Other steps would be taken to prevent fire during construction, such as establishing roads before accessing the site to minimize vehicle contact with grass, using diesel construction vehicles rather than gasoline vehicles to prevent potential ignition by catalytic converters, not allowing vehicles to idle in grassy areas, and restricting the use of high-temperature equipment in grassy areas.
- Project design will also incorporate graveled areas around the O&M facility and substation and graveled access roads that may serve as fire breaks, where applicable.

As a result of the above fire avoidance measures and ability to respond on-site to potential fires, the risks of and potential impacts from on-site fires during Project construction would be minimal.

Operations
The risk of accidental fires at the Project is low since there is no need to transport, store, or combust fossil fuels to generate solar electricity. However, fire at the Project could result from a lightning strike, short circuit, or mechanical failure/malfunction. Any of these occurrences affecting electrical operation in close proximity to the Project would be sensed by the SCADA system and reported to the project control center. Under these conditions, the Project would automatically shut down and/or project maintenance personnel would respond consistent with the Emergency Management Plan.

Fire prevention and safety measures will be developed and enforced during Project operation, to reduce and address potential fire risks. Project personnel would be trained in fire response and would have the equipment to deal with particular emergency situations that may occur at the Project. Project personnel would contact local fire personnel for more skilled expertise only when necessary (e.g., working in confined spaces, high voltage, etc.). Consequently, such an incident would generally not expose local emergency service providers or the general public to public health or safety risk.

As described above, the Project would be designed to comply with NEC and NFPA requirements to avoid potential electrical fire risks. The Applicant will also coordinate with the Benton County Fire Marshal's Office to provide photovoltaic training to fire responders and Project staff. The intent of this training would be to familiarize both responders and workers with the codes, regulations, associated hazards, and mitigation processes related to solar electricity generation. This training will include techniques for fire suppression of photovoltaic systems. Combustible vegetation on and around the Project area boundary would be maintained by the Applicant and the landowner. The Project will include fire breaks around the Project boundary in accordance with applicable state and/or county standards.

As a result of the above fire avoidance measures and ability to respond on-site to potential fires, the risks of and potential impacts from on-site fires during operation of the project would be minimal.

Law Enforcement. The Benton Country Capital Improvement Plan for 2021-2026 does not identify significant needs for increased equipment, personnel, and facilities for the Benton County Sherriff's Office to provide services to the community (Benton County 2020), and these services have been funded at sustained levels over the past 5 years (Benton County 2021). A temporary peak increase of up to 300 workers during Project construction is less than one percent of the Benton County population and will not effectively reduce the level of service that the Benton County Sheriff's Office and local law enforcement can provide the community.

Construction activities associated with the Project, including the commutes of construction workers and the transportation of materials, would increase traffic volume on roadways in and near the Project area. The number of accidents and calls for service could increase slightly during the construction period because of the increased number of personnel temporarily on-site. Out-of-area workers are not likely to move their families to the Project area. Because few construction workers are likely to change their family residences, there would be a minimal population increase in the area and minimal subsequent pressures on law enforcement. The demand for police services during project operation could increase as a result of theft, vandalism, or trespassing at the Project. Such an increase in service demand, however, is expected to be minimal because security measures would be implemented during project operations. To mitigate the need for additional law enforcement services, site access will be restricted, and Project components will be secured by a perimeter fence, nighttime security lighting, padlocking gates, and pad-mounting transformers. The Project will not require special

services from the Benton County Sheriff's Office. As a result, no adverse impacts to state or County law enforcement services are anticipated as a result of the Project.

Schools, Parks, and Recreational Facilities. No significant adverse impacts to schools, parks, or recreational facilities are anticipated as a result of the Project. Construction of the Project will take about 24 months, during which period a peak of up to 300 workers will be employed. Because the construction period is temporary, little to no adverse impact on housing or schools is anticipated (Attachment I). Temporary school and housing needs would be supported within the purview of Benton County's current growth trajectory, which plans for population growth in the Tri-Cities area and associated rural transition areas and urban growth areas (Benton County 2022c). Temporary, occasional use of parks and recreational facilities associated with the temporary construction population would not significantly adversely affect these facilities; see Part 3, Section 17 for further discussion on recreation. During operations, the Project will employ up to five personnel, which will not create an adverse impact for schools, parks, or recreational facilities.

Public Open Space, Social Services, and General Government. A portion of the Transmission Line Corridor Siting Area crosses federally managed land. However, there are no formal recreation sites on these parcels and limited public use is anticipated; see Part 3, Section 17 for further discussion. The gen-tie line will be limited to the proposed easement area and will not preclude access or use to public lands under the line. Therefore, Project construction and operation is not anticipated to significantly impact public open space. Increased jobs for community members as described in Attachment I and increased property tax revenue from the Project will provide support for social services and general government operations.

Because public services and facilities will not be adversely affected, a detailed analysis of potential impacts to public services and facilities under Part 4 is not warranted. Furthermore, no mitigation, beyond what is described above, is anticipated to be required.

As you complete the Detailed Analysis in Part 4 - 21. Public Services and Facilities, make sure you consider and address:

- Existing/potential inadequacy of service providers to meet need
- Consumption of disproportionate share of existing or future service capacities
- Options to reduce service demand (onsite security, etc.)

3.22 Utilities

SUMMARY	1. Does **screening** trigger a Part 4 analysis?	2. Is it clear what **analysis or study** is called for?	3. Is the analysis sufficiently complete for **SEPA determination**?	4. Is the analysis fully complete for **application review**?	5. Is the proposed **mitigation** (if any) adequate?
[Applicant only] No, Yes, Maybe/na / [EFSEC only] No, Yes, Maybe/na	No	N/A	Yes	Yes	N/A

3.22.a Screening Question – Utilities

Will the project be likely to increase demand for public or privately-owned water, sewer, storm water, solid waste, communication, or energy utilities?	☒ **No**	⇒ *Explain below why you believe "No" is the appropriate answer.*
	☐ **Yes**	⇒ *Explain below what aspect of the question triggered a "Yes" response;* *AND* ⇒ *Complete Part 4 - Detailed Analysis*
	☐ **Maybe**	⇒ *Describe below how you plan to obtain the information needed to move to a definitive "Yes" or "No" prior to the final submission on your application.*

Explanation:
The Project will not significantly increase demand for public or private water, sewer, solid waste, stormwater, communication, or energy utilities. The Project's impacts to these public and private utilities will be minimal, largely because the Project is a solar power generating facility that will produce much of its own electricity. Additionally, the Project is located in rural Benton County where public utility services are largely unavailable, including no public sewer or stormwater facilities.

During construction, water will be hauled to the site from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right). BMPs will be employed to manage stormwater within the Siting Area (see Part 3, Section 5, and Part 4, Section 5, for more information). Portable toilets will be used for sanitary wastes. A licensed hauler will be used to transport and dispose of construction waste in accordance with applicable laws. Recycling will be implemented to the extent practicable. Electricity and necessary communications connections for the Project will be provided by Benton Rural Electric Association before the start of operations, and communications will be provided by a local utility.

During operations, the Project will haul water from off-site sources with existing water rights such as a municipal water source or vendor with a valid water right (as discussed in Part 3, Sections 4 and 6). Domestic waste produced during construction and operation of the Project will be handled by a licensed waste contractor. After the Project is decommissioned, spent panels will be recycled by the manufacturer to the extent possible. The Project will be designed to capture stormwater and reduce runoff as described in Part 3, Section 5, and Part 4, Section 5. No municipal stormwater facilities will be utilized. The Project will generate

electricity during operations, which will be supplemented with a small amount of power for the O&M building as needed from the Benton Rural Electric Association and the back-up generator.

No significant adverse impacts to water, stormwater, sewer, or solid waste facilities are anticipated as a result of the Project. The Project is outside the urban growth boundary service area where public water, stormwater, sewer, and solid waste facilities are available; therefore, construction and operation of the Project is not anticipated to impact these services and facilities. During construction, water will be obtained from a source with verified water rights. The Project will purchase and haul water from off-site sources during operation; therefore, the Project will not use public water services. No freshwater or wastewater facilities will be used at the Project O&M building.

Routine solid waste will be produced during construction and operation of the Project, including packaging materials and domestic refuse. These materials will be handled by a licensed contractor in accordance with applicable regulations (see Part 3, Section 11). At the end of the Project's useful operational life, spent solar panels will be recycled by the manufacturer after decommissioning in accordance with state law. Solid waste landfills and waste transfer stations in Benton County and nearby Yakima County are available with sufficient capacity to accommodate wastes generated by the Project, including the Yakima County Lower Valley Transfer Station, Cheyne Landfill, Terrace Heights Landfill, City of Richland Horns Rapids Landfill, and the Waste Management Kennewick Transfer Station. Therefore, the Project will not adversely impact public solid waste disposal facilities.

The Project design will generally maintain existing topography and therefore stormwater would continue to flow and infiltrate into the ground as under existing conditions. No municipal stormwater facilities will be used or impacted.

Because the Project will not significantly increase demand for public and private utilities, a detailed analysis of potential impacts to utilities under Part 4 is not warranted. No mitigation is proposed or anticipated to be required.

As you complete the Detailed Analysis in Part 4 - 22. Utilities, make sure you consider and address:

- Existing/potential inadequacy of utilities to meet need
- Consumption of disproportionate share of existing or future utility capacities
- Potential to reduce service demand (conservation, etc.)
- Identify where utilities have confirmed service availability

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Part 4 – DETAILED ANALYSIS

4.1 Earth

4.1.A Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.

Study name	Expected completion date	Author / Expert agency participation Name, Title, and Involvement	Completed Y/N
Updated Geologically Hazardous Areas Assessment (Attachment F)	Completed July 2022	Prepared by PBS, geotechnical consultant for the Applicant.	Yes
Soil Table (Attachment N)	Completed August 2022	Prepared by Tetra Tech, environmental consultant for the Applicant.	Yes

☒ **Check this box when all proposed studies for this topic are completed**

4.1.B Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.

Topical area/issue	Existing Condition and Problems
General description of site	General: The Project is located within Yakima Valley and east-northeast of the town of Sunnyside, Washington, in Benton County. The site is positioned along a broad, relatively flat piedmont along the south side of the Rattlesnake Hills. Elevations throughout the site range from 2,440 feet in the northeast to 1,049 feet in the southwest. The ground surface is mostly vegetated with sagebrush and grasses. The piedmont is characterized as a relatively flat surface with deeply incised linear drainages. The drainages consist of Black Canyon, Spring Creek, and other unnamed drainages. These drainages are incised into the piedmont and are bedrock control drainages with seasonal ephemeral streams. Geologically hazardous slopes are primarily located within the drainages and along Sage Brush Ridge. Sage Brush Ridge forms a near-linear, east-west oriented ridgeline and topographic local highpoint near the toe of the piedmont and is an anticlinal fold. Geology: The Project is mapped within the Columbia Basin geologic province and positioned within the Yakima fold and thrust belt. The geologic units within the site consist of Holocene to Pleistocene age loess, Holocene to Pleistocene age alluvium, and Tertiary age volcanic rocks of the Columbia River Basalt Group.

	The loess occupies the low gradient surface of the piedmont, while the alluvium is primarily within the drainage floor of Black Canyon, Spring Creek, and the unnamed tributary drainage that forms a confluence with Spring Creek near Sage Brush Hill. Columbia River Basalt bedrock is mapped primarily within drainage slopes. Subsurface investigations through excavating 12 test pits within the Solar Array Siting Area are summarized by three units: • SILT (ML): a brown silt with variable fine-grained sand content with silt extending to depths of up to 8.5 feet below ground surface but generally was less than 3 feet thick. Sile was low plasticity and dry to moist. • Silty SAND (SM): a brown, fine-grained sand intermixed with silt to a depth of 3 feet. • BASALT: basalt depths ranged from 1.5 to 8.5 feet below ground surface. Basalt was dark gray with a white, mineral crust and was slightly to moderately vesicular and unweathered. Soils: Attachment A includes figures of the soils in the Project Siting Area (Figure A-3) while Attachment N includes a table listing the soils and related soils information within the Project Siting Area. Silt loam soils or variants of silt loams are the primary underlying soil type within the Project Siting Area accounting for over 95 percent of the soil types. The majority of the Solar Array Siting Area is mapped as silty loam with slopes from 0 to 15 percent. Shallow Bedrock: Shallow bedrock (less than 60 inches in depth) is reported for approximately 5 percent of the soil types within the Project Siting Area. Steep Slopes: Soils with slopes greater than 30 percent account for approximately 13 percent of the Project Siting Area, 4.7 percent of the Solar Array Siting Area, and 22 percent of the Transmission Line Corridor Siting Area. Erodibility: Soils mapped within the Project Siting Area are rated as low to moderate wind erodibility. Eighty-eight percent of soils within the Solar Array Siting Area are mapped with a moderate to high potential for water erosion, while 66 percent of soils within the Transmission Line Corridor Siting Area are mapped with a moderate to high potential for water erosion. Drainage/Topography: Drainage and topography within the Solar Array Siting Area are described in Section 2.1 and shown on Figure 3 of the Updated Geologically Hazardous Areas Assessment by PBS Engineering and Environmental (PBS; Attachment F). Topography in the Solar Array Siting Area generally ranges from 1,049 feet above mean sea level (amsl) to 2,440 feet amsl. Three main drainages run through the site: Black Canyon, Spring Creek, and unnamed drainages.

Geologic hazards	Geological hazards are defined as Critical Areas in Chapter 15.12.020 of Benton County's CAO as either being erosion hazards, landslide hazards, or seismic hazards. The following are defined as erosion hazard areas under BCC 15.12.020(a): 1) Slopes greater than 15 percent and 39 percent; 2) slopes 40 percent or greater; or 3) slopes 15 percent or greater that contain soils or soils complexes identified by the U.S. Department of Agriculture Natural Resources Conservation Service or the Soil Survey for Benton County as having "severe" or "very severe" erosion potentials. The following are defined as landslide hazard areas under BCC 15.12.020(b): *1) Slopes 15 percent or greater that have a relatively permeable geologic unit underlying a relatively impermeable unit and have springs or groundwater seeps;* *2) Slopes 40 percent or greater with a vertical relief of 10 or more feet except areas composed of competent rock and properly engineered slopes designed and approved by a geotechnical engineer licensed in the state of Washington and experience with the site;* *3) Potentially unstable slopes resulting from rapid river or stream incision, river or stream bank erosion, or undercutting by wave action. These include slopes exceeding 10 feet in height adjacent to rivers, streams, lakes, and shorelines with more than a 35 percent gradient;* *4) Areas that have shown evidence of historical failure or instability, including, but not limited to, back-rotated benches on slopes; areas with structures that exhibit structural damage such as settling and racking of building foundations; and areas that have toppling, leaning, or bowed trees caused by ground surface movement;* *5) Slopes having gradients steeper than 80 percent subject to rock fall during seismic shaking;* *6) Areas that are at risk of mass wasting due to seismic forces;* *7) Areas of historical landslide movement; or* *8) Areas mapped by the State of Washington Department of Natural Resources as landslides or landslide deposits.* *9) Areas identified as landslide runout areas or areas at the top and sides of landslide hazards likely to slide.* The following are defined as seismic hazard areas under BCC 15.12.020(c): *Seismic hazard areas shall include areas subject to a severe risk of earthquake damage as a result of seismically induced ground shaking, differential settlement, slope failure, settlement, lateral spreading, mass wasting, surface faulting, or soil liquefaction. They include areas identified by the State of*

	Washington Department of Natural Resources as having liquefaction susceptibility of moderate, moderate to high, and/or high. The Updated Geologically Hazardous Areas Assessment by PBS Engineering and Environmental (PBS; Attachment F) describes the geology, soils, topography, and existing erosion patterns of the Solar Array Siting Area, per the requirements of WAC 365-190-120. The report also provides information regarding geologic hazards that may affect the Project including seismic hazards (e.g., ground shaking, surface fault rupture, soil liquefaction, and other secondary earthquake-related hazards), slope instability and landslides, flooding, and erosion. Seismic Hazards: Seismic hazards and faulting for the site were evaluated by PBS through review of the U.S. Geological Survey (USGS) Quaternary Faults and Fold database. Seismic sources included in the study area include the Cascadia Subduction zone, interface earthquakes, intraslab earthquakes, crustal faults, and volcanic sources. The geotechnical report did not include Cascadia Subduction Zone, intraslab earthquakes, or volcanic sources as seismic sources due to their distance from the site. Faults within the USGS Quaternary Fault and Fold Database within 25 kilometers (km), with numerous fault traces of undifferentiated Quaternary age belonging to the Rattlesnake Hills structures and Horse Heaven Hills structures, are summarized in Table 3 and Figure 9 of the report. The closest fault traces are located approximately 10 km north of the site. The faults are considered class A faults and their existence is demonstrated through offsets of Quaternary age geologic units, geomorphic expression, liquefaction, and other deformational features. These faults are on strike with other crustal faults such as the Wallula fault system and Toppenish Ridge. It should be assumed that the identified faults can produce local seismicity and ground shaking could impact the site. Fault rupture is unlikely on the site due to lack of fault traces. Liquefaction Hazards: The Solar Array Siting Area is mapped as having either no susceptibility due to the presence of shallow bedrock or low to moderate susceptibility of liquefaction. Some areas of high liquefaction susceptibility are present within some drainages mostly in the southeastern portion of the site. Slope Stability and Landslides: The Solar Array Siting Area is classified as having a low landslide potential. Slopes exceeding 15 percent are found throughout the site and primarily located along drainage slopes and Sage Brush Ridge. Site slopes predominantly consist of shallow bedrock, which should be considered an impermeable layer, overlain by a thin veneer of soil that should be considered permeable. Springs and seepage were not observed during site reconnaissance. Shallow bedrock is likely persistent throughout slope drainages. The shallow bedrock conditions would likely only remove colluvium accumulated at the toe of drainage

	slopes. There was no evidence of previous slope failures. Seismic shaking may induce shallow failures; however, previous/historical failures were not observed within the light detection and ranging (LiDAR) digital elevation map (DEM) or during field reconnaissance. Erosion: Soil erosion potential was discussed in the soils discussion above.
Unique physical features	The drainages throughout the Solar Array Siting Area have increased slopes greater than 80 percent in some areas. Erosion potential is very high in these areas.

4.1.C Changes to and from Existing Condition

4.1.C.1 Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.

☐ No	☐ Yes	
	Topical Area/issue	**Changes**
	Geohazards	Based on observations within the Updated Geologically Hazardous Areas Assessment (PBS; Attachment F) and review of the LiDAR DEM, no signs of recent or historical instability under current conditions were disclosed. The risk of slope instability to the development is low, considering the array will target areas with slope inclinations of less than 15 to 33 percent, which is outside of the defined slope crest. While site slopes exhibit a height of greater than 100 feet in some areas, shallow bedrock will likely limit slope movement to shallow failures unlikely to impact the array or site structures. The shallow bedrock encountered throughout the site slopes would limit slope movements to shallow failures. Affected areas are generally limited to site drainages and Sage Brush Hill. Seismic shaking may induce shallow failures; however, historical failures were not observed. Site slopes are currently vegetated and unlikely to erode due to typical wind or water without removal of vegetation. It is anticipated most construction activity will occur within areas with slope inclinations of less than 30 percent and outside of the drainages that consist of severely erodible soils. In addition, the Project will be designed to meet seismic design and soil characteristic requirements. Liquefaction susceptibility is low due to the presence of bedrock throughout the piedmont and undetermined within the drainages mapped as having a moderate to high liquefaction susceptibility by DNR. Subsurface conditions encountered in the explorations preformed for the Updated Geologically Hazardous Areas Assessment

		generally consisted of 1 to 8.5 feet of a variable mixture of silt and fine-grained sand overlying basalt bedrock. Based on the Updated Geologically Hazardous Areas Assessment (Attachment F), conventional foundation support on shallow spread footings is feasible for the proposed structures. Excavation with conventional equipment is limited to the depth of the overlying silt and sand soils. Excavating utility trenches through bedrock will likely require, at a minimum, use of a 30,000-pound or larger excavator equipped with rock teeth and an excavator-mounted pneumatic hammer. Blasting may be required if project plans include excavations that penetrate more than a few feet into bedrock. Solar arrays are commonly anchored in soils using driven, small-diameter pipe piles, drilled shafts, or helical piles. In general, these piles have limited application at this site due to the shallow bedrock generally encountered. Drilled shafts are practically feasible, but may not be economically feasible. Anchorage in bedrock, which will require use of a down-the-hole hammer or other specialty equipment, will likely be required. The Updated Geologically Hazardous Areas Assessment (Attachment F) recommends additional exploration within areas where solar arrays will be installed, engineering analyses to develop recommendations for PV array foundations and site grading, additional exploration intended to support design and construction of transmission lines and other infrastructure, and a final review of project plans for conformance with geotechnical recommendations. The Project will be designed to meet seismic design and soil characteristic requirements. As described above and in the mitigation section below, the Project will either avoid geological hazards (e.g., seismic hazards, unstable slope, landslides, etc.), or will mitigate the effects of these hazards on the Project. As a result, the Project is in compliance with the County's CAO in regards to geological hazards.
	Water flow	The majority of the Project Area will not be covered with impervious surfaces (see Part 2, Section B.2) and infiltration of precipitation will not differ significantly from current conditions; any additional scour will be minimized and avoided within existing drainages through Project design and BMPs. Silty soils that are present in the Project Area could contribute to localized ponding during heavy rain events. As discussed in Part 4, Section 5, the stormwater design will provide adequate drainage to minimize Project effects.
	Topography	The Project Area will require minimal grading on-site (see Part 2, Section 3.4 under Section A.2.a). The Applicant will provide grading plans and specify the source of fill in the Construction Plans and Specifications, which will be provided to EFSEC for approval prior to site preparation.

4.1.C.2 Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?

☐ No	☐ Yes	
	Topical Area/issue	**Changes**
	Design around slope and geohazards	The Project will be designed to avoid the steepest slopes, watercourse drainages, and geo-hazardous areas to minimize risk due to erosion and flash flooding to the greatest extent practicable. The Solar Array Siting Area has one mapped 100-year floodplain area and the Transmission Line Corridor Siting Area has two mapped 100-year floodplain areas associated with surface water drainage features (Attachment A Figure A-4). The Project anticipates avoiding impacts to mapped 100-year floodplain areas and will avoid permanent impacts to ephemeral streams or stream buffers to the extent practicable. Refer to Part 4, Section 4. Appropriate Project design, construction, and maintenance measures will be implemented to mitigate the risk from site erosion. The specific location of the Project's gen-tie line support structures is pending final design. However, the support structures will be sited to span or otherwise avoid placement on wetlands, streams, and floodplains to the extent feasible. The stormwater design will account for sufficient measures, including drainage basins, to address the minor amount of additional impervious surface. Appropriate Project design, construction, and maintenance will be implemented to mitigate the risk from site erosion. The Applicant will use the geotechnical design recommendations provided in the Final Geotechnical Engineering Report that will be developed prior to construction.

4.1.D Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?

☐ No	☐ Yes		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**

	Implementation of Geotechnical Recommendations	The Applicant will use the geotechnical design recommendations provided in the Final Geotechnical Engineering Report that will be developed prior to construction.	EFSEC
	Best Management Practices (BMPs) - Erosion	As further described in Part 4, Section 5, the Applicant will implement an Erosion and Sediment Control Plan (ESCP) and a Construction Phase Stormwater Pollution Prevention Plan (SWPPP) and Operations Phase SWPPP in compliance with local stormwater regulations. These plans will address stormwater runoff, flooding, and erosion to ensure compliance with state and federal water quality standards. The ESCP will include BMPs such as the appropriate use of silt fencing to avoid or eliminate runoff of contaminants. The SWPPP will include BMPs from the Washington Department of Ecology's (Ecology) Stormwater Management Manual for Eastern Washington (Ecology 2019). Per Revised Code of Washington 17.10.140, the Applicant will prepare and submit a Vegetation and Weed Management Plan to the Energy Facility Site Evaluation Council for the control of noxious and problem weeds prior to construction. The plan will be implemented to revegetate temporarily impacted areas and minimize erosion.	Ecology, EFSEC
	Building Permits	The Applicant will provide grading plans and obtain necessary building permits from the Benton County Building Division if needed. Seismic design parameters that will be used to design the Project are included in the 2018 International Building Code and American Society of Civil Engineers (ASCE) 7-10 and ASCE 7-16. These parameters are consistent with the Washington State Building Codes. The Project will comply with the current codes at the time of construction, demonstrating compliance with Washington Administrative Code 463-62-020.	Benton County Building Division and Washington State Building Code Council

4.1.E Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?

☒ No	☐ Yes	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

4.1.F References

Ecology (Washington State Department of Ecology). 2019. Stormwater Management Manual for Eastern Washington. Publication Number 18-10-044. August. Available online at: https://apps.ecology.wa.gov/publications/documents/1810044.pdf.

4.2 Air Quality

4.2.A Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.

Study name	Expected completion date	Expert agency participation Name, Title, and Involvement	Completed Y/N
N/A			
No studies related to air quality have been conducted for the Project, nor are any studies planned.			

☐ **Check this box when all proposed studies for this topic are completed**

4.2.B Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.

Topical area/issue	Existing Condition and Problems
Regulatory	The Clean Air Act (CAA) is the primary federal statute governing air quality. The EPA has promulgated primary and secondary National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), two size categories of particulate matter (PM_{10} and $PM_{2.5}$), ozone (O_3), sulfur dioxide (SO_2), and lead. The primary standards are concentration levels of pollutants in ambient air, averaged over a specific time interval, designed to protect public health with an adequate margin of safety. The secondary standards are concentration levels judged necessary to protect public welfare and other resources from known or anticipated adverse effects of air pollution. Although states may promulgate more stringent ambient standards, the State of Washington has adopted standards identical to the federal levels (see WAC 173-476, Ambient Air Quality Standards). Local air quality is measured against these national and state standards, and areas that do not meet the standards are designated as “non-attainment” areas. A new emissions source must demonstrate compliance with all applicable federal and state air quality requirements, including emissions standards and ambient air quality standards. The State of Washington has established rules through Ecology for permitting new sources in both attainment and non-attainment areas of the state, and additional requirements may be imposed by local air authorities. WAC 463-62-070 requires that energy facilities meet all federal and state air quality laws and regulations mentioned above, and WAC 463-78 establishes adoption of these requirements by EFSEC. EFSEC issues authorizations for air emissions for sources under its jurisdiction. In general, if potential emissions from stationary sources exceed certain thresholds, approval from the applicable permitting authority is required before beginning construction. In an effort to

	bring the area back into compliance with air quality standards, new sources of air emissions in non-attainment areas must undergo more rigorous permitting than equivalently sized sources in attainment areas. However, the Project is not located within a non-attainment area for any criteria pollutants (EPA 2022). Under the CAA, new industrial sources of air pollution must receive an air quality permit prior to operation. The two most common permits associated with industrial activity emitting regulated air pollutants are Notice of Construction/New Source Review approvals and Prevention of Significant Deterioration (PSD) permits. WAC 463-39 and 173-400 establish the requirements for review and issuance of notice of construction approvals for new sources of air emissions. A Notice of Construction is not required for the Project because there will be no permanent source of regulated air emissions. PSD regulations apply to proposed new or modified sources located in an attainment area that have the potential to emit criteria pollutants in excess of predetermined de minimus values (40 CFR Part 51). For new generation facilities, these values are 100 tons per year of criteria pollutants for 28 specific source categories, or 250 tons per year for sources not included in the 28 categories. A PSD permit will not be required for the Project because the generation of electricity by solar arrays does not produce air emissions. A concrete batch plant will not be required during construction or operation of the Project, and as such, no associated permit will be required. During operations, the Project collector substation and O&M building will be connected to the local utility (Benton Rural Electric Association). No back-up power generators are proposed and therefore no associated permits will be required. **Construction Emissions:** Although construction emissions are not included in permitting of stationary sources, mobile sources (such as construction equipment and maintenance pickups) are regulated separately under the CAA. Washington State regulates what are known as “fugitive” air emissions, which consist of pollutants that are not emitted through a chimney, smokestack, or similar facility. Blowing dust from construction sites, unpaved roads, and tilled agricultural fields are common sources of fugitive air emissions. Solar energy plants are not included among the facilities for which review and permitting of fugitive emissions are required (WAC 173-400-040). Nevertheless, WAC 173-400-040(9)(a) requires owners and operators of fugitive dust sources to take reasonable measures to prevent dust from becoming airborne and to minimize emissions. Other Washington State regulations that apply to nuisance emissions, including fugitive dust, and various equipment used during construction include the following: • WAC 173-400-040(3) Fallout. No person shall cause or allow the emission of particulate matter from any source to be deposited beyond the property under direct control of the owner or operator of the source in sufficient quantity to interfere unreasonably with the

use and enjoyment of the property upon which the material is deposited.

- WAC 173-400-040(4-4a) Fugitive emissions. The owner or operator of any emissions unit engaging in materials handling, construction, demolition, or other operation, which is a source of fugitive emissions, if located in an attainment area and not impacting any non-attainment area, shall take reasonable precautions to prevent the release of air contaminants from the operation.
- WAC 173-400-040(5) Odors. Any person who shall cause or allow the generation of any odor from any source that may unreasonably interfere with any other property owner's use and enjoyment of his property must use recognized good practice and procedures to reduce these odors to a reasonable minimum.
- WAC 173-400-040(9) Fugitive dust. The owner or operator of a source or activity that generates fugitive dust must take reasonable precautions to prevent that fugitive dust from becoming airborne and must maintain and operate the source to minimize emissions.

Greenhouse Gases:

Greenhouse gases (GHG) play a critical role in determining the earth's surface temperature. A GHG is any gas in the atmosphere that absorbs infrared radiation. The infrared radiation is selectively absorbed or "trapped" by GHGs as heat and then reradiated back toward the earth's surface, warming the lower atmosphere and the earth's surface. As the atmospheric concentrations of GHGs rise, the average temperature of the lower atmosphere gradually increases, thereby increasing the potential for indirect effects such as a decrease in precipitation as snow, a rise in sea level, and changes to plant and animal species and habitat. Climate impacts are not attributable to any single action but are exacerbated by diverse individual sources of emissions that each make relatively small additions to GHG concentrations.

GHGs are emitted by both natural processes and human activities. Human activities known to emit GHGs include industrial manufacturing, utilities, transportation, residential, and agricultural activities. The GHGs that enter the atmosphere because of human activities are CO_2, methane, nitrous oxide, and fluorinated carbons (i.e., hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride).

In Washington state, GHGs are regulated by RCW Chapter 70A.45, which establishes goals for statewide reduction of GHG emissions. The statute aims to reduce overall GHG emissions to 45 percent below 1990 levels by 2030. By 2050, the state intends to reduce overall emissions to 95 percent below 1990 level. Goals also included fostering a clean energy economy by increasing the number of jobs in the clean energy sector to 25,000 by 2020, from just over 8,000 jobs in 2004 (RCW 43.330.310). WAC 173-441 established an inventory of GHG emissions through a mandatory greenhouse reporting rule for certain operations. Because solar power would not emit GHGs during operations, these regulations would not apply to the Project. In addition, the Project would assist the State in achieving these goals by providing clean renewable energy to the State.

Climate	The Project is located 7 miles northeast of the city of Sunnyside and 5 miles north of I-82 in Benton County, Washington. It is located in a sparsely populated rural area of Benton County and contains a mix of dryland and irrigated agricultural use, rangeland, transmission and electrical infrastructure, and undeveloped areas. It is located within a rain shadow created by the Cascade Mountains, which causes a decrease in precipitation to the east. In this region of Washington, the summers are hot and mostly clear, winters are very cold and partly cloudy, and it is typically dry year-round (e.g., on average, there are over 200 days of sunshine). Average annual precipitation at Prosser, Washington (nearest monitor, approximately 7 miles south of the Project) is 8 inches. The average seasonal snowfall at Prosser is 7.2 inches. In winter, temperatures average a high of 41.3 degrees Fahrenheit (°F) and low of 25.9°F, with extreme lows below 20°F. In summer, temperatures average a high of 85.3°F and a low of 52.8°F, with extreme highs above 95°F (Western Regional Climate Center 2021). Wind conditions near the Project can be characterized by Automated Surface Observing Systems (ASOS), which serves as the nation's primary surface weather observing network. The closest ASOS station to the Project is located at the Sunnyside Municipal Airport in Sunnyside, Washington (K1S5). Based on data collected over the 5-year period 2015 through 2020, the prevailing winds most frequently blew from the west (approximately 11 percent of the time), from the north (approximately 9 percent of the time), and from the northeast, east, and southwest (each approximately 7 percent of the time), with calm conditions (less than 2.0 miles per hour) occurring approximately 50 percent of the time. The average wind speed for the period was approximately 3.5 miles per hour (1.6 meters per second) (IEM 2022).
Regional Air Quality	While the air quality in Benton County is healthy most of the year, the county's sunny climate, pollution-trapping mountains, and growing population contribute to occasional air quality issues. Fugitive dust and smoke are two of the most prevalent existing sources of air pollution in the area. Agricultural and outdoor burns, as well as wildfires, are the main $PM_{2.5}$ sources. Tilling operations, windblown dust, and resuspended road dust sometimes gives rise to elevated levels of PM_{10}. The area surrounding the Project is sparsely populated and largely undeveloped, with the nearest schools and parks located 5 miles to the south in the town of Grandview. The nearest air quality monitors to the Project that can be used to determine compliance with the NAAQS are summarized in Table 4.2-1. Ambient monitoring data reported in this table are for years 2019 through 2021, as summarized in the 2022 Ambient Air Monitoring Network Plan. The nearest monitor is located in Sunnyside, Washington (approximately 7 miles to the west), which measures $PM_{2.5}$. The nearest PM_{10} monitor is located in Yakima, Washington (approximately 35 miles to the northwest). The nearest ozone monitor is in Kennewick, Washington (approximately 30 miles to the east). The nearest SO_2 monitor is located in Malaga, Washington (approximately 70 miles north). The nearest CO and NO_2 monitors are in Seattle and Tacoma, Washington, respectively (both approximately 135 miles to the northwest).

In recent years, Washington has experienced extended smoke events from regional wildfires in the Pacific Northwest. These smoke events caused repeated exceedances of the PM standards. Due to the regional and exceptional nature of these events, EPA issued waivers for the unmet monitoring requirement. Under normal conditions, pollutant concentrations fall well below NAAQS (Ecology 2022).

Table 4.2-1. Ambient Air Quality Monitors Nearest the Project with Comparison to NAAQS

Pollutant / Averaging	Site	2019	2020	2021	3-year Design Value	NAAQS	Units
CO 1-hr	Seattle Beacon Hill (ID 530330080)	1.1	1.8	0.8	1.8	35	ppm
CO 8-hr		0.8	1.7	0.6	1.7	9	ppm
NO_2 1-hr	Tacoma – S 36th St. (ID 530530024)	40.3	39.8	37.7	39	100	ppb
NO_2 Annual		15.1	12.5	12.6	15	53	ppb
PM_{10}	Yakima 4th Ave. (ID 530770009)	65	566	205	566	150	µg/m³
$PM_{2.5}$ 24-hr	Sunnyside – S 16th St. (ID 530770005)	31.3	118.1	42.3	64	35	µg/m³
$PM_{2.5}$ Annual		10.77	15.21	10.93	12	12	µg/m³
SO_2 1-hr	Malaga Hwy. (ID 530070012)	1.0	1.7	1.4	1.4	75	ppb
SO_2 3-hr		0.8	1.5	1.3	1.5	500	ppb
Ozone 8-hr	Kennewick – S Clodfelter Rd. (ID 530050003)	0.061	0.068	0.063	0.064	0.07	ppm

4.2.C Changes to and from Existing Condition

4.2.C.1 Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.

☐ No	☒ Yes	
	Topical Area/issue	**Changes**
	Construction	The primary sources of air pollution generated by construction of the Project will be vehicle exhaust emissions, as well as fugitive dust particles from disturbed soils that become airborne. A concrete batch plant will not be required during construction. Sources of vehicle exhaust emissions will include heavy construction equipment operating on the site, trucks delivering construction materials and Project components to the site, and vehicles used by construction workers to access the site. Pollutant emissions from these sources will be relatively small, given the size of the construction workforce and equipment fleet, and similar to emissions from other equipment commonly used for agriculture, transportation, and general construction in Benton County. The emissions will generally be dispersed among multiple locations in and near the Project Area at any given time rather than concentrated in a specific location, and they likely will not reach significant concentrations at off-site locations. Construction activities that could create fugitive dust include transportation of materials; clearing and grading for roads, crane

pads, solar array pads, and other Project infrastructure; and trenching or plowing for underground utility cables.

Construction activities for the Project are scheduled to take approximately 24 months (see Part 2 of the ASC). Construction emissions have been estimated using EPA's Motor Vehicle Emissions Simulator (MOVES3) and NONROAD emission factor models for the 2024. These emissions are associated with exhaust from heavy equipment, worker vehicle commutes, delivery and haul trucks, as well as fugitive dust from earth-moving and material handling activities. Construction scheduling and equipment have not been finalized, and therefore, reasonable and conservative assumptions have been made for the purpose of estimating construction emissions. A summary of total estimated emissions from construction of the Project is shown in Table 4.2-2. When compared to the most recent published emissions inventory (2017) for Benton County, Project emissions will represent a very minor fraction of total emissions for the county (Ecology 2020). Given the relatively low magnitude, localized extent, and temporary duration of construction-related emissions, air quality impacts associated with Project construction will not be substantial.

The following assumptions were used to develop the calculations presented in Table 4.2-2:

- Construction equipment emissions were based on estimated construction activity schedule, types of vehicles/equipment, number of vehicles/equipment, fuel type, equipment load factors, and equipment size (horsepower). Equipment operating times for the equipment were based on a 5-day work week and an 8-hour workday.
- Fugitive dust sources were estimated using South Coast Air Quality Management District's (SCAQMD) recommended methodology. An uncontrolled PM_{10} emission factor of 20 pounds per acre per day was used, consistent with the California Air Resource Board's URBEMIS2007 model. The Project will implement BMPs to minimize fugitive dust during construction, including but not limited to graveling, watering, and limiting traffic speeds on unpaved roads. For the purposes of estimating fugitive dust emissions, it was assumed that disturbed areas will be watered at least twice a day, reducing fugitive dust by at least 50 percent. Based on the equipment mix, an estimated average disturbed area of 3 acres per day was used in the calculations. $PM_{2.5}$ emissions were assumed to be 21 percent of PM_{10} emissions, using the fraction recommended by SCAQMD (SCAQMD 1993).

Table 4.2-2. Summary of Total Estimated Construction Emissions (tons per year)

Source	VOC	NOx	CO	PM_{10}	$PM_{2.5}$	SO_2
Off-road Construction Equipment	2.4	17.4	7.8	1.5	1.5	0.02
Worker Commuting	1.9	1.1	28.6	0.05	0.04	0.02
Material Delivery and Hauling	0.6	3.3	2.1	0.07	0.06	0.01
Fugitive Dust from Construction	--	--	--	4.3	0.9	--
Project Construction Annual (Max.) Total	4.8	21.8	38.5	5.9	2.5	0.04
Benton County 2017 Total Emissions[a]	**14,186**	**6,709**	**31,652**	**11,159**	**2,535**	**103**
Project Total as a Percent of Benton County Total Emissions	***< 0.1%***	***0.3%***	***0.1%***	***< 0.1%***	***0.1%***	***< 0.1%***

[a] Ecology 2020

Operation

O&M impacts on air quality from the Project will be minimal. Combustion emissions and fugitive dust generated by vehicles traveling on Project access roads to perform operations and maintenance functions will be the primary emissions expected during this timeframe. The volume of O&M vehicle traffic will be very low; therefore, quantities of potential emissions generated by these vehicles will be very low, intermittent, and localized. Areas disturbed during construction and not occupied by permanent Project infrastructure will be revegetated to prevent the generation of dust. A local utility connection to Benton Rural Electric Association will be provided at the Project collector substation and O&M building and therefore generator engine emissions are not anticipated during operations. Operation of the Project will not produce visible plumes, fogging, misting, icing, impairment of visibility, changes in ambient levels of pollutants, or impacts on climate.

The Project is not expected to induce regional growth that would result in substantial changes to off-site air quality. Other pollutants, including GHGs, will be emitted from outside the immediate vicinity, as a result of the total fuel cycle of the Project. These emissions will be generated from manufacturing and transporting Project parts and equipment. However, the Project itself will not directly emit GHGs beyond the use of vehicles and transportation (as mentioned earlier). Furthermore, the Project will support the state's goal of increasing use of renewable energy resources, which has been declared in part to protect Washington's clean air and water.

Implementation of any weed control measures at the Project (e.g., herbicide spraying) will be conducted in compliance with federal, state, and local regulations to ensure that adverse impacts to air quality do not occur (see Part 4, Section 8).

Odors

During Project-related construction activities, exhaust from diesel-powered vehicles and equipment as well as painting of the O&M building and other structures could create minor odors. These odors are not likely to be noticeable beyond the immediate vicinity and will be temporary and short-lived. Long-term odors are associated typically with industrial projects involving use of chemicals, solvents, petroleum products, and

		other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills; however, the Project involves no elements related to these types of uses. Therefore, no long-term impacts related to odors will occur with operation of the Project.

4.2.C.2 Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?

☒ **No**	☐ **Yes**	
	Topical Area/issue	**Changes**
	N/A	Existing conditions at the site have been analyzed and incorporated as described in above.

4.2.D Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?

☐ **No**	☒ **Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Implementation of Best Management Practices (BMPs) and Standard Construction Practices	Washington Administrative Code (WAC) sections addressing air quality include: • WAC 173-400-040(3) Fallout • WAC 173-400-040(4-4a) Fugitive emissions • WAC 173-400-040(5) Odors • WAC 173-400-040(9)(a) Fugitive Dust To adhere to these codes, the Applicant will implement BMPs and standard construction practices, including the following: • Vehicles and equipment used during construction will be properly maintained to minimize exhaust emissions. • Operational measures such as limiting engine idling time and shutting down equipment when not in use will be implemented.	N/A

		• Watering or other fugitive dust-abatement measures will be used as needed to control fugitive dust generated during construction. When applied, the Applicant will use water or a water-based environmentally safe dust palliative such as lignin for dust control. • Construction materials that could be a source of fugitive dust will be covered when stored. • Traffic speeds on unpaved roads will be limited to 25 miles per hour to minimize generation of fugitive dust. • Truck beds will be covered when transporting dirt or soil. • Carpooling among construction workers will be encouraged to minimize construction-related traffic and associated emissions. • Erosion-control measures will be implemented to limit deposition of silt to roadways, to minimize a vector for fugitive dust. • Replanting or graveling disturbed areas will be conducted during and after construction to reduce wind-blown dust.	

4.2.E Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?

☒ **No**	☐ **Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

4.2.F References

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EPA (U.S. Environmental Protection Agency). 2022. Green Book, Washington Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. Available online at: https://www3.epa.gov/airquality/greenbook/anayo_wa. html. Accessed November 16, 2022.

IEM (Iowa Environmental Mesonet, Iowa State University). 2022. Sunnyside Municipal Airport (K1S5) ASOS Station Windrose Plot. Available online at: https://mesonet.agron.iastate.edu/sites/dyn_windrose.phtml?network=WA_ASOS&station=1S5. Accessed on November 16, 2022.

SCAQMD (South Coast Air Quality Management District). 1993. CEQA Air Quality Handbook. Available online at: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook.

Western Regional Climate Center. 2021. Prosser, Washington (456768) Climate Summaries. Available online at: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?wa6768. Accessed on November 16, 2022.

4.3 Water Quality – Wetlands and Surface Waters (Buffers, Fill, Dredging, & Sedimentation)

4.3.A Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.

Study name	Expected completion date	Expert agency participation Name, Title, and Involvement	Completed Y/N
Hop Hill Wetland and Non-Wetland Waters Delineation Report (Attachment P) and Addendum (forthcoming)	Original report completed in September 2022; supplemental addendum covering the delineation of wetlands and waters in the Transmission Line Corridor Siting Area and a small additional portion of the proposed arrays is expected by spring of 2023.	Prepared by SWCA Environmental Consultants, consultant for the Applicant The September 2022 Wetland and Non-Wetland Waters Delineation Report is anticipated to be submitted to Ecology via this ASC. The Applicant will submit the final comprehensive Wetland and Non-Wetland Waters Delineation Report to the U.S. Army Corps of Engineers (USACE) in the spring of 2023.	Yes (one small area within the Solar Array Siting Area will be added to the forthcoming Transmission Line Corridor Siting Area delineation report addendum).

☒ **Check this box when all proposed studies for this topic are completed**

4.3.B Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.

Topical area/issue	Existing Condition and Problems
Wetland delineation	There are three delineated palustrine emergent wetlands and two desktop delineated riverine wetland complexes within the Solar Array Siting Area. The wetland delineation report in Attachment P details the location of the three wetlands found in the Solar Array Siting Area on Figures 14, 15, and 16. A desktop review of the Transmission Line Corridor Siting Area found two drainages with likely wetland complexes. The desktop delineated areas will be delineated in the field, and a supplemental report is expected by spring of 2023 so that outstanding biological

	resource surveys that must be done seasonally can be conducted simultaneously.
Ephemeral streams within the Project area	Seventeen ephemeral stream segments and one irrigation canal were delineated in the Solar Array Siting Area. Those streams are mapped and characterized in Attachment P. A desktop review of the Transmission Line Corridor Siting Area found approximately 64 drainages. The desktop delineated areas will be delineated in the field, and a supplemental report is expected by spring of 2023 so that outstanding biological resource surveys that must be done seasonally can be conducted simultaneously.
Flood risks	There are no FEMA-listed floodplains in the Solar Array Siting Area. The Transmission Line Corridor Siting Area is adjacent to a FEMA-mapped Zone A associated with Dry Creek (Figure A-4, Attachment A).
Regulatory	On August 30, 2021, the Navigable Waters Protection Rule was vacated and the definition of waters of the United States (WOTUS) has reverted to pre-2015 rules. Under those rules, certain isolated wetlands and ephemeral waterways are again considered jurisdictional. As of November 18, 2021, a revised definition of WOTUS has been published in the Federal Register for public comment. The proposed definition is a codified version of the current pre-2015 rules. The virtual hearings for the proposed 2022 definition of WOTUS occurred in mid-January 2022, but no findings from those hearings have been presented to the public. The State of Washington considers all water bodies to be waters of the state and therefore is assumed to have jurisdiction over the ephemeral streams found within the Solar Array Siting Area and the Transmission Line Corridor Siting Area. Crossings or other work within the ordinary high-water marks of ephemeral streams may require review by Ecology to determine if the proposed actions can meet state water quality standards or if an Administrative Order would be required. Additionally, work in or near waters of the state may require a Hydraulic Project Approval (HPA) review and permit from the WDFW. Per WAC 220-660-010, the purpose of the HPA is to ensure that construction or performance of work is done in a manner that protects fish life. The Applicant is designing the Project to avoid and minimize impacts to ephemeral streams to the extent feasible. A JARPA is included in this submittal to facilitate review of the stream crossings by Ecology and WDFW. The Applicant understands that Ecology and WDFW will advise EFSEC on whether an Administrative Order and/or an HPA is required on the basis of a review of this application. All streams delineated within the Solar Array Siting Area are considered ephemeral. BCC Chapter 15.14.040(g)(b)(iii) requires 50-foot buffers on Non-Fish Seasonal (Ns) streams without adjacent slopes of 10 percent or greater, and 100-foot buffers on all

	Ns streams with adjacent slopes of 10 percent or greater. All streams within the Project Area are considered Ns pending confirmation of the wetland delineation. The Applicant has currently proposed 100-foot buffers across the Project Area without an analysis of slope to determine the minimum amount needed in order to provide the most conservative buffer and consistency for compliance; however, if further constraints are identified that require refinement in design, they may be narrowed if needed to the minimum buffer based on slope. Stream buffer impacts are limited to the 10 crossing locations, where the collector lines and roads cross the ephemeral drainages.

4.3.C Changes to and from Existing Condition

4.3.C.1 Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.

☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**
	Wetland and wetland buffer impacts	The Project has been designed to avoid wetlands, and no wetland or wetland buffer impacts (temporary or permanent) will occur.
	Stream crossings	Ephemeral streams were avoided by Project design to the greatest extent practicable. The Applicant applied a conservative 100-foot buffer to drainages from Project components within the Project Area. However, there are 10 locations where the collector lines and roads will cross an ephemeral drainage. Permanent impacts associated with the installation of subsurface collector lines will occur either via trenching adjacent to the roadway or via directional boring. If directional boring is selected, the entrance and exit locations will be located outside of the floodplain. Permanent impacts associated with the road crossings will include installation of either a low water crossing, an armored low water crossing, or a culvert in each ephemeral waterway. Low water crossings will have at least 8 inches of coarse aggregate and a layer of geotextile placed on the compacted subgrade. An armored low water crossing will have cable-connected concrete placed on a layer of geotextile and the compacted subgrade. If a culvert is used, it will

		have a cover of at least one foot of roadbed. The finished apron surface will align to the inner bottom of the culvert allowing water to flow through the channel unimpeded and without ponding upstream of the road crossing. Culverts will be sized for the 10-year, 24-hour storm event. Streams in the Transmission Line Corridor Siting Area will be fully-spanned, with no transmission line structures placed within the streams or their buffers.
	Existing/potential flood risks	No temporary structures or permanent impacts are proposed within the FEMA listed floodplain in the Transmission Line Corridor Siting Area. If needed, a Special Flood Hazard Development Permit will be obtained from Benton County prior to construction for the temporary access corridor.
	Erosion and surface water quality	Risks of erosion during construction will be addressed through construction best management practices as described in detail in Part 4, Section 1 and Section 5. The Project will be designed and constructed to comply with Benton County and Ecology requirements in retaining stormwater on-site and maintaining natural drainage patterns for conveyance of upland flow, and the Project's ESCP, Construction SWPPP, Permanent Stormwater Control Plan, and Vegetation and Weed Management Plan will provide specific measures to minimize erosion and sedimentation during and after construction. Further, stream crossings will be constructed to minimize risks of erosion, including locating directional boring entrance and exit locations outside of the floodplain and outside of the ordinary high-water marks in the ephemeral drainages; installing adequately sized and designed culverts where required; and restoring areas of temporary impacts to the natural, pre-project channel dimensions and vegetation.

4.3.C.2 Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?

☒ No	☐ Yes	
	Topical Area/issue	**Changes**
	Existing/potential flood risks	While the Transmission Line Corridor Siting Area is adjacent to a FEMA-mapped Zone A associated with Dry Creek, all permanent features are proposed to be located outside of the floodplain. If needed, a Special Flood Hazard Development Permit will be obtained from Benton County prior to construction. Therefore, the Project will not be affected by existing and potential flood risks.

4.3.D Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?

☐ No	☒ Yes		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Avoidance	The Project will not impact wetlands or wetland buffers and is consistent with Washington Administrative Code 463-62-050. Ephemeral streams and stream buffers were avoided to the greatest extent feasible as described above.	N/A
	Stream crossing construction best management practices (BMPs)	Minimization of temporary water quality impacts (Washington Administrative Code [WAC] 220-660-120; Stormwater Management Manual for Eastern Washington (Chapter 173-204 WAC); and Construction Stormwater General Permit (Chapter 90.48 Revised Code of Washington) will be implemented on site during construction and operations	Ecology, WDFW

		and include the following BMPs: • Staging of materials and equipment to prevent contamination of waters of the state; • Development of the Stormwater Pollution Prevention Plan, Erosion and Sediment Control Plan, and Spill Prevention, Control, and Countermeasure Plan; • Installation and maintenance of temporary erosion and sediment control measures; and • Completing work in the dry with no water present.	
	Hydraulic Project Approval (HPA)	The Applicant is using the Joint Aquatic Resources Permit Application to obtain an HPA permit per Washington Administrative Code 20-660-050, if needed.	WDFW

4.3.E Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?

☒ **No**	☐ **Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

4.3.F References

None.

4.4 Water Quality – Wastewater Discharges

Part 4 Analysis is not required for this section.

4.5 Water Quality – Stormwater Runoff

4.5.A Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.

Study name	Expected completion date	Expert agency participation Name, Title, and Involvement	Completed Y/N
Updated Geologically Hazardous Areas Assessment (Attachment F)	July 21, 2022	Prepared by PBS Engineering and Environmental Inc., geotechnical consultant for the Applicant	Y
Phase I Environmental Site Assessment	September 2022	Prepared by SWCA Environmental Consultants, environmental consultant for the Applicant	Y
Hop Hill Wetland and Non-Wetland Waters Delineation Report (Attachment P)	September 2022	Prepared by SWCA Environmental Consultants, environmental consultant for the Applicant	Y

☒ **Check this box when all proposed studies for this topic are completed**

4.5.B Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.

Topical area/issue	Existing Condition and Problems
Surface water runoff	The Project is located within the Yakima Valley and east-northeast of the town of Sunnyside, Washington, in Benton County. Existing land uses in the Project Area include dryland and irrigated agriculture, rangeland, undeveloped areas, local roads, existing BPA electrical infrastructure (e.g., transmission and distribution lines, substations), and interspersed unoccupied structures (e.g., agricultural storage). Adjacent land uses surrounding the Project Area are similar and also include interspersed rural residences, a vineyard, rangelands, state highways, and Hanford Reach National Monument. Due to the historic agricultural use of land in proximity to the Project Area, the potential of exposure to organic and inorganic fertilizers, pesticides, or herbicides is possible. Per the Phase 1 ESA, numerous discarded fungicide and herbicide jugs and boxes were identified within the Solar Array Siting Area. The application of fertilizers, pesticides, and herbicides is assumed to have occurred according to manufacturer guidance, in a relatively uniform and generally consistent manner typical of agricultural

	practices. The concentrations of fertilizers and pesticides are likely to be similar to other rangeland and crop cultivation operations in the area. Risks to human health and the environment associated with soil disturbance during Project development are assumed to be low and similar to those associated with agricultural operations such as tiling. Additionally, all identified *recognized environmental conditions* shall be avoided during final Project siting. As such, there is minimal concern of adverse environmental impacts from historic agricultural activity in relation to the Project. The Project is positioned along a broad, relatively flat piedmont along the south side of the Rattlesnake Hills. The piedmont consists of an approximately 4 percent average slope that slopes from the northeast down to the south and southwest. The drainage's slopes are on the order of 15 to 40 percent. The ground surface is largely vegetated with sagebrush and grasses and has numerous rudimentary access roads created from driving over in situ site soils; some access roads have been improved by surfacing with gravel. The subject property is within the Lower Yakima watershed. As described above, the subject property spans the divide between the Columbia River to the north and the Yakima River to the south. Three east-west-oriented ridges cross the Transmission Line Corridor Siting Area and divide surface flow to the north and south to the Columbia River, Cold Creek, and Dry Creek, respectively, all of which flow eastward and converge as the Columbia River almost 30 miles to the east-southeast. The Solar Array Siting Area lies on the south slope of a ridge that dips south-southwest to the Yakima River valley and Yakima River. Groundwater flow is presumed to mimic surface topography, moving eastward toward drainageways. Three delineated palustrine emergent wetlands and 17 ephemeral stream segments and one irrigation canal, including the named Spring Creek, were identified within the Solar Array Siting Area (Attachment P). A desktop review of the Transmission Line Corridor Siting Area found two drainages with likely wetland complexes and approximately 62 other drainages. The field delineation of the Transmission Line Corridor Siting Area will be completed and the information appended to this application. One additional area proposed for placement of solar arrays will also be delineated at this time. The Solar Array Siting Area has one mapped 100-year floodplain area and the Transmission Line Corridor Siting Area has two mapped 100-year floodplain areas associated with surface water drainage features (Attachment A, Figure A-4). The Applicant anticipates the Project avoiding impacts to mapped 100-year floodplain areas.

	The Updated Geologically Hazardous Areas Assessment (Attachment F) explored subsurface conditions at the Project site by excavating 12 test pits to depths of up to 8.5 feet below ground surface (bgs). Based on the bore logs, static groundwater was not encountered in any of the bore holes. It is estimated that static groundwater level is present at a depth greater than 100 feet bgs given the lack of flows, seepages, or springs within the drainages (Attachment F). Please note that groundwater levels can fluctuate during the year depending on climate, irrigation season, extended periods of precipitation, drought, and other factors. Land cover in the Solar Array Siting Area is predominantly grassland/herbaceous (86 percent) and shrub/scrub (13 percent), with small areas of cropland (<1 percent) and developed (less than 1 percent). Land cover in the Transmission Line Corridor Siting Area includes 67 percent grassland/herbaceous, 5 percent shrub/scrub, and 27 percent cropland, with small areas of barren, developed, and open water (each <1 percent). Soils within the Solar Array Siting Area include 2 percent Hydrologic Soil Group A, 30 percent Hydrologic Soil Group B, 14 percent Hydrologic Soil Group C, and 53 percent Hydrologic Soil Group. Soils within the Transmission Line Corridor Siting Area include 3 percent Hydrologic Soil Group A, 52 percent Hydrologic Soil Group B, 12 percent Hydrologic Soil Group C, and 23 percent Hydrologic Soil Group D. Group A soils have low runoff potential when thoroughly wet. Water is transmitted freely through the soil. Group A soils typically have less than 10 percent clay and more than 90 percent sand or gravel and have gravel or sand textures. Some soils having loamy sand, sandy loam, loam or silt loam textures may be placed in this group if they are well aggregated, of low bulk density, or contain greater than 35 percent rock fragments. Group B soils have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded. Group B soils typically have between 10 percent and 20 percent clay and 50 percent to 90 percent sand and have loamy sand or sandy loam textures. Group C soils have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted. Group C soils typically have between 20 percent and 40 percent clay and less than 50 percent sand and have loam, silt loam, sandy clay loam, clay loam, and silty clay loam textures. Soils in the Solar Array Siting Area have a mix of moderate, slow, and very slow infiltration rates, while more than half of the soils in the Transmission Line Corridor Siting Area predominantly have moderate infiltration rates, and approximately a quarter of the soils have very slow infiltration rates.

Critical Aquifer Recharge Area	The Project Area includes alluvial soils within some drainage areas; aqueducts, canals, and siphons in the far western portion of the Solar Array Siting Area; and two wellhead protection zones (one in the Transmission Line Corridor Siting Area and one within the Solar Array Siting Area; Attachment A, Figure A-4). Benton County classifies all lands with moderate to high susceptibility to contamination as critical aquifer recharge areas (BCC 15.06.010).
Existing water quality issues	Per the Updated Geologically Hazardous Areas Assessment (Attachment F), no pollutants were encountered during the subsurface investigation. Per the Phase I ESA (SWCA 2022), no water quality issues were identified within the Project Area.

4.5.C Changes to and from Existing Condition

4.5.C.1 Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.

☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**
	Surface water runoff	It is anticipated that only minor changes to the existing stormwater drainage would occur as a result of new impervious surfaces developed as part of this proposal. Impervious surfaces within the Solar Array Siting Area generally include gravel access roads, inverters, and the Project collector substation area. The Project under the solar modules will be converted to grassland conditions within the fenced boundary around the proposed impervious surfaces. Due to the area between and beneath the panels being vegetated, panels are not considered an impervious surface. Impervious surfaces within the Transmission Line Corridor Siting Area will generally include gravel access roads and transmission line components. Only a small minority of the Project Area will be covered with impervious surfaces (see Part 2, Section 2.B.2) and infiltration of precipitation will not differ significantly from current conditions; any additional runoff will be minimized and avoided within existing drainages through Project design and BMPs such as detention basins. A Stormwater Management Report will be developed as part of the Project design, and will include all erosion control measures required to address construction and operations stormwater runoff. The Project will also prepare an ESCP, Construction SWPPP, Operations SWPPP, and Vegetation and Weed Management Plan prior to construction

		that will include measures to minimize soil erosion and stormwater runoff. Additionally, the Project will be designed and constructed to comply with Benton County and Ecology requirements in retaining stormwater on-site and maintaining natural drainage patterns for conveyance of upland flow. Runoff from impervious areas within the Solar Array Siting Area such as gravel access roads and the O&M building and parking area will sheet-flow to detention basins or similar detention BMPs, and will outlet similar to existing conditions. Minimal grading is proposed across the Solar Array Siting Area. Drainage patterns will remain the same with the addition of detention basins that outlet similar to existing conditions. It is anticipated that stormwater management practices such as detention basins will be proposed on site to meet the requirements of the state, as determined in the Stormwater Management Report that will be developed. Other stormwater measures will be proposed to route water through the site, such as culverts and low water crossings. Changes to the existing drainage pattens in the Transmission Line Corridor Siting Area will be minimal. The transmission line and its components are anticipated to fully span all wetlands and waterways, with no components located where natural drainage patterns would be affected. Gravel access roads may require stormwater conveyance features such as ditches, cross-bars, culverts, and hardened crossings, but will be a small percentage of the overall area and will not change natural drainage patterns. Per the subsurface investigations reported in the Updated Geologically Hazardous Areas Assessment (Attachment F), static groundwater was not encountered in any of the bore holes. As such, groundwater is unlikely to be encountered or impacted during construction. The slight increase in impervious surfaces (188 acres, which includes 1.6 percent of the Solar Array Siting Area, 0.06 percent of the Transmission Line Corridor Siting Area, and 0.82 percent of the total Project Area) is not expected to impact recharge or increase water flow to groundwater or streams. Erosion control measures have been incorporated into the Project design to address construction runoff. Prior to construction, the Project will also prepare an ESCP, Construction SWPPP, Operations SWPPP, and Vegetation and Weed Management Plan that will include measures to minimize the rate of stormwater that will be discharged due to impervious surfaces.
	Loss of wetland/surface water functions and values	Project impacts are proposed to be avoided and outside existing Benton County Code wetland and water feature buffers, except for access road and collector line crossings of ephemeral stream features at 10 locations. Within the Solar

		Array Siting Area, this will be accomplished by siting panels and other Project infrastructure outside of buffers. In the Transmission Line Corridor Siting Area, this will be accomplished by fully spanning all streams and wetlands from outside of their buffers.
	Critical Aquifer Recharge Area	BCC Section 15.06.030 requires a Critical Areas Report to be prepared for certain activities when proposed in a Critical Aquifer Recharge Area; however, the proposed Project does not meet the criteria provided in BCC 15.06.030. As such, a Critical Areas Report is not required.

4.5.C.2 Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?

☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**
	Site Design and Layout	The existing stormwater runoff and erosion patterns will influence the final design of the Project; as such, and in compliance with state requirements, changes to drainage patterns will be minimized. A Stormwater Management Report will be developed, including modeling of water depths and velocities. Hydrologic concerns will be addressed by either avoiding areas of high flood depths or through detailed engineering design. The proposed Project will be designed to meet the requirements of the State of Washington for stormwater management. Appropriate erosion and sediment control and drainage plans will be implemented based on existing conditions and planned impervious surfaces (e.g., roads and other graveled areas). The Project will be designed to have the least impact to stormwater drainage patterns and erosion risk as feasible. Access routes are still being finalized in the Project design, but if needed, culverts or low water crossings will be sized to withstand the shear stresses caused by flow during the 10-year, 24-hour rainfall event. As discussed in Part 3, Section 4 of this ASC, panel washing would not be expected to generate runoff from the site or cause erosion. If panel washing occurs, the wash water will not contain additives and will not be discharged into nearby water bodies (i.e., it is expected infiltrate into the ground surface at and near the point of application). The amount of water needed for cleaning is estimated to be approximately 266,000 gallons per year.

		The proposed vegetative cover below the array and permanent detention basins or equivalent BMPs will reduce runoff rates for the final conditions. Grassland is proposed below the solar array, which will allow for treatment using the Full Dispersion BMP. Based on Table 6.10 in the SWMMEW (Ecology 2019), a minimum of 20 percent grass cover is required on site. The Project will greatly exceed this minimum because only 1.6 percent of the Solar Array Siting Area will be permanently impacted, and vegetative cover will be established in areas of temporary disturbance and within any detention basins.

4.5.D Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?

☐ No	**☒ Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Construction Stormwater General Permit (CSWGP)	In compliance with WAC 173-200, the Applicant will obtain a CSWGP from the Washington Department of Ecology (Ecology). The CSWGP requires an Erosion and Sediment Control Plan and a Stormwater Pollution Prevention Plan. Benton County has adopted Ecology's Stormwater Management Manual for Eastern Washington (SWMMEW) as their basis of design and review. As the Project design advances, the post-construction stormwater management should be reviewed in further detail with the County Engineer. Stormwater quantity control will be provided so that proposed conditions peak runoff rates and volumes must be equal to or less than existing conditions. Runoff treatment best management practices (BMPs) will be sized based on the methodology identified in the SWMMEW. The aim of Core Element #5 of the SWMMEW is to treat at minimum 90 percent of runoff from pollution-generating impervious surfaces (PGIS). A surface is considered a PGIS if it is being regularly used by vehicles. Since the access roads on the Project site are primarily	Ecology

		for operations and maintenance and will be used irregularly, it is assumed that this Project is exempt from the Core Element #5 requirements. Water quality will be addressed using the Full Dispersion BMP (SWMMEW, Table 6.10). Proposed culverts and low water crossings will be sized for the 10-year 24-hour stormwater event.	
	Erosion and Sediment Control Best Management Practices (BMPs) – Stormwater	The Erosion and Sediment Control Plan (ESCP) and Stormwater Pollution Prevention Plans (SWPPPs) (for construction and operation) will address stormwater runoff, flooding, and erosion to ensure compliance with state and federal water quality standards. The ESCP will include erosion and sediment control BMPs such as the appropriate use of silt fencing to avoid or eliminate runoff of contaminants. The SWPPPs will include BMPs from the Washington Department of Ecology's Stormwater Management Manual for Eastern Washington (SWMMEW; Ecology 2019). A Vegetation and Weed Management Plan will be developed prior to construction and implemented to revegetate temporarily impacted areas and minimize erosion and sedimentation during and after construction.	Ecology
	Spill Prevention, Control, and Counter-measure (SPCC)	Substantial quantities of oils, fuels, and other potential contaminants are not expected to be stored on-site during construction or operation. Oil and fuel storage will include oil-filled equipment (i.e., transformers) and temporary gasoline and/or diesel tanks during construction. The Applicant will prepare a Construction Phase SPCC Plan as needed, consistent with requirements of 40 Code of Federal Regulations (CFR) Part 112, to prevent spills during construction and to identify measures to expedite the response to a release if one were to occur. Preventative procedures and rapid response measures will address and prevent potential water quality issues. The Applicant will also prepare an Operations Phase SPCC Plan as needed in consultation with the Washington Department of Ecology (Ecology) and pursuant to the requirements of CFR Part 112, Sections 311 and 402 of the	N/A

		Clean Water Act, Section 402 (a)(1) of the Federal Water Pollution Control Act, and Revised Code of Washington 90.48.080.	

4.5.E Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?

☒ **No**	☐ **Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

4.5.F References

Ecology (Washington State Department of Ecology). 2019. Stormwater Management Manual for Eastern Washington. Publication Number 18-10-044. August. Available online at: https://apps.ecology.wa.gov/publications/documents/1810044.pdf.

SWCA (SWCA Environmental Consultants). 2022. Hop Hill Solar Energy Project Wildlife and Habitat Study Report. Prepared for HOHI bn, LLC. July 2022.

4.6 Water Quantity – Water Use

Part 4 Analysis is not required for this section.

4.7 Water Quantity – Runoff, Stormwater & Point Discharges

Part 4 Analysis is not required for this section.

4.8 Plants

4.8.A Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.

Study name	Expected completion date	Expert agency participation Name, Title, and Involvement	Completed Y/N
Wildlife and Habitat Study Report (Attachment E)	September 2022	Prepared by SWCA Environmental Consultants, environmental consultant for the Applicant	Y
Biological Field Survey Results	October 29, 2021	Prepared by ERM-West Inc. , environmental consultant for the Applicant	Y
Hop Hill Wetland and Non-Wetland Waters Delineation Report (Attachment P)	September 2022	Prepared by SWCA Environmental Consultants, environmental consultant for the Applicant Agency Involvement: Ecology and USACE, and/or Benton County	Y
Biological Field Survey of Transmission Line Siting Area	Spring 2023	Will be prepared by SWCA Environmental Consultants, environmental consultant for the Applicant	N

☐ **Check this box when all proposed studies for this topic are completed**

4.8.B Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.

Topical area/issue	Existing Condition and Problems
USFWS Federally Listed Plant Species	The Umtanum desert buckwheat (*Eriogonum codium*), a federally listed threatened plant species, has potential to be impacted by the Project as it is found only on the Hanford Reach of the Columbia River near the northern portion of the Siting Area (USFWS 2013, 2022). This species has a highly restricted distribution. The entire known population occurs in a 1.9-acre area on the eastern end of Umtanum Ridge within the Hanford Reach National Monument (USFWS 2022a). Based on WDFW-mapped PHS data (WDFW 2022), the northern edge of the Transmission Line Corridor Siting Area intersects the critical habitat for the Umtanum desert buckwheat in Section 14, Township 13 North, Range 24 East. This is the only designated critical habitat for the species (78 *Federal Register* 76995-77005). It is

<table>
<tr><td></td><td>found exclusively on soils over-exposed basalt from the Lolo Flow of the Wanapum Basalt Formation. It was last fully censused in 2011, when 5,169 plants were observed.</td></tr>
<tr><td>WNHP Special Status Vascular Plants</td><td>
There are 29 special status vascular plant species (i.e., species listed as endangered, threatened, or sensitive in Washington by the WNHP) known to occur or potentially occur within Benton County (WNHP 2021c), with three of those species having current element occurrences within the Siting Area including Columbia milkvetch (Astragalus columbianus), Umtanum desert buckwheat, and Hoover's desert-parsley (Lomatium tuberosum) (WNHP 2021b). Of the 29 special status vascular plant species, 21 species (Table 4.8-1) were considered to have a potential of occurring within the Siting Area based on the proximity of known occurrences and the anticipated likelihood of suitable habitat, often associated with shrubsteppe (WNHP 2021a, 2021b, WNHP 2021d). Due to the degraded condition of the herbaceous grasslands, which are essentially grazed pastureland, in the majority of the Siting Area, the potential for these species to occur is limited to those locations where there is intact shrubsteppe habitat. These locations are primarily in the northeastern corner of the Solar Array Siting Area and portions of the Transmission Line Corridor Siting Area.

The other eight species were considered possible, but unlikely to occur because: 1) the known range of the species does not overlap the Siting Area, 2) the known occurrences of the species in Benton County are historical (i.e., have not been confirmed in over 40 years), and/or 3) suitable habitat for the species was not anticipated to occur in the Siting Area.

There are also four rare/high-quality ecosystems within the Siting Area (WNHP 2021b):
• Wyoming big sagebrush / bluebunch wheatgrass shrub herbaceous Vegetation community
• Threetip sagebrush / bluebunch wheatgrass community
• Threetip sagebrush / Idaho fescue community
• Wyoming big sagebrush / Sandberg’s bluegrass community.

Table 4.8-1. WNHP Element Occurrences within 5 miles of the Siting Area
<table>
<tr><th>Common Name</th><th>Scientific Name</th></tr>
<tr><td>awned halfchaff sedge</td><td>Lipocarpha aristulata</td></tr>
<tr><td>beaked spike-rush</td><td>Eleocharis rostellata</td></tr>
<tr><td>cespitose evening-primrose</td><td>Oenothera cespitosa ssp. cespitosa</td></tr>
<tr><td>Columbia milkvetch</td><td>Astragalus columbianus</td></tr>
<tr><td>Columbia yellowcress</td><td>Rorippa columbiae</td></tr>
<tr><td>coyote tobacco</td><td>Nicotiana attenuata</td></tr>
<tr><td>desert cryptantha</td><td>Cryptantha scoparia</td></tr>
<tr><td>dwarf evening-primrose</td><td>Eremothera pygmaea</td></tr>
<tr><td>foxtail mousetail</td><td>Myosurus alopecuroides</td></tr>
<tr><td>gray cryptantha</td><td>Cryptantha leucophaea</td></tr>
<tr><td>Great Basin gilia</td><td>Aliciella leptomeria</td></tr>
<tr><td>Hoover's desert-parsley</td><td>Lomatium tuberosum</td></tr>
</table>
</td></tr>
</table>

	lowland toothcup — *Rotala ramosior* Nuttall's sandwort — *Sabulina nuttallii* var. *fragilis* small-flower evening-primrose — *Eremothera minor* Snake River cryptantha — *Cryptantha spiculifera* spreading pygmyleaf — *Loeflingia squarrosa* Suksdorf's monkeyflower — *Erythranthe suksdorfii* Umtanum desert buckwheat — *Eriogonum codium* white eatonella — *Eatonella nivea* yellow wildrye — *Leymus flavescens* Field surveys for the remaining Transmission Line Corridor Siting Area will be conducted in the spring of 2023, to further refine the desktop analysis presented here. Agency coordination, along with further desktop studies and analyses, will continue to confirm the scope of spring surveys.
WNHP Special Status Nonvascular Species	Per WNHP (2021c), one special status nonvascular lichen, woven-spore lichen (*Texosporium sancti-jacobi*), is listed as known or potentially occurring in Benton County. This species is listed as threatened by the WNHP. Navel lichen grows in arid to semiarid shrubsteppe, grassland, scabland, or savannah vegetation communities (WNHP 2021a). Most sites where this species is found are relatively undisturbed and dominated by native plants including sagebrush (*Artemisia tridentata*), bitterbrush (*Purshia tridentata*), Idaho fescue (*Festuca idahoensis*), and bluebunch wheatgrass (*Pseuodoroegneria spicata*), and fire generally eliminates the species (WNHP 2021a). In Washington, this species is currently known from four occurrences in Benton, Klickitat, and Yakima Counties (WNHP 2021a). Although the exact locations of these occurrences are not publicly available, the closest element occurrence is approximately 5 miles west of the Siting Area.
Vegetation Types / WDFW Priority Habitats	Habitat surveys conducted by SWCA Environmental Consultants (SWCA) identified eight habitat types within the Siting Area (Attachment E, Table 2, Figure 4). These include: • Herbaceous grassland • Shrubsteppe • Cultivated Crops • Developed • Wetland • Open Water • Hay/pasture • Barren land Although the NLCD is generally mapped at a coarser scale than LANDFIRE, it aligned more closely with previous habitat survey results (ERM 2021) and aerial imagery than LANDFIRE. Therefore, NLCD data were used, in combination with previous habitat survey results (for the Solar Array Siting Area only) and current and historic aerial imagery, to characterize and delineate habitat types in the Siting Area. NLCD data characterize the majority of the Siting Area as herbaceous and shrub-scrub

habitat. The entire area is grazed by cattle and sheep and the herbaceous areas are generally characterized as degraded grassland or pastureland.

In general, habitat types were adapted from habitat classifications and descriptions found in *Wildlife-Habitat Relationships in Oregon and Washington* (Johnson and O'Neil 2001), the PHS List (WDFW 2022), and the WDFW Wind Power Guidelines (WDFW 2009). Table 4.8-2 lists the acres of each habitat type mapped within the Siting Area. One of the habitat types that occur within the Siting Area, the shrubsteppe, is listed as a Priority Habitat by the WDFW (WDFW 2022).

As shown in Table 4.8-2, approximately 4,312 acres of shrubsteppe occur within the Siting Area. As shown in Attachment E, Figure 4, shrubsteppe habitat is most prevalent in the northeastern portion of the Solar Array Siting Area and the southern and northern edges of the Transmission Line Corridor Siting Area. Herbaceous grassland dominates the Siting Area with cultivated crops covering portions of the Transmission Line Corridor Siting Area. See the Wildlife and Habitat Study Report (Attachment E) for additional details on habitat types observed within the Siting Area as well as their distribution in the area.

Table 4.8-2. Habitat Types Mapped within the Siting Area

Habitat Type	Acres within Siting Area	Percent of Siting Area
Herbaceous grassland	14,676	67%
Shrubsteppe	4,312	20%
Cultivated crops	2,922	13%
Developed	102	<1%
Wetland*	3	<1%
Open Water	1	<1%
Hay/pasture	1	<1%
Barren land	3	<1%
Total	**22,020**	**100**

Source: Habitat mapping based on NLCD data was updated with field survey data and aerial imagery.

* Since wetland and water habitats have not been formally delineated within the Transmission Line Corridor Siting Area and in a small area in the northern part of the Solar Array Siting Area, the acreage of wetlands and waters presented herein is a preliminary estimate based on determination-level surveys in the solar array siting area (ERM 2021), wetland delineation report (see Attachment E), and desktop review of NLCD data for the Transmission Line Corridor Siting Area.

Invasive Plant Species

Four state and county listed noxious weeds were observed in the solar array siting area during biological surveys conducted in September 2021 (Table 4.8-3).

Table 4.8-3. State and County Noxious Weeds Observed Within Solar Siting Area During September 2021 Surveys (ERM 2021)

Common	Scientific	Benton County Status[1]	WA State Status[2]
Houndstongue	*Cynoglossum officinale*	Class B	Class B
Medusahead	*Taeniatherum caput-medusae*	Class C	Class C
Old man's beard	*Clematis vitalba*	-	Class C
Reed canary grass	*Phalaris arundinacea*	Class C	Class C

[1] Benton County 2022; [2] Washington State NWCB 2021

	In addition to these four species, other non-native, invasive plant species, including cheatgrass (*Bromus tectorum*) and common stork's bill (*Erodium cicutarium*), are co-dominant in more disturbed areas, particularly in those mapped as herbaceous. Biological surveys, including for noxious weeds, will be conducted within the Transmission Line Corridor Siting Area in the spring of 2023.
Fire	Fire has played an important role in shaping the environmental conditions and habitat types of an area. Several fire complexes have occurred within the Siting Area between 1979 and 2020 (DNR 2021). The Siting Area overlaps seven of these large fire complexes, primarily along the Transmission Line Corridor Siting Area. However, much of the Solar Array Siting Area and southern Transmission Line Corridor Siting Area is dominated by shrubsteppe and herbaceous grassland communities that have not been disturbed by a large fire in the last 20 years (DNR 2021). Part 4, Section 13 describes the existing conditions related to historic fires in the area.

4.8.C Changes to and from Existing Condition

4.8.C.1 Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.

☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**
	USFWS Federally Listed Plant Species	As noted in Section 4.8.B above, the critical habitat and WDFW-mapped PHS for the Umtanum desert buckwheat intersects the northern edge of the Transmission Line Corridor Siting Area. This is the only designated critical habitat for the species. The Umtanum desert buckwheat is federally threatened and found only on the Hanford Reach of the Columbia River (USFWS 2013). The Applicant intends to avoid this species' critical habitat; however, should the Project infrastructure need to be installed within designated critical habitat, an assessment will occur through coordination with the USFWS to determine if the Project will result in an adverse modification of critical habitat prior to finalization of design.
	WNHP Special Status Vascular Plants	Species-specific surveys have not been conducted for special status vascular species within the Siting Area. Species-specific surveys will be conducted to provide a habitat assessment and discuss habitat avoidance, minimization, and mitigation measures addressing the requirement per BCC 15.14.030 and WAC 463-60-332(3).

		However, as noted in Section 4.8.B, there are 29 special status vascular plant species known to occur or potentially occurring within Benton County (WNHP 2021c). Three of those species have current element occurrences within the Siting Area including Columbia milkvetch, Umtanum desert buckwheat, and Hoover's desert-parsley (WNHP 2021b). The Siting Area has been impacted by seven fires in the last 20 years, primarily along the Transmission Line Corridor Siting Area, including the 2017 Silver Dollar Fire that burned portions of the Umtanum critical habitat population at Hanford Reach (DNR 2021). The USFWS has attempted to establish a second population in the Cowiche Canyon Conservancy near Yakima in 2022 (USFWS 2022b). Botanical surveys for special status vascular plant species will be conducted within suitable habitat in the Siting Area in the spring of 2023. If special status vascular plant species are observed during botanical surveys, they will be avoided during Project construction and operation, to the extent feasible.
	WNHP Special Status Nonvascular Species	Species-specific surveys have not been conducted for special status nonvascular species within the Siting Area. Species-specific surveys would be conducted to provide a habitat assessment and discuss habitat avoidance, minimization, and mitigation measures addressing the requirement per BCC 15.14.030 and WAC 463-60-332(3). Suitable habitat for woven-spore lichen (e.g. relatively undisturbed shrubsteppe, grassland) was observed during field surveys in the Solar Array Siting Area. PHS-mapped shrubsteppe habitat was largely intact in the eastern half of the Solar Array Siting Area, but mostly converted to grassland in the western portion of the Solar Array Siting Area (ERM 2021). Although the closest element occurrence is five miles west, the shrubsteppe habitat is suitable habitat for the woven-spore lichen. Shrubsteppe occurs in 20 percent of the entire Siting Area and primarily in the northeastern portion of the Solar Array Siting Area and the southern portion of the Transmission Line Corridor Siting Area (Attachment E). Herbaceous grassland habitats, which are essentially grazed pastureland, are estimated to cover 67 percent of the Siting Area. In addition, the Siting Area has been impacted by seven fires in the last 20 years, primarily along the transmission line siting area (DNR 2021). The intact shrubsteppe in the northeastern portion of the Solar Array Siting Area has not been impacted by these seven fires. Because woven-spore lichen is typically found in relatively undisturbed native vegetation communities and fire is believed

		to eliminate this species, it is highly unlikely that this species occurs within the Transmission Line Corridor Siting Area. However, much of the Solar Array Siting Area is dominated by shrubsteppe and herbaceous grassland communities that have not been disturbed by a large fire in the last 20 years (DNR 2021). Impacts to shrubsteppe were minimized during Project design, but 1,600 acres of shrubsteppe habitat are proposed for impact during Project construction and operation. Therefore, impacts to woven-spore lichen may occur within the Solar Array Siting Area. Most sites where this species is found are relatively undisturbed and dominated by native plants including sagebrush (*Artemisia tridentata*), bitterbrush (*Purshia tridentata*), Idaho fescue (*Festuca idahoensis*), and bluebunch wheatgrass (*Pseuodoroegneria spicata*), and fire generally eliminates the species (WNHP 2021a). These are the same species observed with the shrubsteppe habitat. Suitable habitat for woven-spore lichen would include the native shrubsteppe, which occurs primarily in the northeastern portion of the Solar Array Siting Area and the southern portion of the Transmission Line Corridor Siting Area. Suitable habitat for woven-spore lichen would also include the herbaceous grassland habitats, which cover 67 percent of the Siting Area. As such, species-specific surveys for woven-spore lichen are recommended within the Solar Array Siting Area and relevant portion of the Transmission Line Corridor Siting Area.
	Vegetation Types / WDFW Priority Habitats	Construction and operation of the Project will result in permanent and temporary impacts on vegetation, as well as alterations to vegetation within the solar array's perimeter fence lines during the life of the Project. Permanent impact areas include locations where Project components will occur (e.g., solar array panel posts, permanent Project service roads, O&M building, collector substation area, poles for transmission line, inverter and transformer pads) and constitute a habitat loss during the life of the Project. Temporary impact areas include areas that will be disturbed during construction and revegetated following construction (e.g., collection lines, temporary access roads, and temporary work areas outside the perimeter fence lines and temporary laydown and pulling areas for the transmission line). Temporarily disturbed areas will be revegetated in accordance with a Vegetation and Weed Management Plan that will be developed and submitted to EFSEC prior to construction. Altered habitat impacts include lands within the perimeter fence lines minus any areas occupied by permanent Project structures. These areas will be revegetated either passively (i.e., allow species to colonize naturally) or actively (seeded with low-growing vegetation consisting of native species and/or a mix of native and desirable non-native, non-invasive

species [e.g., species that would provide more rapid soil stabilization and vegetative cover than slower growing native species], identified in coordination with WDFW, which will result in permanently altered vegetation [see Attachment L for additional details]). A Vegetation and Weed Management Plan will be prepared in coordination with EFSEC staff and WDFW, and the plan will describe the revegetation methods for the Project.

Table 4.8-4 lists the estimated acres of permanent, temporary, and altered impacts to habitat types and acres of altered habitat from construction and operation of the Project. The vast majority of impacts will occur to Croplands, Pasture, Urban and Mixed Environments as well as shrubsteppe. Croplands, Pasture, Urban and Mixed Environments includes hay/pasture, cultivated crops, herbaceous, barren land, and developed habitat types.

Table 4.8-4. Anticipated Impacts to Habitat Types from the Project

Habitat Type	Temporary Impacts (Acres)[1]	Altered Habitat Impacts (Acres)[2]	Permanent Impacts (Acres)[3]	Total[4]
Croplands, Pasture, Urban, and Mixed Environs	303	3,124	130	**3,557**
Shrubsteppe	71	1,475	58	**1,604**
Developed	3	0.0	0.0	**3**
Total[4]	**377**	**4,599**	**188**	

[1] Temporary impacts include collector lines, temporary access roads, and work areas located outside the solar array perimeter fence lines and laydown and pulling areas associated with the transmission line.
[2] Altered habitat impacts consist of all lands within the perimeter fence lines, minus any areas occupied by permanent Project features/structures.
[3] Permanent impacts include solar array panel posts, inverter pads, permanent access roads, collector substation, O&M building, and poles for transmission line.
[4] Totals may not sum exactly due to rounding.

As shown in Table 4.8-4, it is estimated through reasonable assumptions regarding equipment placement, spacing, and sizing that up to approximately 71 acres of shrubsteppe habitat will be temporarily impacted by Project construction, 1,475 acres of shrubsteppe inside perimeter fence lines will be altered during construction, and 58 acres of shrubsteppe will be permanently impacted during construction of the Project (e.g., placement of solar array panels, inverter pads, permanent access roads, and collector substation).

The estimated acres of impact on each habitat type provided in Table 4.8-4 are based on the current Project design (Attachment A, Figure A-1). However, as discussed in Part 2, the exact locations of Project components may be revised during final Project design, and impacts from the Project could occur anywhere within the Siting Area. Any relocations made

		to the Project layout will be designed to avoid or minimize impacts to special status species, Priority Habitats, and streams to the extent practical, and will comply with any conditions imposed in the Site Certification Agreement. To the extent feasible, the solar array fence lines have been designed to enclose smaller solar arrays within the Project Area rather than enclosing one large fenced array, which will minimize habitat fragmentation and better allow wildlife passage through the area. In consultation with WDFW, delineation of shrubsteppe habitat was accomplished through desktop analysis of aerial imagery as informed by previous habitat survey results in the Solar Array Siting Area. Impacts to shrubsteppe habitat were minimized to the extent feasible. Some areas of shrubsteppe initially proposed for solar arrays have been avoided in the current layout. Sufficient acreage of like-kind habitat may be available within the Siting Area to mitigate for Project impacts and achieve no net loss of habitat functions and values. Part 4, Section 9 contains additional information regarding impacts to habitat including those classified as Priority Habitats by the WDFW.

4.8.C.2 Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?

☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**
	Vegetation Types / WDFW Priority Habitats	As noted in Part 2, Section A.2, the Applicant requested flexibility to microsite the Project and its associated supporting components anywhere within the Siting Area. The design has been adjusted to minimize impacts. Some areas of shrubsteppe initially proposed for solar arrays have been avoided in the current layout to minimize impacts to shrubsteppe within the Siting Area, where possible. However, as discussed in Part 2, the exact locations of Project components may be revised during final Project design. In addition, the suite of measures discussed in Section 4.8.D below will provide additional habitat mitigation.

4.8.D Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?

☐ No	☒ Yes		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Avoidance and Minimization Measures	During siting and design, the Applicant took several measures to avoid and minimize impacts to botanical resources. The Applicant minimized impacts to shrubsteppe habitat (i.e., Priority Habitat). The Applicant will conduct any necessary botanical surveys and document known populations of suitable habitat of Umtanum desert buckwheat and woven-spore lichen. If documented, the Project siting would prioritize avoidance and then if not possible, work with the U.S. Fish and Wildlife Service and/or Washington Department of Fish and Wildlife to minimize the impacts to the critical habitat or known populations of Umtanum desert buckwheat and woven-spore lichen.	USFWS and WDFW
	Habitat Management Plan	Per WAC 463-60-332(3) and consistent with requirements in Benton County Code (BCC) 15.14.030 for the Applicant to provide a habitat assessment and discuss the habitat avoidance, minimization, and mitigation measures proposed for the Project, the Applicant has prepared a Draft Habitat Mitigation Plan (Attachment L). This plan will provide details regarding mitigation measures for impacts to habitat types from Project construction and operation including impacts to “habitats and species of local importance” (i.e., shrubsteppe habitat), per BCC 15.14.030. A Final Habitat Mitigation Plan will be prepared prior to construction.	WDFW
	Revegetation and Noxious	Per Revised Code of Washington (RCW) 17.10.140, the Applicant will develop a Vegetation Management Plan for temporary and altered impact areas	EFSEC, Benton County Noxious Weed Control Board

	Weed Control	following construction and Weed Management Plan for during construction and operation of the Project with opportunities for input from EFSEC and the Benton County Noxious Weed Control Board prior to construction. Herbicide and pesticide applications will be conducted in accordance with manufacturer instructions and all federal, state, and local laws and regulations; herbicides will only be directly applied to localized spots and will not be applied by broadcasting techniques (RCW 17.21).	
	BMPs	The Applicant will implement the Project's Erosion and Sediment Control Plan, Construction Stormwater Pollution Prevention Plan, and Permanent Stormwater Control Plan. These plans will help reduce erosion and impacts to vegetation.	Ecology; WDFW

4.8.E Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?

☒ **No**	☐ **Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	

4.8.F References

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4.9 Animals

4.9.A Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.

Study name	Expected completion date	Expert agency participation Name, Title, and Involvement	Completed Y/N
Biological Field Survey Results	October 29, 2021	Prepared by ERM-West, Inc., environmental consultant for the Applicant	Y
Wildlife and Habitat Study Report	September 2022	Prepared by SWCA Environmental Consultants, environmental consultant for the Applicant Agency involvement: WDFW provided feedback on protocols and special status species in the Project vicinity.	Y
Wetland and Non-Wetland Waters Delineation Report	September 2022	Prepared by SWCA Environmental Consultants environmental consultant for the Applicant	Y
Biological Field Survey of Transmission Line Siting Area	Spring 2023	Will be prepared by SWCA Environmental Consultants	N

☐ **Check this box when all proposed studies for this topic are completed**

4.9.B Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.

Topical area/issue	Existing Condition and Problems
Habitat Types	In consultation with WDFW and in compliance with WAC 463-60-332(1), the Applicant contracted with SWCA to complete a wildlife and habitat survey in 2022 (see Section 4.9.A above). Habitat surveys were conducted within the Solar Array Siting Area from September 8 to 10, 2021, by ERM. Species-specific field surveys conducted by SWCA in 2022 included burrowing animal targeted surveys, avian point count surveys, and raptor nest surveys all within the Solar Array Siting Area (SWCA 2022). Within the Transmission Line Corridor Siting Area, field verification of habitat

	types has not occurred; shrubsteppe was digitized using historical and current aerial imagery. The digitized shrubsteppe polygons were then combined with NLCD data (for non-shrub-scrub habitat types) to produce the final habitat acreages (Attachment E). Details regarding these habitat/wildlife surveys are provided in the Wildlife and Habitat Study Report (Attachment E). This report includes wildlife surveys that were conducted during 2022 including protocol-level burrowing animal surveys, ground-based raptor nest surveys, and avian point counts. Eight habitat types were verified within the Solar Array Siting Area and digitized within the Transmission Line Corridor Sting Area. They include herbaceous (i.e., degraded grassland and pastureland), shrubsteppe, cultivated crops, developed, wetland, open water, hay/pasture, and barren land. Section 3.1 of the Wildlife and Habitat Study Report (Attachment E) as well as Table 4.8-1 in Part 4, Section 8 (Plants) provide detailed description of the herbaceous and shrubsteppe habitat types found within the Siting Area, as well as the amount of these habitat types that occur in the Siting Area. Figure 4 in Attachment E depicts the locations of each habitat type within the Siting Area. Although the NLCD is generally mapped at a coarser scale than LANDFIRE, it aligned more closely with previous habitat survey results (ERM 2021) and aerial imagery than LANDFIRE. Therefore, NLCD data were used, in combination with previous habitat survey results (for the Solar Array Siting Area only) and current and historic aerial imagery, to characterize and delineate habitat types in the siting area. NLCD data characterize the majority of the Siting Area as herbaceous and shrub-scrub habitat. Wetland and water habitats have been formally delineated within the vast majority of the Solar Array Siting Area. While there are no fish-bearing streams present in the Solar Array Siting Area, there are three wetlands and 19 miles of ephemeral streams including Spring Creek identified within the Solar Array Siting Area. One portion of proposed arrays is located outside of the previous project area footprint outlined in Figure 5 of the delineation report. This area will be field surveyed and the delineation report updated in conjunction with the Transmission Line Siting Area surveys (Attachment P). Based on desktop review of the NHD database there appear to be 64 drainages located within this area. Based on field results for other streams within the Project Area, it is anticipated that these streams will be similar in flow regime and quality. There have been no formal delineations within the transmission line siting area but mapped features from the NWI and NHD include potential waters of the state within the Transmission Line Corridor Siting Area. For further details on wetland and water features, see Attachment P.

Special Status Species	For this analysis, the term “special status species” includes federal and state endangered, threatened, proposed, and candidate species; species of concern; birds of conservation concern; and state sensitive and priority species. On February 17, 2022, the WDFW provided the Applicant with a description of special-status wildlife that may occur in the Project vicinity and anticipated species-specific surveys that would be required. Table 3 in Attachment E provides the list of 22 special-status wildlife species identified as having the potential to occur in the area, which includes 11 birds, 6 mammals, 1 reptile, 2 fish, 1 insect, and 1 plant. Section 3.2 in Attachment E lists the sources used to identify which special-status species have a potential to occur (e.g., the WDFW PHS database) as well as describes the coordination conducted with the WDFW prior to surveys to determine this list. One federally listed wildlife species that has potential to occur within the Project Area based on the presence of suitable habitat is the gray wolf (*Canis lupis*), which is federally endangered (Attachment E). The nearest WDFW-reported occurrence is approximately 4 miles east of the Transmission Line Corridor Siting Area. Other occurrences have been reported within an approximately 20-mile radius of the Siting Area (WDFW 2022c). Another federal candidate wildlife species with potential to occur in the Siting Area is the monarch butterfly (*Danaus plexippus*), which in Washington, occurs in weedy fields and sparsely vegetated habitats, typically near wetlands and riparian areas. No other federally listed wildlife species are likely to occur within the Siting Area due to lack of suitable habitat. See Table 3 in Attachment E for further details. Ground-based nesting raptor surveys were conducted from May 11 to 14, 2022, and June 28 to 29, 2022, within 0.5 mile of the Solar Array Siting Area. Eleven raptor nests were observed during the surveys, two of which were occupied. A barn owl (*Tyto alba*) and a red-tailed hawk (*Buteo jamaicensis*) occupied those nests, and neither species is a PHS species. Of all the raptor species observed, the prairie falcon (*Falco mexicanus*) is the only WDFW designated priority species. Eleven bird species were observed (seen or heard) during the avian point counts within the Solar Array Siting Area (Attachment E). No federally threatened or endangered species were observed during these surveys; however, state candidate (SC) species and PHS were observed during the surveys. • **Prairie Falcon** – PHS data map several occurrences in the Siting Area (WDFW 2022a), and prairie falcon were observed within Solar Array Siting Area during field surveys by ERM and SWCA (ERM 2021; Attachment E). There are prairie falcon breeding areas (site Name Spring Creek and Spring Creek 2) that are within the Siting Area (WDFW 2022a). • **Sagebrush Sparrow** (*Amphispiza nevadensis*) – Three sagebrush sparrow individuals were observed within the Solar Array Siting Area (Attachment E). There is a breeding area

	(site name N. of Anderson Rd – Benton Co) within the Siting Area. Additional special status species observations from 2021 surveys include evidence of Rocky Mountain mule deer *(Odocoileus hemionus hemionus*), and suitable burrows for the Townsend's ground squirrel (*Urocitellus townsendii nancyae*) - SC and PHS, and the burrowing owl (*Athene cucicularia*) – SC. • **Burrowing Owl** – There is one previously documented occurrence (date unknown) of a burrowing owl in the Solar Array Siting Area (WDFW 2022a). Suitable burrows were observed on-site (ERM 2021). • **Townsend's Ground Squirrel** – Suitable burrows were observed on-site by ERM (ERM 2021). The nearest PHS mapped occurrence is within a 9-mile radius of the Solar Array Siting Area (WDFW 2022a). • **Rocky Mountain Mule Deer** – Characteristic scat of the Rocky Mountain mule deer (hereafter referred to as mule deer) was observed within the Solar Array Siting Area during ERM surveys (ERM 2021) and the species is known to occur within the general area. Other special status species with potential to occur in the Siting Area, including documented occurrences of the bald eagle (*Haliaeetus Leucocephalus)* nine miles northwest of the Transmission Line Corridor Siting Area, are described in detail in Table 3 of Attachment E including PHS mapped habitat within the Siting Area. Other PHS species that are indicated based on the Siting Area include elk (*Cervus elaphus*), greater sage-grouse (*Centrocercus urophasianus*), black-tailed jackrabbit (*Lepus californicus*), and loggerhead shrike (*Lanius ludovicianus*). Although no elk were observed during field surveys, the Siting Area intersects two elk areas, Corral Canyon and Blackrock (WDFW 2022b), the Rattlesnake elk wintering area (WDFW 2022a), and a habitat concentration area (HCA) for both elk and mule deer, which are important habitat patches (WHCWG 2010, 2012). There is a greater sage-grouse habitat named Snipes Creek and Tributaries within the shrubsteppe remnants in draws within the winter wheat farmland in the Siting Area (WDFW 2022a). There is one observation of an adult black-tailed jack rabbit mapped in the Cold Creek quarter section within the Siting Area (WDFW 2022a). Lastly, there is a loggerhead shrike breeding area (Hanford Shrike Nesting Habitat), which is primarily old-growth sagebrush and trees within the Siting Area (WDFW 2022a). Other PHS habitats that are indicated based on the Siting Area include talus slopes and cliffs/bluffs. The talus slopes are habitat features named Packrat Butte Talus south of Packrat Butte (WDFW 2022a). The cliffs/bluffs habitat feature is named Priest Rapids Cliff Line above Priest Rapids and supports nesting raptors and chukar partridge (WDFW 2022a).

Raptor Nests and General Avian Species	The Applicant conducted two rounds of ground-based raptor nest surveys within the raptor nest study area. The raptor nest study area is the Solar Array Siting Area and a 0.5-mile buffer. As requested by WDFW, the raptor nest surveys also encompassed the area within 2 miles of a ferruginous hawk (*Buteo regalis)* core nesting area located northwest of the Solar Array Siting Area to capture potential foraging areas used by those raptors (Attachment E). Ground-based raptor nest surveys were completed from May 11 to 14, 2022, and June 28 to 29, 2022, to assess potential raptor nesting and foraging activity. Surveys focused on cliff-nesting habitat at Black Canyon and Spring Creek identified during previous site surveys (ERM 2021), potential raptor nesting habitat identified from desktop review (e.g., forested areas with suitable trees), as well as previously documented raptor nesting areas identified by WDFW. A total of 11 raptor nests were observed within the raptor nest study area, consisting of two occupied nests and nine presumed unoccupied nests (Attachment E). Occupied nest observations included one red-tailed hawk nest located near the southwestern edge of the raptor nest study area, and one barn owl nest located near the southern edge of the raptor nest study area. Other raptor species that were incidentally observed flying over the study area, but were not exhibiting nesting behaviors, included the night hawk (*Chordeiles minor*), Swainson's hawk (*Buteo swainsoni*), and American kestrel (*Falco sparverius*). Of the raptor species observed, the prairie falcon is the only WDFW-designated priority species. Details of the ground-based raptor nest surveys can be found in the Wildlife and Habitat Study Report (Attachment E). Use of the Project Area by general avian species was documented during the habitat and general wildlife survey (see Attachment E). Avian point counts were conducted by qualified avian biologists during the nesting season from May 11 to 14, 2022, and June 28 to 29, 2022, to characterize avian use of the Solar Array Siting Area. The avian survey area encompassed the Solar Array Siting Area. A total of 14 one-hour-long avian point counts were conducted at locations spaced throughout the avian survey area and within representative habitat types. Per WDFW's recommendations to strategically place avian point counts within burrowing animal survey areas and shrubsteppe areas, avian point counts were more heavily focused in the northwestern and northeastern portions of the avian survey area. A total of 11 avian species were detected during point counts either audibly or visually. Of the avian species detected, only one species, the sagebrush sparrow, is a special status species (WDFW-designated priority species and a state candidate for listing in Washington). Three sagebrush sparrows were seen at two avian point count locations in the north-central portion of the avian survey area.
Fish	Wetland and waterbody habitats have been formally delineated within the vast majority of the Solar Array Siting Area; however, one array area was relocated north within the Solar Array Siting Area and a

	formal delineation of this currently unsurveyed area in the Solar Array Siting Area will occur at the same time that the Transmission Line Siting Area is surveyed. Mapped features from the NWI and NHD include potential waters of the state within the Transmission Line Corridor Siting Area and the portion of Solar Array Siting Area not yet delineated. No fish-bearing streams are present in the Solar Array Siting Area. There are three wetlands and 19 miles of ephemeral streams including Spring Creek identified within the Solar Array Siting Area (SWCA 2022b). The wetlands include emergent riverine Category III wetlands and emergent a riverine Category IV wetland. For further details on wetland and water features, see Attachment P.
Fish and Wildlife Conservation Areas	Per the Benton County Critical Area Regulations, "Fish and Wildlife Conservation Areas" include 1) areas where endangered, threatened, and sensitive species have a primary association[1]; 2) habitats and species of local importance; 3) waters of the state; 4) naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat[2]; 5) lakes, ponds, streams and rivers planted with native fish populations, including fish planted under the auspices of federal, state, local or tribal programs or which supports priority fish species as identified by the WDFW; 6) Washington State Wildlife Areas[3]; and 7) Washington State Natural Area Preserves and Natural Resource Conservation Areas [4]. All areas that meet one of more of these criteria are managed per the WDFW's management recommendations for priority habitat and species (see Chapter 15.08 of the Benton County Critical Area Regulations). Areas that are classified by Benton County as a Fish and Wildlife Conservation Area that may be impacted based on the location of the Siting Area include priority shrubsteppe habitat, suitable habitat for several priority and state-listed species (Table 3 in Attachment E), suitable habitat for a federally threatened species (Umtanum desert buckwheat), nesting raptors, and wetlands and waters. Also, the special status species occurrences (reported above in the Special Status Species section) would trigger the affected areas to be classified as Fish and Wildlife Conservation Areas per criteria 1 and 2. The emergent wetlands and ephemeral drainages identified in

[1] These areas are identified on the WDFW PHS Map.
[2] "Naturally occurring ponds" do not include ponds deliberately designed and created from dry sites such as canals, detention facilities, wastewater treatment facilities, farm ponds, temporary construction ponds (of less than 3 years' duration) and landscape amenities. However, naturally occurring ponds may include those artificial ponds intentionally created from dry areas in order to mitigate conversion of ponds, if permitted by a regulatory authority.
[3] As defined, established, and managed by the WDFW.
[4] As defined, established, and managed by the DNR.

	Attachment P would also be classified as Fish and Wildlife Conservation Areas per criteria 3 through 5.
Big Game Habitats and Migration Routes	As described above (in the Special Status Species section), evidence of mule deer has been identified within the Siting Area. Big game habitat and potential migration corridors were reviewed to identify big game migration routes in the Project vicinity. The Siting Area intersects two elk areas, Corral Canyon and Blackrock (WDFW 2022b), as well as the Rattlesnake elk wintering area (WDFW 2022a). The Siting Area encompasses known migration routes and HCAs for elk and mule deer, and use of the area by these species is expected to be high. The Siting Area is within State-designated mule deer year-round range and tied to the Rattlesnake Hills in the Columbia Plateau Mule Deer Management Zone. The Siting Area intersects the Corral Canyon and Blackrock elk areas. Rattlesnake Hills elk herd (Hanford Site) is a subpopulation of the Yakima herd. Movements into and out of the Hanford Site are a common occurrence seasonally; however, the Hanford Site is considered a core area, particularly the Cold Creek Valley area (WDFW 2002). As shown in Attachment E, Figure 5, the central portion of the Siting Area is identified as a Priority Conservation Area (WHCWG 2012). Also shown in Figure 5 of Attachment E is the northern portion of the Transmission Line Corridor Siting Area, which is identified as a Priority Linkage Area (PLA)[5], specifically the Juniper Springs PLA, by the Arid Lands Initiative (ALI) (ALI 2014). Most of the Siting Area is identified as a Landscape Integrity Core Area by the Washington Connected Landscapes Project (WHCWG 2012). As a result, the landscape around and encompassed by the Project likely serves as important winter and migration habitats for both elk and mule deer. It is believed that elk and mule deer (as well as other large body mammal species) currently use the various ephemeral drainages, manmade water sources (livestock ponds), game trails, as well as native habitat types located outside of agricultural use for migration corridors though the Siting Area.
Noise, Light, and Glare	The Project Area is located in an area with agricultural development and accompanying existing sources of noise. Principal contributors to the existing acoustic environment likely include motor vehicle traffic, mobile farming equipment, farming activities such as plowing and irrigation, all-terrain vehicles, local roadways, rail movements, periodic aircraft flyovers, and natural sounds such as birds, insects, and leaf or vegetation rustle during elevated wind conditions. As noted in Part 4, Section 16a, existing ambient sound levels at the Project Area are expected to be approximately 50 A-weighted

[5] Priority Linkage Areas are area identified as important for maintaining movement opportunities for organisms or ecological processes (e.g., for animals to move to find food, shelter, or access to mates).

	decibels (dBA) equivalent sound level (L_{eq}) during daytime hours and 40 dBA L_{eq} during nighttime hours (also see Attachment Q).
Fire	Fire plays an important role in shaping the environmental conditions and habitat types of an area. Part 4, Section 13 describes the existing conditions related to historic fires in the area.
Hazardous or toxic spills	Part 3, Sections 12 and 13, as well as Part 4, Section 13 provide information regarding the existing conditions regarding hazardous materials within the Siting Area.

4.9.C Changes to and from Existing Condition

4.9.C.1 Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.

☐ No	☒ Yes	
	Topical Area/issue	**Changes**
	Habitat Types	As described in Part 4, Section 8, the Project will result in three types of impacts to habitat—temporary, altered, and permanent—where Project construction and operations will occur. Table 4.8-4 in Part 4, Section 8 lists the estimated acres of temporary, altered, and permanent impacts to the various habitat types that will result from the Project's construction and operation based on the current Project design (Attachment A, Figure A-1). However, as discussed in Part 2, the exact locations of Project components may be shifted or revised during final Project design, and impacts from the Project could occur anywhere within the Siting Area because the Applicant is requesting flexibility to microsite the Project and its associated supporting components anywhere within the Siting Area, provided the final layout does not exceed the values evaluated in this ASC and allowed for in the Site Certification Agreement. Following construction, areas within the solar array perimeter fence not permanently occupied by Project components will be revegetated with low-growing vegetation consisting of native species or desirable non-native, non-invasive species (e.g., species that would provide more rapid soil stabilization and vegetative cover than slower-growing native species), resulting in permanently altered vegetation. The altered vegetation community will be compatible with a solar facility and support an altered wildlife community (i.e., consisting of species that are able to pass over, under, or through the perimeter fence), retaining value to some wildlife species that

		are able to pass through/over the perimeter fence (e.g., small mammals, birds, and reptiles). The temporary, permanent, and altered habitat impacts as well as the associated Project mitigation needs are identified in Attachment L, Draft Habitat Mitigation Plan. These values may be adjusted in coordination with EFSEC and with input from WDFW. Habitat loss through conversion to agriculture, fire, fragmentation, and degradation are the major threats to wildlife in the state of Washington (WDFW 2015). The long-term conversion or loss of habitat associated with the footprint of the area occupied by Project components will create marginal additional habitat loss and fragmentation on the landscape; however, once constructed, the area may benefit over time from the removal of the effects from domestic grazing and limit potential effects from increased fire regimes in this area.
	Special Status Species	Habitats associated with the special status species with potential to result in changes (i.e. habitat loss or alteration) that were observed during surveys and/or are known to occur in the Project vicinity include: • Shrubsteppe and talus slopes, Priority Habitats • Cliffs/bluffs – the Priest Rapids Cliff line for nesting raptors and chukar partridge • Suitable burrows for burrowing owl and Townsend's ground squirrel • Prairie falcon breeding areas • Sagebrush sparrow observations and breeding areas Aside from the habitat loss and alteration described above, potential impacts to special status wildlife species include collisions with construction vehicles and equipment, and displacement due to avoidance of activity during Project construction and operation for more mobile wildlife. Removal of vegetation during the breeding season can result in destruction of nests and injury or death to birds or eggs. Special status raptors (e.g., prairie falcon, golden eagle, bald eagle, and ferruginous hawk) may experience loss of foraging habitat as a result of the Project. The Project has the potential to affect habitats that are important to elk and mule deer during winter months as well as affect the migratory corridors for big game species (see further discussion below in the Big Game Habitats and Migration Routes section). Lastly, the Project does not contain USFWS-designated critical habitat for any wildlife species (USFWS 2022).

	Raptor Nests and General Avian Species	If nest territories are occupied during construction, pairs associated with these nests could experience disturbance, particularly early in the breeding season during courtship, nest building, incubation, and brooding. Raptors within active territory could also experience a loss of foraging habitat if prey species are reduced within the pairs' home range. However, the vast majority of the habitat that will be impacted by the Project is herbaceous and agricultural land, which typically provides limited forage value to large raptors such as prairie falcon, golden eagle, bald eagle, and ferruginous hawk, given the low prey availability in agricultural lands. There are areas of shrubsteppe habitat in the northeastern portion of the Solar Array Siting Area and southern portion of the Transmission Line Corridor Siting Area (Attachment E, Figure 4). Impacts to shrubsteppe habitats have been avoided and minimized to the extent feasible. Additionally, the Project avoids impacts on the talus slope associated with the cliff nesting habitat in the northeastern portion of the Solar Array Siting Area by 125 feet, limiting impacts to the ridgeline and shrubsteppe immediately adjacent to the ridge that likely supports raptor prey species. Avian collisions with solar modules during operation are possible, as is the case for any physical structure. However, the available data on avian mortality at utility scale solar energy sites suggest mortality at PV facilities is comparatively low. A study examining avian fatalities at two solar sites and one PV facility found the mortality rate at the PV facility in the study was significantly lower than at the two power tower facilities (Walston et al. 2016). More recently, Kosciuch et al. (2020) synthesized results from fatality monitoring studies at 10 PV solar facilities across southwest United States and calculated a high-end estimate of 2.5 birds per MW per year, but noted that an average annual fatality rate of 1.8 birds per MW per year was also calculated by excluding the one project in the Coastal California Bird Conservation Region that could be considered an outlier in the dataset. In Oregon, preliminary results of a fatality study at a 56-MW PV facility near Prineville detected only two fatalities on native birds, a horned lark and a dark-eyed junco, during one year of standardized searches (ODOE 2020). If any overhead power lines are required to connect the Project to the grid, these lines will be designed and constructed to minimize avian electrocution, utilizing the guidelines outlined in Avian Power Line Interaction Committee standards such as line marking devices (aerial marker spheres, spirals, and suspended devices), using large diameter wire, and burying collection lines (APLIC 2012).
	Fish	No fish-bearing streams are present in the Solar Array Siting Area (see Attachment P); therefore, no effects to fish species

		are anticipated. However, the Project will implement a Construction SPCC Plan and an Operations SPCC Plan, as required based on thresholds on-site, as well as BMPs related to erosion control and prevention to avoid or minimize Project-related effects to waterbodies (see Part 4, Sections 3 and 5). Waters buffers are 50 feet for streams with adjacent slopes of less than 10 percent, and 100 feet on parcels with streams with adjacent slopes of 10 percent or greater (BCC 15.15.40-2). The Applicant has currently proposed 100-foot buffers across the project area without an analysis of slope to determine the minimum amount needed in order to provide the most conservative buffer and consistency for easier compliance; however, if further constraints are identified that require refinement in design, they may be narrowed if needed to the minimum buffer based on slope.
	Fish and Wildlife Conservation Areas	As discussed above, impacts to shrubsteppe habitats have been avoided and minimized to the extent feasible. The acreage of impact that will occur to shrubsteppe habitats is provided in Table 4.8-2 in Part 4, Section 8. Project-related impacts to habitat (i.e., temporary, altered, and permanent) will occur within mule deer and elk HCAs. Project-related impacts to 1) areas where endangered, threatened, and sensitive species have a primary association, and 2) habitats and species of local importance are discussed above in the Special Status Species section. Project-related impacts on aquatic Fish and Wildlife Conservation Areas (i.e., waters of the state) are addressed in Part 4, Section 3.
	Big Game Habitats and Migration Routes	Development of the Project's perimeter fence will result in the fenced area having no habitat value for elk and mule deer (i.e., excluding them from the fenced area) because it will create an access barrier to areas within the fence. Following construction and revegetation, these areas would contain an altered vegetation community compatible with solar arrays and would support an altered wildlife community that is able to pass over, under, or through the perimeter fence. The Project's perimeter fence will intersect and encompass important migratory areas for both elk and mule deer, including approximately 3,125 acres of a mule deer HCA, 4,063 acres of the elk HCA, and 3,075 acres of the Landscape Integrity Core Area (LICA). However, as shown in Table 4.9-1, the majority of these areas consist of herbaceous habitats (ranging from 58 to 64 percent of the designated migratory area within the Fenced Area), which may serve as lower quality habitat for big game species compared to native habitats.

Table 4.9-1. Acres of Big Game Migration Habitat Designation Encompassed by the Project's Perimeter Fence

Vegetation Type	Mule Deer HCA	Elk HCA	LICA
Herbaceous	1,818	2,583	1,770
Shrub/Scrub	1,307	1,480	1,305
Total	**3,125**	**4,063**	**3,075**

The presence of the Project's perimeter fence may affect the movement patterns of elk and mule deer in the area. As discussed below (see Section 4.9.D), the Applicant has modified the layout of the Project's perimeter fence to include separate smaller fenced units versus one large fenced array in order to allow for elk and mule deer movement. The fence design may be revised further based on ongoing coordination with EFSEC and WDFW, but the Project must prioritize regulatory compliance for electrical code and/or safety in these discussions. These design changes to the fence as well as considerations regarding water sources in the area will minimize the effects that this Project may have to elk and mule deer movement patterns and habitat availability in the area.

Noise, Light, and Glare	As described in Part 4, Section 16a, the Project is not expected to have significant noise impacts during operations. Potential impacts on wildlife during construction include general noise and visual disturbances from construction activity. Projected noise levels associated with expected Project construction equipment at 50 feet are identified in Table 6 in Attachment Q. These noise levels could disturb wildlife, if present in the Project vicinity, within the anticipated 24-month construction period. In general, noise and visual disturbances may cause wildlife to avoid typical foraging and breeding areas, or distract them from those activities within those areas, which can result in reduced fitness. Construction equipment operates intermittently, and noise levels resulting from construction activities will vary depending on equipment and operations being performed. Loud construction activities are anticipated to be infrequent at the site, hours of construction will be limited, and noise mitigation measures will be implemented, which will minimize the impacts on wildlife from the temporary increase in noise due to construction (see Part 4, Section 16a and Attachment Q). For example, evening and nighttime construction activities will be avoided to the extent practicable, which will limit the impacts of construction noise to wildlife. Additional BMPs related to noise are listed in Part 4, Section 16a. Although wildlife species are susceptible to noise disturbances caused by humans and construction equipment, the BMPs listed in Part 4, Section 16a will limit these impacts.

		Lighting can attract some species (e.g., avian species) to the Project Area, thereby exposing them to potential impacts. The Applicant will limit the amount of lighting, shield lighting as needed, and direct lighting property to eliminate light spill and trespass. In addition, applicable lighting may include switch action and/or motion detector-activated lighting to minimize the amount of time lights need to be active. Lighting is also needed at the Project O&M building and collector substation in accordance with NERC standards. Fatalities or injuries of water-associated birds (i.e., species that rely on water for foraging, reproduction, and/or roosting, such as herons and egrets) and water-obligate birds (i.e., species that cannot take flight from land, such as loons and grebes) has led some researchers to suggest that these species might interpret PV solar facilities as water (i.e., lake effect hypothesis; Kagan et al. 2014). Kosciuch et al. (2020) reviewed bird fatality data from 10 PV solar facilities in southwest United States; for facilities with multiple study years, each year was treated as a separate study, resulting in 13 "site-years." Kosciuch et al. (2020) found that water-obligate birds occurred at 90 percent of site-years in the Sonoran and Mojave Desert Bird Conservation Region, and that adjusted composition (which takes into consideration searcher efficiency and carcass persistence per Huso [2011]) was higher for water associates and water obligates the closer the facility was to the Salton Sea, which serves as stop-over and wintering habitat for water birds. The sites farthest from the Salton Sea showed almost no contribution to adjusted composition of water associates and water obligates (i.e., relatively few birds or none in these groups were detected). The Project will be built with solar modules that are treated with an anti-reflective coating to minimize glare. Moreover, the Project does not occur near a large waterbody that serves as a major migratory stop-over site; therefore, water-associated and water-obligate species are not anticipated to be disproportionately affected by the Project.
	Fire	Fires (both those potentially generated by the Project as well as those generated by other factors) have the potential to directly affect botanical resources through alteration of habitats as well as destruction of plant species including special status plant species. Fire can also indirectly affect botanical resources by creating conditions for colonization or expansion of non-native, invasive plant species, such as cheatgrass. As described in Part 3, Section 13 (Environmental Health – Hazardous Materials), Part 3, Section 21 (Public Services and Facilities), and Part 4, Section 13 (Environmental Health – Hazardous Materials), the Project will implement measures to address fire risk.

		Prior to construction, the Applicant will develop an Emergency Management Plan and implement BMPs for fire prevention. The Applicant will request coordination from the Benton County Sheriff's Office, Benton County Emergency Management, and DNR Wildland Fire Management Division to collaboratively develop safety measures that will be incorporated into the Project's design and construction. The Applicant will also request comment from these entities regarding necessary equipment or training, if any are identified as needed, that may be required to provide fire protection services to the Project. To further mitigate the need for fire protection services, the Project's facilities will incorporate multiple layers of protection to avoid failures and risks of fire or spills and will be designed to applicable requirements of the NEC, NFPA Standards, and Institute of Electrical and Electronics Engineers Standards. Access roads will be developed and maintained with an approximately 24-foot width to provide 1) sufficient access for fire fighters to the area and 2) additional fire breaks. In addition, the Project may include a water cistern to store water for fire suppression needs, if needed. Vegetation management will also establish and maintain fire breaks around each solar array, PCS, the collector substation, and along the Project's fence line. The Applicant may also establish and maintain additional fire and fuel breaks (i.e., 100- to 150-foot-wide planted green strips) in key areas and have been in discussion with WDFW staff to continue green-stripping areas along the boundaries of the leased parcels. The implementation of these measures will minimize the risk of wildfires occurring and adversely affecting wildlife in the region.
	Hazardous or toxic spills	As demonstrated in Part 4, Section 13, the risk of hazardous or toxic spills at the Project is low. The Applicant will prepare both a Construction SPCC Plan and an Operations SPCC Plan. The SPCC Plans will be implemented during construction and operation to reduce the likelihood of an accidental release of a hazardous or regulated liquid and, in the event such a release occurs, to expedite the response to and remediation of the release. Implementation of these measures will minimize the risk that an accidental release of a hazardous or regulated liquid will affect wildlife species.

4.9.C.2 Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?

☐ **No**	☒ **Yes**

	Topical Area/issue	Changes
	Habitat	The Applicant has revised the Project layout to avoid Fish and Wildlife Conservation Areas in the Project Area to the extent feasible. This includes completely avoiding talus slopes by 125 feet as well as minimizing the extent of shrubsteppe habitats that will be affected. Also, as discussed in Part 4, Section 3, waters and wetlands will be avoided to the extent feasible. The Project design layout has been updated and moved away from the northwest corner of the previous Solar Array Siting Area layout to minimize effects on potential ferruginous hawk core nesting area approximately one mile northwest of the Solar Array Siting Area.
	Big Game Habitats and Migration Routes	To the extent feasible, the solar array fence lines have been designed to enclose smaller solar arrays within the Project Area rather than enclosing one large fenced array, which will minimize habitat fragmentation and allow wildlife passage through the area. The layout of the perimeter fence was also modified where practical to maintain access to the ephemeral drainages within the Project Area (see Attachment P), which are used by mule deer and elk for movement corridors as well as for water sources; the existing transmission line rights-of-way through the Project will also be left unfenced to maintain movement corridors along these existing transmission lines. The fence design may be revised further based on ongoing coordination with EFSEC and WDFW. Construction and operation of the Project will result in both permanent and temporary impacts on vegetation, as well as permanent alterations of vegetation within the solar array's perimeter fence lines, for the life of the Project.

4.9.D Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?

☐ No	☒ Yes		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Avoidance and Minimization Measures	During siting and design, the Applicant took several measures to avoid and minimize impacts to wildlife and habitat. The Applicant coordinated with Washington Department of Fish and Wildlife (WDFW) prior to conducting surveys, and used the feedback obtained	WDFW

		during this coordination to inform surveys and the assessment of impacts. The Project has been designed to avoid and minimize impacts on habitats associated with the special status species that were observed during surveys and/or are known to occur in the Project vicinity. In particular, these are shrubsteppe habitat, wetlands and streams, and talus slopes. • Talus slopes are a Priority Habitat • Cliffs/bluffs (Priest Rapids Cliff line for nesting raptors and chukar partridge) • Suitable burrows for burrowing owl and Townsend's ground squirrel • Prairie falcon breeding areas • Sagebrush sparrow observations and breeding areas WDFW requires shrubsteppe mitigation, which will be a 2:1 mitigation ratio for permanent impacts and 1:1 for altered and temporary impacts. To the extent feasible, the solar array fence lines have been designed to enclose smaller solar arrays within the Project Area rather than enclosing one large fenced array, which will minimize habitat fragmentation and allow wildlife passage through the area. The layout of the perimeter fence was also modified where practical to maintain open access to the ephemeral drainages within the Project Area (see Attachment P) that are used by mule deer and elk for movement corridors as well as for water sources; the existing transmission line rights-of-way through the Project would also be left unfenced to maintain movement corridors along these existing transmission lines. The fence design may be revised further based on ongoing coordination with the Energy Facility Site Evaluation Council (EFSEC) and WDFW.	
	Construction and Operations Best	Unnecessary lighting will be turned off at night to limit the attraction of migratory birds to the area. This includes using	WDFW

	Management Practices (BMPs)	mitigation measures such as motion and/or switch activation, lights with timed shutoff, downward-directed lighting to minimize horizontal or skyward illumination, and avoidance of steady-burning, high-intensity lights. Evening and nighttime construction activities will be avoided to the extent practicable, which will limit the impacts of construction noise to wildlife. Prior to construction, construction personnel will be instructed on wildlife resource protection measures, including: 1) applicable federal and state laws (e.g., those that prohibit animal collection or removal); and 2) the importance of these resources and the purpose and necessity of protecting these resources. Construction personnel will be trained in the following areas when appropriate: awareness of biological resources (including Priority Habitats and special status species), potential bird nesting areas, and general wildlife issues. The Applicant will prepare an Erosion and Sediment Control Plan (ESCP) that would include BMPs to minimize surface water runoff and soil erosion. Appropriate stormwater management practices will be implemented in accordance with the Stormwater Pollution Prevention Plans (SWPPPs). The Applicant will prepare Spill Prevention, Control, and Countermeasure (SPCC) Plans as required based on thresholds on-site to be implemented during construction and operation to reduce the likelihood of an accidental release of a hazardous or regulated liquid and, in the event such a release occurs, to expedite the response to and remediation of the release (see Part 4, Section 3 for more details). Vehicle speeds will be limited to 25 miles per hour on internal Project access roads to avoid wildlife collisions. Existing posted speed limits on county and private roads will be followed outside of the Project Area.	

		If any overhead power lines are required to connect the Project to the grid, these lines will be designed and constructed to minimize avian electrocution, utilizing guidelines outlined in Avian Power Line Interaction Committee standards (APLIC 2012). Fire hazards from vehicles and human activities will be reduced via use of spark arrestors on power equipment, avoiding driving vehicles off roads, and allowing smoking only in designated areas per the requirements of WAC 463-60-352. The Applicant will prepare an Emergency Management Plan that contains fire safety measures, which will be developed with input from applicable agencies (see the "Fire" section above for more details). Decommissioning activities are typically expected to take between 6 and 8 months. Following decommissioning, reclamation of the Project Area will begin as quickly as possible to reduce the likelihood of ecological resource impacts in disturbed areas. Following the removal of the plant and equipment, removal of any invasive species shall occur. The soil will be restored to topographic conditions similar to pre-construction and re-seeded to promote native vegetation, unless a future residential or commercial development is set to occur. If it is set to be restored to its original condition, a native seed mix approved by the County and the State (the latter if required) will be applied and planted to assist in preventing soil erosion and dust. Section 4.8.D contains additional measures targeted at successfully restoring vegetation communities. Implementation of these Vegetation mitigation measures will have indirect benefits to wildlife species as well.	
	Compensatory Mitigation	In order to achieve "no net loss of habitat functions and values" as required by WAC 463-62-040, the Applicant will continue to work with the Washington Department of Fish and Wildlife and Energy Facility Site Evaluation Council to determine	WDFW

		appropriate compensatory mitigation. The Applicant has prepared a Draft Habitat Mitigation Plan (Attachment L), which provides a framework for determining the compensatory mitigation required to achieve "no net loss." A Final Wildlife Habitat Mitigation Plan will be prepared prior to construction.	

4.9.E Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?

☒ No	☐ Yes	
	Environmental Element	**Additional changes or effects**
	N/A	

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4.10 Energy and Other Natural Resources

Part 4 Analysis is not required for this section.

4.11 Waste Management

Part 4 Analysis is not required for this section.

4.12 Environmental Health – Existing Site Contamination

Part 4 Analysis is not required for this section.

4.13 Environmental Health – Hazardous Materials

4.13.A Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.

Study name	Expected completion date	Expert agency participation Name, Title, and Involvement	Completed Y/N
Phase I Environmental Site Assessment for the Hop Hill Solar Project, Benton County, Washington	Complete (September 2022)	Prepared by SWCA, environmental consultant for the Applicant.	Y

☒ **Check this box when all proposed studies for this topic are completed**

4.13.B Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.

Topical area/issue	Existing Condition and Problems
Hazardous Materials	The Siting Area contains a mix of rangeland, crop cultivation, undeveloped land, local roads, and existing electrical utility infrastructure. Based on available historic aerial imagery, the land use in the siting area has been consistent with current conditions for at least the past 30 years (Google Earth 2021). As a result, historical use of organic and inorganic fertilizers, pesticides, or herbicides has likely occurred in agricultural production areas in the Siting Area, which was confirmed in the Phase 1 ESA (SWCA 2022). A site-specific Phase 1 ESA was conducted for the Solar Siting Area in September 2022 (SWCA 2022). The Phase 1 ESA researched two sub-areas of the Siting Area as follows: • The “Solar Array Siting Area,” which is approximately 11,179 acres of land on 21 parcels in the south of the subject property, portions of which are proposed for solar energy generation. The Solar Array Siting Area includes the “Project Area,” which is up to 6,000 buildable acres within the siting area. For the Solar Array Siting Area, SWCA completed the standard components of a Phase I ESA, including a site visit and landowner interviews. • The “Transmission Line Corridor Siting Area,” which is a 17.8-mile string of 37 parcels north of the Solar Array Siting Area through which a generation tie (gen-tie) corridor is proposed. At the request of the client, the assessment for the Transmission Line Corridor Siting Area was a desktop-only assessment and did not include a

site visit or landowner interviews. These parcels total approximately 10,841 acres of land.

The Phase 1 ESA revealed no evidence of *recognized environmental conditions* in connection with the Solar Array Siting Area except for the following:

- A trash and debris pit in Section 21, Township 10 North, Range 24 East contains both visible and buried debris, and a second older, smaller trash pit is believed to be nearby based on historical aerial photographs. Although most of the contents the trash and debris pit appeared to be innocuous materials, numerous discarded fungicide and herbicide jugs are present. Because the discarded jugs are likely indicative of the types of buried materials, these trash pits represent a likely presence of hazardous substances or petroleum products due to a release to the environment and the likely presence of hazardous substances or petroleum products under conditions that pose a material threat of a future release to the environment.
- Several dozen intact and dismantled smudge pots along the southern boundary of the subject property have leaked. Soil under and downhill of the pots is saturated with oil or fuel, covering an area of approximately 650 square feet. The saturated area is approximately 15 feet from open water in the canal.
- A storage area for chemicals contained 30 or more 300-gallon polyethylene totes and many empty boxes and jugs of herbicide. They are on the ground, on pallets, on makeshift wooden platforms, and stacked on top of one another. Evidence of past leaks and spills was evident, though the extent could not be readily determined. Because the evidence of past leaks and because current materials' handling and storage conditions are likely indicative of long-term past practices, this represents the presence of hazardous substances or petroleum products under conditions likely to be indicative of a past release to the environment and under conditions that pose a material threat of a future release to the environment.

The desktop assessment conducted for the Transmission Line Corridor Siting Area revealed no evidence of *recognized environmental conditions* in connection with the Transmission Line Corridor Siting Area except for the following:

- The Midway Substation 0.25 mile east of the northern portion of the Transmission Line Corridor Siting Area is identified as a Superfund Environmental Management System (SEMS) Archive site. SEMS-Archive tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as CERCLIS[6]–No Further Remedial Action Planned. Archived status indicates sites where, following an initial

[6] Comprehensive Environmental Response, Compensation, and Liability Information System

<table>
<tr><td></td><td>investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the National Priorities List (NPL), or the contamination was not serious enough to require federal Superfund action or NPL consideration. This site did not qualify for the NPL based on existing information. It was archived in 1990 following discovery in 1981 and a preliminary assessment in 1990.

The application of fertilizers, pesticides, and herbicides is assumed to have occurred according to manufacturer guidance, in a relatively uniform and generally consistent manner typical of agricultural practices. The concentrations of fertilizers and pesticides are likely to be similar to other rangeland and crop cultivation operations in the area. Risks to human health and the environment associated with soil disturbance during Project development are assumed to be low and similar to those associated with agricultural operations such as tiling. Additionally, all identified recognized environmental conditions shall be avoided during final Project siting. Therefore, potential past applications of fertilizer, herbicides, and pesticides pose little to no concern of adverse environmental impact with respect to Project development.

No hazardous materials are known to be stored currently in the Siting Area.</td></tr>
<tr><td>Existing infrastructure</td><td>There are seven existing transmission lines that cross through the Project Siting Area, six of which are BPA-owned and one PacifiCorp-owned. All lines traverse the Transmission Line Corridor Siting Area and one also traverses the Solar Array Siting Area:

<table>
<tr><th>Substation to Substation</th><th>Utility</th><th>Voltage (kilovolts)</th><th># Lines</th><th>Location</th></tr>
<tr><td>Big Eddy to Midway</td><td>BPA</td><td>230 kV</td><td>1</td><td>Northern Transmission Line Corridor Siting Area</td></tr>
<tr><td>Midway to Moxee</td><td>BPA</td><td>115 kV</td><td>1</td><td>Northern Transmission Line Corridor Siting Area</td></tr>
<tr><td>Midway to Grandview</td><td>BPA</td><td>115 kV</td><td>1</td><td>Northern Transmission Line Corridor Siting Area, and along western edge of Solar Array Siting area</td></tr>
<tr><td>North Bonneville to Midway</td><td>BPA</td><td>230 kV</td><td>1</td><td>Northern Transmission Line Corridor Siting Area</td></tr>
<tr><td>Schultz to Wautoma</td><td>BPA</td><td>500 kV</td><td>1</td><td>Northern Transmission Line Corridor Siting Area</td></tr>
<tr><td>Hanford to Wautoma</td><td>BPA</td><td>500 kV</td><td>3</td><td>Mid Transmission Line Corridor Siting Area</td></tr>
<tr><td>Union Gap to Midway</td><td>PacifiCorp</td><td>230 kV</td><td>1</td><td>Northern Transmission Line Corridor Siting Area</td></tr>
</table>
</td></tr>
</table>

	Water use for both Project construction and operations will be hauled to the site from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right). No underground hazardous liquid (e.g., petroleum) or natural gas transmission pipeline is located within the Siting Area or on surrounding properties (PHMSA 2022).
Risk of Fire or Explosion	The Siting Area is located predominantly on vacant, undeveloped land that has been used for rangeland and crop cultivation. There are potentially two residences in the Siting Area (based on review of County Assessor data [07/2022]; Google Earth 2021). The Project's security fence is set back from the closest participating residence within the Solar Array Siting Area by approximately 900 feet and is set back from the closest residence located outside the Solar Array Siting Area by approximately 2,000 feet. No petroleum products or other flammable/explosive substances are stored within the Siting Area. Wildland grass fires are the greatest existing fire risk in the vicinity of the Siting Area. As of August 2022, there are currently no active fire-related incidents in the immediate vicinity of the Project (InciWeb 2022). However, the Siting Area has a history of large fires, the most recent of which is the Cold Creek Fire from 2019. A portion of the Siting Area is located within the extent of seven large historic fires. A list of large fires greater than 500 acres in the last 40 years and recorded within 10 miles of the Siting Area follows below (DNR 2020):

Fire Name	Acres	Year	Cause	Overlaps With Siting Area	# Acres Overlap with Siting Area
DRY CREEK COMPLEX	48,902	2009	UNKNOWN	Yes	459
WAUTOMA	67,291	2007	MISCELLANEOUS	Yes	4,569
RANGE 12	176,581	2016	UNKNOWN	Yes	4,221
SILVER DOLLAR	31,740	2017	UNKNOWN	Yes	1,401
COLD CREEK	41,712	2019	UNKNOWN	Yes	62
HANFORD	122,894	1984	UNKNOWN	Yes	1,945
EMERSON	6,703	1990	UNKNOWN	Yes	517
WEATHER STATION	4,915	2005	MISCELLANEOUS	No	0
WASHOUT	596	2012	UNKNOWN	No	0
241-BLM	4,614	2012	UNKNOWN	No	0
MILEPOST 17	6,452	2007	MISCELLANEOUS	No	0
SADDLE LAKES	14,449	2015	LIGHTNING	No	0
SOUTH WARD GAP	5,040	2016	UNKNOWN	No	0
MONTECITO	1,877	2018	UNKNOWN	No	0
400	26,087	2017	UNKNOWN	No	0
BUCKSHOT	908	2018	HUMAN	No	0
L RD SW	21,619	2018	HUMAN	No	0
POWERLINE	7,723	2019	UNKNOWN	No	0
VERNITA BR	1,996	1984	UNKNOWN	No	0
LAMBING	9,451	1987	UNKNOWN	No	0
NAKE	1,578	1990	UNKNOWN	No	0
RATTLESNAKE	17,200	1992	UNKNOWN	No	0
GIBBON	845	2020	DEBRIS BURN	No	0

Most materials used in construction of the Project will not be hazardous or dangerous, and the risk of fire will be low. However, the Project will include a PCS with a DC-coupled BESS (distributed throughout the solar arrays). The BESS is described further in Part 2, Section A.2. The BESS units will be designed to incorporate multiple layers of protection to avoid failures and risks of fire or spills and will comply with the applicable requirements of the NEC, NFPA standards, and Institute of Electrical and Electronics Engineers Standards.

Emergency Plans and Services	The Project is located outside of a Benton County fire district. During construction, the Project will implement and maintain the Fire Protection Emergency Response Plan that includes BMPs for fire prevention and emergency response (see Attachment R). The Applicant has shared its Emergency Response Plan with West Benton County Fire Rescue and will continue to seek feedback on the plan from all applicable stakeholders including the Benton County Sheriff's Office, Benton County Emergency

	Management, Benton County Fire Protection Districts, and DNR Wildland Fire Management Division as necessary for proper implementation.

4.13.C Changes to and from Existing Condition

4.13.C.1 Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.

☐ No	☒ Yes	
	Topical Area/issue	**Changes**
	Hazardous Materials	Earthwork associated with Project construction will disturb soils and has the potential to expose soils that may contain remnants of past fertilizer, pesticide, and herbicide use. Potential risks associated with soil disturbance are expected to be low and similar to those associated with agricultural operations such as tiling. The Applicant or the Applicant's contractor will manage noxious weeds and control vegetation during construction and operations. The Project will only use herbicides that are approved for use in the state of Washington by the EPA and the Washington State Department of Agriculture. As needed, herbicides will be transported and applied to the Siting Area but will not be stored in the Siting Area. During construction, small amounts of hazardous materials (e.g., petroleum-based fuels, mineral-based transformer oils, and oil-based lubricants) will be transported, stored, or used to operate equipment. These materials will be stored in compliance with a SPCC Plan that follows the EPA Amended SPCC Rule issued in 2006 (EPA-550-F-06-008) as needed. The SPCC Plan provides preventative procedures and rapid response measures to handle hazardous spills if one were to occur and reduce the risk of potential soil or groundwater contamination to negligible. Project operations will not require large quantities of fuels, oils, or chemicals in the Siting Area, except those required for the operation of certain Project components where such substances are fully contained (e.g., transformers, inverters, back-up generators, and certain BESS equipment). As noted in Part 2, the Project collector substation will contain lead-acid cell batteries for emergency back-up power for the control room, communications, and inverters. Lead-acid batteries contain sulfuric acid within sealed, leakproof exterior compartments. Under 40 CFR § 355, sulfuric acid is considered an extremely hazardous material by the EPA. If lead-acid batteries are used at the Project, secondary containment will be provided. The Applicant will report sulfuric acid as part of its

		annual Emergency Planning and Community Right-to-Know Act report to local emergency service providers. Lead-acid batteries will be replaced every 5 years or more frequently, as indicated by system controls. Replacement of lead-acid batteries will be handled by a qualified contractor and adhere to applicable regulations for transport and disposal, including, but not limited to, 49 CFR § 173.159.
	Risk of Fire or Explosion	The two types of fire risks that might affect the Project include 1) fires that are caused by Project-related activities, and 2) fires that start outside of the Siting Area and spread to the Siting Area. With respect to the first type of risk, the Project could theoretically increase existing fire or explosion risk due to the introduction of potential ignition sources. Vehicles, equipment, human activities, and heat-producing Project components represent potential ignition sources; however, the risk of actual ignition is low. Oil-based materials will be used and stored in accordance with any applicable SPCC Plan, applicable regulations, and best practices during both construction and operation of the Project. The BESS units will be designed to incorporate multiple layers of protection to avoid failures and risks of fire or spills and will comply with the applicable requirements of the NEC, NFPA standards, and Institute of Electrical and Electronics Engineers standards. Batteries may contain flammable liquids that can become hot during operation. To ensure safe handling these batteries contain individual, hermetically sealed cells that do not have any waste discharges and will not be opened in the Siting Area for installation or maintenance purposes. In addition, each BESS will contain a fire suppression system that complies with NFPA standards, specifically NFPA 855 “Standard for the Installation of Stationary Energy Storage Systems.” The fire suppression system will include sensing equipment and alarm systems with remote shut-off capabilities. Installation, maintenance, and decommissioning of BESS components will be done in compliance with applicable regulations, including 49 CFR §173.185, which regulates the transportation of lithium-ion batteries. Therefore, the potential ignition risk of either of these types of battery systems is low. Access roads will provide primary access to each of the solar array blocks, including each PCS, as well as the O&M building and Project collector substation. The spacing between the rows of panels will allow for localized access within each of the solar array areas. The O&M building will be equipped with fire extinguishers as well as smoke detectors tied to the supervisory control and data acquisition system. In addition to fire extinguishers, the O&M building will have basic firefighting equipment for use on-site during maintenance activities such as shovels, beaters, portable water for hand sprayers, and personal protective equipment. Also, the Siting Area may include an onsite water trucks to store water for fire suppression needs.

		Vegetation management will also establish and maintain fire breaks around each solar array, PCS, the Project collector substation, and along the Project's fence line. The Applicant may also establish and maintain fire and fuel breaks in coordination with landowners, ranch managers, and appropriate agencies such as the West Benton County Fire Rescue. The implementation of these measures will minimize the risk of wildfires occurring in the Siting Area. The Project will implement and maintain the Fire Protection Emergency Response Plan (see Attachment R) and implement BMPs for fire prevention and emergency response. The Applicant has shared its Emergency Response Plan with West Benton County Fire Rescue and will continue to seek feedback on the plan from the Benton County Sheriff's Office, Benton County Emergency Management, Benton County Fire Protection Districts, and DNR Wildland Fire Management Division to collaboratively develop safety measures that will be incorporated into the Project's design and construction. The final layout will be provided to the Benton County Fire Marshal's Office. The Applicant will also seek coordination with these entities regarding necessary equipment or training, if any are identified, that may be required to provide fire protection services to the Project. To further mitigate the need for fire protection services, the Project's facilities will include and incorporate multiple layers of protection to avoid failures, and risks of fire or spills will be designed to applicable requirements of the NEC, NFPA standards, and Institute of Electrical and Electronics Engineers standards. Furthermore, the Project's design will incorporate graveled areas around the O&M facility and collector substation, as well as graveled access roads and fire breaks, where applicable. With respect to the second type of risk, hot temperatures, arid conditions, and the presence of dry vegetation could lead to wildfires originating outside of the Project that could pose a risk to Project construction and components, including lithium-ion batteries contained in the optional BESS. The Applicant will monitor wildfire activity during Project construction and operations; comply with the Benton County Wildfire Protection Plan (BCWPP Steering Group 2005); and if necessary, the Applicant will modify Project activities, change the schedule, cease construction/operation activities, or take other action requested by emergency service providers to ensure the safety of Project personnel and avoid any interference with emergency fire/medical responders. During Project operations, there will be minimal fuel use on-site, and electrical equipment will be designed to reduce the potential for fire damage. Therefore, while the Project itself may be damaged in the event of a wildfire spreading across the site, it will not significantly change the risk posed by the wildfire to the surrounding vicinity.

	Existing Infrastructure	Water for operations use will be hauled to the site from off-site sources with existing water rights (i.e., a municipal water source or vendor with a valid water right). Since there are no underground hazardous liquid or natural gas transmission pipelines and none are proposed as part of the Project, no change to this existing condition will occur. The Project will introduce new subsurface infrastructure such as electrical collector lines and 230- or 500-kV gen-tie lines, which will connect to an existing BPA substation and transmission infrastructure. Proposed subsurface infrastructure will not contain hazardous materials nor pose significant fire risk. No changes will occur to existing transmission lines outside of the gen-tie interconnection. The Applicant is coordinating with BPA regarding the proposed interconnection actions.
	Emergency Plans and Services	The Fire Protection Emergency Response Plan addresses worker health and safety, emergency response, as well as fire prevention and control measures for construction and operation (see Attachment R). Access roads will have a compacted gravel surface, with a permanent width of approximately 24 feet as well as the required clearance and turning radius needed for emergency response vehicles, in accordance with fire code. The final layout will be provided to the Benton County Fire Marshal's Office in which emergency responder access points, evacuation routes, and road exits shall be identified.

4.13.C.2 Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?

☒ **No**	☐ **Yes**	
	Topical Area/issue	**Changes**
	N/A	N/A

The existing agricultural use of the Siting Area will not significantly affect construction, operation, or decommissioning of the proposed Project. No underground hazardous liquid or natural gas transmission pipelines occur within the Siting Area.

4.13.D Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?

☐ **No**	☒ **Yes**

	Mitigation	Applicable law and how well it addresses the impact	Expert agency participation
	Emergency Management Plan	During Project construction and operations, the Applicant will implement and maintain a Fire Protection Emergency Response Plan to address worker health and safety, standards concerning potential release of hazardous materials, and fire prevention and control (see Attachment R). This plan provides safety guidelines and procedures for potential emergency-related incidents during the Project's construction, operation, and decommissioning phases. This includes coordination with emergency service providers and fire suppression measures associated with the Project. The Applicant will seek feedback from Benton County Emergency Management, Benton County Sheriff, Benton County Fire Protection Districts, and Washington Department of Natural Resources (DNR) Wildland Fire Management Division as necessary for proper implementation. Applicable laws/codes include: • WAC 463-60-352 (2 through 4), which addresses fire and explosion, hazardous materials release, and safety standards compliance. • WAC 463-60-352(6), which describes emergency plans to ensure public safety and environmental protection. • 49 CFR §173.185, which regulates the transportation of lithium-ion batteries. • 49 CFR §173.159, which regulates the transportation of lead-acid batteries. • International Fire Code	Benton County Emergency Management, Benton County Sheriff, Benton County Fire Protection District, and DNR Wildland Fire Management Division
	Best Management Practice (BMPs) – Fire Prevention	To minimize the risk of fire or explosions, the Project will implement BMPs detailed in the Fire Protection Emergency Response Plan noted above (see Attachment R). Typical BMPs	Benton County Fire Protection District and DNR Wildland Fire Management Division

		include, but are not limited to, the following: • Equip construction vehicles with fire extinguishers, spark arrestors and heat shields, as appropriate. • Establish roads before accessing the site to minimize vehicle contact with grass. • Use diesel construction vehicles instead of gasoline vehicles, where feasible, to prevent potential ignition by catalytic converters. • Prohibit vehicles from idling in grassy areas. • Restrict the use of high-temperature equipment in grassy areas. • Install lightning protection measures to protect generators and other equipment. • Install fire protection equipment in accordance with Washington state fire code. • Notify the local fire district of construction plans and access to Project equipment. • Provide mutual assistance in the case of fire in or around the Project during construction. • Monitor wildfire activity during Project construction and operations and, if necessary, modify Project activities, change the schedule, cease construction operations, or remove equipment. • Prevent and control potential fires inside the Siting Area with trained staff who have 24-hour access to the site. • Prevent the storage of combustible material in or within 10-feet of the solar power conversion system or battery enclosures. A Vegetation and Weed Management Plan will be prepared and will include	

		revegetation management and noxious weed control measures.	
	Battery Energy Storage System (BESS) Design	The BESS will contain a fire suppression and detection system in accordance with fire code and National Fire Protection Association (NFPA) standards, specifically NFPA 855 "Standard for the Installation of Stationary Energy Storage Systems." The system will include monitoring equipment and alarm systems with remote shut-off capabilities. The Fire Protection Emergency Response Plan includes fire prevention procedures related to battery enclosures (see Attachment R).	NFPA
	Construction Stormwater General Permit (CSWGP), Construction Phase Stormwater Pollution Prevention Plan (SWPPP), and Erosion and Sediment Control Plan (ESCP)	As described in Part 4, Section 5, the Applicant will obtain a Construction Stormwater General Permit (CSWGP) from the Washington Department of Ecology (Ecology), which requires a SWPPP and ESCP. These plans will contain measures to minimize the risk of spills and stormwater pollution, as well as to reduce the effects of erosion to ensure compliance with state and federal water quality standards. Applicable laws/codes include the following: • Revised Code of Washington (RCW) 90.48, which establishes general stormwater permits for Ecology under the Water Pollution Control Act • Washington Administrative Code (WAC) 173-201A, Water Quality Standards for Surface Waters of the State of Washington • Clean Water Act (33 United States Code 1251)	Ecology
	Spill Prevention, Control, and Countermeasure (SPCC) Plan	The Applicant will prepare a SPCC Plan, consistent with requirements of 40 CFR Part 112 as needed, to prevent spills during construction and to identify measures to expedite the response to a release if one were to occur. Preventative procedures and rapid	Ecology

		response measures will address and prevent potential risks to water quality.	
	Use of approved herbicides	In compliance with Revised Code of Washington (RCW) 17.10.140, the Applicant will only use herbicides that are approved for use in the state of Washington by the U.S. Environmental Protection Agency (EPA).	EPA and the Benton County Noxious Weed Control Board

Consistent with WAC 463-60-352 (2 through 4) and (6), the proposed mitigation described for the Project complies with existing regulations and provides measures to reduce the risk of fire and explosion; reduce potential hazardous releases to the environment that could affect the public; comply with applicable local, state, and federal safety standards; and implement the Project's Fire Protection Emergency Response Plan (see Attachment R). For the reasons provided, construction and operation of the Project poses minimal risk to environmental health.

4.13.E Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?

☒ **No**	☐ **Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

4.13.F References

BCWPP Steering Group (Benton County Wildfire Protection Plan Steering Group). 2005. Benton County Wildfire Protection Plan. May. Available online at: https://www.dnr.wa.gov/publications/rp_burn_cwppbenton.pdf

DNR (Washington Department of Natural Resource). 2020. Washington Large Fires 1973-2020 download link. Washington Department of Natural Resource GIS Open Data Available online at: https://data-wadnr.opendata.arcgis.com/documents/washington-large-fires-1973-2020-download/about

Google Earth. 2021. Aerial Imagery for the Hop Hill Project. Image date April 2021.

InciWeb. 2022. Incident Information System. Participating agencies: National Wildfire Coordinating Group, U.S. Forest Service, U.S. Bureau of Land Management, U.S. Bureau of Indian Affairs, U.S. Fish and Wildlife Service, U.S. National Park Service, National Association of State Foresters, and U.S. Fire Administration. Available online at: https://inciweb.nwcg.gov/

PHMSA (Pipeline and Hazardous Materials Safety Administration). 2022. Public Map Viewer, National Pipeline Mapping System. U.S. Department of Transportation PHMSA. Available online at: https://pvnpms.phmsa.dot.gov/PublicViewer/

SWCA (SWCA Environmental Consultants). 2022. Phase I Environmental Site Assessment for the Hop Hill Solar Project, Benton County, Washington. September. Prepared for HOHI bn, LLC. SWCA Project Number 69535.

4.14 Land Use, Natural Resource Lands, & Shoreline Compatibility

4.14.A Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.

Study name	Expected completion date	Expert agency participation Name, Title, and Involvement	Completed Y/N
See Part 1, Section E (List of Studies)			

☒ **Check this box when all proposed studies for this topic are completed**

Response: There are no studies of the Project conducted solely for the purpose of land use; however, the studies listed in Part 1, Section E support findings of compliance in response to Benton County's applicable land use regulations. The Land Use Consistency Review (see Attachment D) provides cross-references to these studies, where applicable, that demonstrate local land use consistency and regulatory compliance.

4.14.B Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.

Topical area/issue	Existing Condition and Problems
Existing Land Ownership	The Siting Area boundary includes 58 assessor parcels. The Solar Array Siting Area includes 21 assessor parcels under private ownership. The Transmission Line Corridor Siting Area includes 37 assessor parcels, 34 of which are under private ownership and three assessor parcels (Nos. 110343000001001, 115341000000000, and 122341000000000) at the north of the Transmission Line Corridor Siting Area which are federal lands. In addition, an approximately 1.6-mile segment of the Transmission Line Corridor Siting Area occurs on federal land owned by the U.S. DOE that does not have an associated Benton County assessor parcel number (Attachment A, Figures A-1 and A-2). The Applicant has executed or is pursuing a Lease or Easement Option Agreements with each identified property owner within the Siting Area. Refer to Part 1, Section A.4 for a description of the assessor parcels. Lands to the east of the Siting Area are part of the Hanford Reach National Monument (Rattlesnake Unit of the Fitzner/Eberhardt Arid Lands Ecology Reserve) and managed by the USFWS. Generally, lands to the north, west, and south of the Siting Area include a mixture of DNR, BLM, and private lands. The Department of

	Defense (U.S. Army) Yakima Training Center is approximately 4.2 miles northwest of the Siting Area in Yakima County.
Existing Land Use	Existing land uses in the Siting Area include dryland and irrigated agriculture, rangeland, undeveloped areas, local roads, electrical infrastructure (e.g., transmission and distribution lines, substations), and scattered unoccupied structures (e.g., agricultural storage). Adjacent land uses surrounding the Siting Area are similar and also interspersed with rural residences, rangelands, state highways, and the U.S. DOE property (Hanford Reach National Monument) to the east. Private lands within the Siting Area and adjacent lands (with the exception of federal property to the east) are zoned for agriculture and other compatible uses (Attachment D, Figure 1). Current land uses in the Solar Array Siting Area also include rangeland, crop cultivation, undeveloped land, local roads, and existing electrical utility infrastructure. Lands in the Siting Area have historically been used for agricultural activities (crop cultivation and grazing), although the areas used for these activities have varied over time. Approximately 2,992 acres (13 percent) of the Siting Area was mapped as cultivated agricultural lands per the Project's 2022 Wildlife and Habitat Study Report (Attachment E, Table 2). Outside of these agricultural areas, approximately 18,988 acres (87 percent) of the Siting Area was mapped as herbaceous grassland and shrubsteppe. The remaining approximately 110 acres (<1 percent) of the Siting Area was mapped as developed, hay/pasture, barren land, and open water. Minimal agricultural-related structures (e.g., storage sheds, well house, etc.) occur in the Siting Area. Agricultural lands in the Siting Area were also mapped using Washington Department of Agriculture 2021 agricultural land use data (WSDA 2021, Attachment D, Figure 2). Within the Siting Area, WSDA maps show approximately 816 acres of cereal grain, 100 acres of orchard, 1,553 acres of vineyard, 12 acres of pasture, and approximately 2,000 acres classified as other such as fallow, idle, or Conservation Reserve Program (CRP) land. The Project will be accessed primarily from SR 241 to Sheller Road as described in Part 4, Section 20. Access roads within the Solar Array Siting Area will consist of improvements to existing roads and new access roads. Improvements to existing roads may include drainage upgrades, smoothing, and graveling as needed to accommodate construction vehicles. New access roads may require excavation and fill to achieve acceptable grades. The Siting Area is located in a rural, sparsely populated area of Benton County. One rural residence with multiple supporting residential and agriculture structures, located at the intersection of Anderson Road and North Missimer Road, is located within the Solar Array Siting Area and is a participating landowner. No solar array installations are planned for this residential area and the Applicant has included a construction buffer around the residence to minimize potential disturbance (see Attachment H, Visual

	Resources Technical Report). The closest developed area to the Project is the City of Sunnyside located approximately 5 miles southwest of the Solar Array Siting Area. Lands surrounding the Siting Area are described in more detail below: **Solar Array Siting Area:** Parcels approximately 0.5 mile north and east of the Solar Array Siting Area are primarily undeveloped, non-irrigated private land within Benton County's Growth Management Act – Agriculture (GMA/AG) zone. One DNR-owned parcel occurs in the Solar Array Siting Area but is excluded from the Solar Array Siting Area boundary and is not part of the Project. Another DNR-owned parcel is adjacent and southeast of the Solar Array Siting Area boundary (Attachment A, Figure A-2). Parcels south of and within approximately 0.5 mile of the Solar Array Siting Area include a mix of privately owned irrigated and actively cultivated land as well as some undeveloped rangelands and non-irrigated pasture (likely dryland wheat) within Benton County's GMA/AG zone. There are several residences between 0.2 mile and 0.5 mile from the southern boundary of the Solar Array Siting Area. Parcels within approximately 0.5 mile west of the Solar Array Siting Area consist of private land within Yakima County's Agriculture zone that is mostly undeveloped and non-irrigated. Some irrigated and cultivated parcels occur within 0.5 mile southwest of the Solar Array Siting Area. The nearest residence is approximately 215 feet southwest of and outside the Solar Array Siting Area. **Transmission Line Corridor Siting Area (Segment 1):** An approximately 11.2-mile segment of the Transmission Line Corridor Siting Area runs north from the boundary of the Solar Array Siting Area to the Option 3 POI (Attachment A, Figure A-2). For the purpose of land use analysis, this portion of the Transmission Line Corridor Siting Area is referred to as Segment 1. Land within approximately 0.5 mile east of Segment 1, from the Solar Array Siting Area north to federal land, is an approximately 5-mile stretch of privately owned parcels that consist of a mix of undeveloped rangelands and non-irrigated pasture (likely dryland wheat) within Benton County's GMA/AG zone. Remaining land within approximately 0.5-mile east of Segment 1 to the Option 3 POI is undeveloped federal land within the Hanford Reach National Monument (Rattlesnake Unit of the Fitzner/Eberhardt Arid Lands Ecology Reserve) and is not used for agriculture. Land within approximately 0.5-mile west of Segment 1 generally consists of privately owned undeveloped land within Benton County's GMA/AG zone, with one parcel (approximately 4 miles north of the Solar Array Siting Area) owned by the DNR. No DNR land is included within the Project Siting Area. **Transmission Line Corridor Siting Area (Segment 2):** An approximately 4-mile segment of the Transmission Line Corridor Siting Area runs north from the Option 3 POI to the Option 2 POI (Attachment A, Figure A-2). For the purpose of land use analysis,

	this portion of the Transmission Line Corridor Siting Area is referred to as Segment 2. Similar to Segment 1, land within approximately 0.5-mile east of Segment 2 is undeveloped federal land within the Hanford Reach National Monument (Rattlesnake Unit of the Fitzner/Eberhardt Arid Lands Ecology Reserve) and is not open to public use or used for agriculture. Land within approximately 0.5 mile west of Segment 2 includes privately owned, undeveloped rangeland and non-irrigated pasture (likely dryland wheat) within Benton County's GMA/AG zone as well as existing electrical transmission infrastructure (i.e., BPA 500-kV transmission lines). **Transmission Line Corridor Siting Area (Segment 3):** An approximately 3.5-mile segment of the Transmission Line Corridor Siting Area runs north from the Option 2 POI to the Option 1 POI at the existing Midway Substation (Attachment A, Figure A-2). For the purpose of land use analysis, this portion of the Transmission Line Corridor Siting Area is referred to as Segment 3. Similar to Segments 1 and 2, land within approximately 0.5 mile east of Segment 3 is undeveloped federal land within the Hanford Nuclear Reservation. The Columbia River is approximately 0.9 mile north of Segment 3. Land within approximately 0.5 mile west of Segment 3 is within Benton County's GMA/AG zone. Areas to the west include vineyards, undeveloped rangeland, and non-irrigated pasture. Irrigated parcels with active cultivation occur directly south of the Columbia River and about one mile west of the Option 3 POI.
Electrical Infrastructure / Electrical Generation Capacity and Service	There is no current electrical generation service within the Siting Area. There are five BPA transmission lines that cross through the Project leading to the BPA Wautoma Substation and Midway Station (located on U.S. DOE land): the Schultz-to-Wautoma 500-kV, Hanford-to-Wautoma 500-kV (two lines), Wautoma-to-Knight 500-kV, and Wautoma-to-Rock Creek 500-kV lines. An additional BPA line crosses the middle of the Siting Area trending northeast-southwest: Big Eddy-to-Midway 230-kV line. Lastly, two BPA lines cross through the north of the Siting Area trending northeast-southwest: the Midway-to-Grandview 115-kV and North Bonneville-to-Midway 230-kV lines.
Benton Comprehensive Plan Designation	The Siting Area and all surrounding non-federal lands are in the Benton County Comprehensive Plan GMA/AG (Benton County 2022a): ***GMA Agriculture*** *(GMA AG) includes agricultural land (such as dryland and irrigated land) identified by the County based on the criteria established by the GMA. A GMA Agricultural District zone conserves agricultural lands by establishing a 20-acre minimum parcel size and (with exceptions e.g., resort destinations, wineries) limits the range of other land uses to those which are dependent upon, supportive of, ancillary to, or compatible with, agricultural production as the principal land use.*

Benton County Zoning District	The Project is located entirely on land zoned Growth Management Act Agricultural District (GMAAD), defined by Benton County Code (BCC; Benton County 2021b) (Attachment D, Figure 1). The Project is consistent with Benton County's definition of a "solar power generator facility, major" under BCC 11.03.010(167) as described in detail in the Land Use Consistency Review (see Attachment D). As defined in BCC 11.03.010(167), "Solar Power Generator Facility, Major" means the use of solar panels to convert sunlight directly or indirectly into electricity. Solar power generators consist of solar panels, charge controllers, inverters, working fluid system, and storage batteries. Major facilities are developed as the primary land use for a parcel on which it is located and does not meet the siting criteria for a minor facility in BCC 11.03.010(168). The Applicant initially submitted a CUP application for the Project to the Benton County Community Development Department on December 20, 2021. At the time the Project application was submitted, "solar power generation facility, major" was listed as a conditionally allowed use requiring a CUP in the GMAAD BCC 11.17.07(cc). On December 21, 2021, Benton County passed Ordinance Amendment (OA) 2021-004, which, among other changes, removed "solar power generation facility, major" from the list of uses requiring a CUP in the GMAAD zone and therefore prohibits this type of use in the GMAAD. The regulatory background is discussed further in Section 1.4 of the Land Use Consistency Review (see Attachment D). Though the Project would not be in compliance with BCC 11.17 after the passage of OA 2021-004 if applicable, the Applicant submitted its CUP prior to the effective date of OA 2021-004 and argues the prior standards allowing a "solar power generator facility, major" in the GMAAD remain applicable. The Applicant also demonstrates in Sections 2.0 and 3.0 of Attachment D how the Project is substantially consistent with the applicable standards of the BCC and Comprehensive Plan. Furthermore, the Land Use Consistency Review and the detailed analysis provided in this ASC and associated attachments demonstrate how the Project's design, BMPs, and mitigation measures are compatible with the stated goals for protection of the GMAAD.
Natural Resource Lands under RCW 36.70A.030	There are no forest or mineral resource lands within the Siting Area. Agricultural land is defined under RCW 36.70A.030(3) as "land primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees not subject to the excise tax imposed by RCW 84.33.100 through 84.33.140, finfish in upland hatcheries, or livestock, and that has long-term commercial significance for agricultural production." Per RCW 36.70A.170(1)(a), counties shall designate, where appropriate, "Agricultural lands that are not already characterized

	by urban growth and that have long-term significance for the commercial production of food or other agricultural products." Benton County completed that designation analysis as described in the Comprehensive Plan (Benton County 2022a). Agricultural lands were designated based on the primary factors of urban growth (i.e., lands not already characterized by urban growth), production capability, and long-term commercial significance. Benton County's designation of agricultural lands of long-term commercial significance used the factors established in WAC 365-190-050(3) as well as County-specific supplemental factors as described in detail in the Land Use Consistency Review (Attachment D). Per the Comprehensive Plan, all lands within the GMA Agricultural designation, including those lands within the Siting Area, are agricultural resource lands under RCW 36.70A.030.
Benton County Critical Areas	As listed in Part 2, Section B.6, the Siting Area includes critical areas for wetlands, frequently flooded areas, aquifer recharge, geological hazards, and fish and wildlife habitat conservation. Further details regarding the existing conditions for these critical areas are provided in Part 4, Sections 1, 3, 5, and 9.
Shoreline Master Program	The northernmost edge of the Transmission Line Corridor Siting Area borders the Columbia River, where the Benton County Shoreline Master Program designates the shoreline as "Hanford." The Hanford shoreline intends to recognize and foster the unique economic, environmental, and recreational values of the Hanford area as it transitions over time from federal energy purposes to other land uses and management consistent with the Hanford Reach National Monument designation (Benton County 2021a). While a portion of the Transmission Line Corridor Siting Area occurs in the County's Shoreline Master Program designation, the Option 3 POI is setback approximately 0.8-mile from the Hanford shoreline environmental designation and no portion of the Project is anticipated to occur in the shoreline jurisdictional boundary.
Transportation, Utility, or Service Demands	Existing transportation conditions are discussed in Part 4, Section 20. Existing public service and utility conditions are discussed in Part 3, Sections 21 and 22, respectively. Where relevant for assessment of Benton County code criteria, aspects of transportation, public service, and utility conditions are also addressed in the Land Use Consistency Review (see Attachment D).

4.14.C Changes to and from Existing Condition

4.14.C.1 Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.

☐ No	☒ Yes	
	Topical Area/issue	**Changes**
	Changes to Land Ownership	Ownership of the land within the Siting Area will not change as a result of the Project. The Applicant has executed or is pursuing Lease or Easement Option Agreements with the underlying property owner (Attachment A, Figure A-1 and Attachment B).
	Existing Land Use	Existing land uses in the Siting Area include dryland and irrigated agriculture, rangeland, undeveloped areas, local roads, electrical infrastructure (e.g., transmission and distribution lines, substations), and scattered unoccupied structures (e.g., agricultural storage). Adjacent land uses surrounding the Siting Area are similar and also include scattered rural residences, rangelands, state highways, and Hanford Reach National Monument (Rattlesnake Unit of the Fitzner/Eberhardt Arid Lands Ecology Reserve). The Project Area is a subset of the Solar Array Siting Area and Transmission Line Corridor Siting Area and includes the approximately 6,000-acre area where the solar array and associated supporting components will be sited during final engineering design. In addition, the Applicant is pursuing the ability to use sheep grazing through a local grazing partnership to manage vegetation around the panel racking system, thus implementing a dual use strategy of the land that would preserve the agricultural integrity of the land while simultaneously producing renewable energy. Within the Project Area, the Project's permanent disturbance during the life of the Project based on the preliminary site plan provided in Attachment A, Figure A-2 will occupy approximately 188 acres, or just under 0.03 percent of GMA Agricultural lands. The permanent disturbance area includes roads, buildings, or other impervious surfaces identified in Part 2, Table B.2. The Project's anticipated permanent disturbance to mapped cropland is approximately 10 acres, or 0.002 percent of GMA Agricultural lands, which would be a small reduction of farmland used for crop and livestock production throughout Benton County (WSDA 2021, Attachment D, Figure 2). Landowners will be able to continue operations on lands outside of the Project's permanent development footprint,

		sheep grazing is being pursued through a local grazing partnership to manage vegetation within the solar array perimeter fence, and agricultural activities will not be precluded under the overhead 230 / 500-kV gen-tie line route to the extent both feasible and desired. Upon Project decommissioning, the land will be restored pursuant to EFSEC's rules and conditions in the Site Certification Agreement, as well as based on property owner requests, to allow current and future agricultural uses to resume. The Applicant also demonstrates in the Land Use Consistency Review (see Attachment D) that the Project is compatible with surrounding agricultural uses because it minimizes impacts through implementation of environmental best practices related to noise, traffic, erosion control, stormwater management, dust mitigation, and noxious weed control. Minimal traffic impacts are expected during operation for the estimated up to five maintenance employees. In summary, the Project will not result in functional changes to adjacent and other working agricultural lands in Benton County. See the Land Use Consistency Review (Attachment D) for additional details regarding land use consistency and compatibility.
	Electrical Infrastructure / Electrical Generation Capacity and Service	The Project will be a new source of clean renewable energy and is designed to take advantage of the region's renewable solar energy resources and adjacent transmission interconnection with the existing BPA transmission system. The Project's three possible POI options are described in Part 2, Section A.2.a. In addition, construction and operation of the Project will help Washington meet its goal of 100 percent clean electricity supply as set forth in the Clean Energy Transformation Act, passed by the Washington legislature in 2019 (RCW 19.405.010).
	Benton County Comprehensive Plan Designation	The Applicant has carefully reviewed the goals and policies of the Comprehensive Plan and evaluated how they inform this ASC. The Project is entirely within the County's GMAAD zoning district, which is part of the County's GMA Agricultural land use designation in the Comprehensive Plan. As a "solar generation facility, major," the Project was previously a conditionally allowed use in the GMAAD prior to the adoption of OA 2021-004, and therefore was previously considered compatible with surrounding land uses in the GMAAD as long as certain conditions were met as required by the CUP process. Section 2.0 of the Land Use Consistency Review (Attachment D) demonstrates further how the proposed Project is consistent with applicable Comprehensive Plan (Benton County 2021c) goals and

		policies. In adopting OA 2021-004, Benton County did not change its comprehensive plan to reflect the change in the zoning code.
	Benton County Zoning District	Section 3.0 of the Land Use Consistency Review (Attachment D) describes how the proposed Project is consistent with the County's zoning code requirements that are applicable to the Project in the GMAAD zoning district. Despite the adoption of OA 2021-004, the Applicant demonstrates the Project is able to meet the lot, building, and setback requirements of the conditional use and general use regulations that would have been required prior to OA 2021-004.
	Natural Resource Lands under RCW 36.70A.030	Agricultural land is defined under RCW 36.70A.030(3) as "land primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees not subject to the excise tax imposed by RCW 84.33.100 through 84.33.140, finfish in upland hatcheries, or livestock, and that has long-term commercial significance for agricultural production." Per RCW 36.70A.170(1)(a), counties shall designate where appropriate, "Agricultural lands that are not already characterized by urban growth and that have long-term significance for the commercial production of food or other agricultural products." The Applicant demonstrates in the Land Use Consistency Review (see Attachment D) that the Project is designed to be compatible with ongoing agricultural activities. Operation of the Project will not conflict with agricultural uses on surrounding lands and represents compatible use in the GMA Agricultural lands designation. As stated above, the permanent disturbance would be a small reduction of farmland used for crop and livestock production throughout Benton County. The Applicant analyzed the Natural Resources Conservation Service (NRCS) soil classifications and determined that of the acres within the Siting Area classified by NRCS as prime farmland if irrigated, only 1,354 acres (all entirely within the Transmission Line Corridor Siting Area that would have minimal permanent impacts in pole placement locations) are irrigated and should be considered prime farmland. The irrigated lands occur entirely within the Transmission Line Corridor Siting Area (Attachment D, Figure 3) and Project operations will not preclude existing farm activities under the overhead 230 / 500-kV gen-tie line route. No irrigated land occurs within the Solar Array Siting Area (Attachment D, Figure 3). The Project has been designed to avoid impacts to the majority of acres within the Siting Area that would be designated Farmland of Unique Importance or Farmland of Statewide

		Importance. See Table 1 in Attachment D for additional detail. The Project will obtain water for construction and operation from existing sources with a verified water right. Anticipated water needs are conservatively described in Part 4, Section 3 of the ASC. Section 2.0 of the Land Use Consistency Review (Attachment D) demonstrates further how the proposed Project is consistent with applicable Comprehensive Plan (Benton County 2021c) goals and policies specifically related to Natural Resource Lands.
	Benton County Critical Areas	The Land Use Consistency Review (see Attachment D) demonstrates that the Project will comply with Benton County's applicable critical area regulations. Additional details regarding critical areas are provided in Part 4, Sections 1, 3, 5, and 9.
	Shoreline Master Program	As stated above, the Transmission Line Corridor Siting Area borders Hanford shoreline designation in Benton County. Management policies for the Hanford shoreline state that "high intensity uses in shoreline jurisdiction should be limited to heavy and light industry, energy generation and transmission, research and development, and environmental cleanup" (Benton County 2021a). As described in Part 4, Section 4.14.B above, a portion of the Transmission Line Corridor Siting Area occurs in the County's Shoreline Master Program designation. However, the Option 3 POI and overhead 230-kV / 500-kV gen-tie line route is setback approximately 0.8 mile from the Hanford shoreline environmental designation and no portion of the Project is anticipated to occur in the shoreline jurisdictional boundary.
	Transportation, Utility, or Service Demands	Potential impacts to transportation conditions are discussed in Part 4, Section 20. Impacts to public services and utilities are discussed in Part 3, Sections 21 and 22, respectively. Where relevant for assessment of Benton County code, aspects of the transportation, public service, and utility impact analyses are also incorporated in the Land Use Consistency Review (see Attachment D). Overall, the Project is not anticipated to significantly increase demands on transportation, public services, or utilities. Construction traffic is expected to be within the capacity of existing roadways and will not block or obstruct access to surrounding lands. A Traffic Control Plan will be developed with input from WSDOT and Benton County as needed. Operational traffic generated by approximately five staff and annual panel washing activity would be negligible. The existing capacity of local public services and utilities will accommodate the limited extent of such services needed for

		the Project, and therefore, no mitigation would be required. Additionally, the project would generate significant tax revenue for the County over the life of the project that would support the maintenance and expansion of such services. For example, the property tax payments to the County from the proposed Project would generate up to an estimated $55 million over the life of the Project for an up to 280-MW layout or up to an estimated $98 million over the life of the Project for an up to 500-MW layout. Total tax revenues over the life of the Project (including sales and use tax during construction and property tax payments) are estimated at about $65 million for the up to 280-MW layout and about $116 million for the up to 500-MW layout.

4.14.C.2 Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?

☒ **No**	☐ **Yes**	
	Topical Area/issue	**Changes**
	The current land use of the Siting Area does not affect the Project. The Project was developed with four main goals identified in Part 1, Section B. These goals include: (1) delivering low cost reliable energy, (2) avoiding expensive and lengthy infrastructure projects by using existing electrical infrastructure more wisely to reduce customer energy costs, (3) minimizing natural resource impacts while maximizing community benefits (such as building on non-irrigated low productivity disturbed grazing land outside of high value habitat areas while generating long-term economic benefits), and (4) maintaining the productive agricultural nature of the land by constructing a project that helps create a new standard for Washington solar energy in which PV generation and agricultural production can work in concert with each other instead of conflict. Further, as a “solar generation facility, major,” the Project was previously a conditionally allowed use in the GMAAD district prior to OA 2021-004. The Project’s inconsistency with Benton County’s recently amended zoning regulations for the GMAAD does not change the siting considerations or Project’s compatibly with surrounding land uses. The Project is designed to be consistent with the zoning code provisions stricken from the code, including mitigation measures proposed for EFSEC’s consideration in accordance with WAC 463-28-070. As described above, the Project was designed to meet the setback and other land use restrictions in the GMAAD. Similarly, those setback and land use restrictions would make conflicting land uses, such as those that would block the Project site’s solar exposure or disrupt access to the Siting Area for operations and maintenance, unlikely.	

4.14.D Proposed Mitigation and Monitoring

☐ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?

☒ No	**☐ Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Based on the information provided above in Section 4.14.C and in the Land Use Consistency Review (see Attachment D), the Project will have no significant adverse effects on land use. Therefore, no land use mitigation or monitoring measures are proposed. Mitigation measures specific to other topics (e.g., wetlands and surface waters, wildlife habitat, or geological hazards) are addressed in their respective resource sections in Part 3 and Part 4 of this application and are summarized in Part 2, Section A.5.		

4.14.E Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?

☒ No	**☐ Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

4.14.F References

Benton County. 2021a. Benton County Shoreline Master Program. Last Amended September 14, 2021. Available online at: https://bentoncounty.municipalcms.com/files/documents/2021FinalDocumentSMPUpdate2-3-20221290614010211122PM.pdf

Benton County. 2021b. Benton County Planning Commission Meeting Audio, November 30, 2021. Available online at: https://www.co.benton.wa.us/agendaArchive.aspx?categoryid=1204&year=2021.

Benton County. 2021c. Benton County Planning Commission Meeting Minutes, December 21, 2021. Available online at: https://www.co.benton.wa.us/agendaArchive.aspx?categoryid=1181&year=2021.

Benton County. 2022a. Benton County Countywide Comprehensive Plan. Last Amended January, 2021. Available online at: https://co.benton.wa.us/pview.aspx?id=1425.

Benton County. 2022b. Benton County Code. Current through Ordinance Amendment 2021-004 passed December 2021. Available online at: https://co.benton.wa.us/pview.aspx?catid=45&id=1541.

WSDA (Washington Department of Agriculture). 2021. Agricultural Land Use Data. Available at: https://agr.wa.gov/departments/land-and-water/natural-resources/agricultural-land-use.

4.15 Housing

Part 4 Analysis is not required for this section.

4.16a Noise

4.16a.A Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.

Study name	Expected completion date	Expert agency participation Name, Title, and Involvement	Completed Y/N
Acoustic Assessment Report (Attachment Q)	Completed (December 2022)	Prepared by Tetra Tech, an environmental consultant for the Applicant	Y

☒ **Check this box when all proposed studies for this topic are completed**

4.16a.B Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.

Topical area/issue	Existing Condition and Problems
Regulatory	There are no noise regulations at the federal or County level with numerical decibel limits applicable to the Project. Chapter 6A.15 in the BCC regulates noise as a public nuisance and does not provide numerical decibel limits. Environmental noise limits are established at the state level by WAC 173-60, which places limits on sounds crossing property boundaries based on the Environmental Designation for Noise Abatement (EDNA) of the sound source and the receiving properties. Daytime (7:00 a.m. – 10:00 p.m.) and nighttime (10:00 p.m. – 7:00 a.m.) limits are prescribed. The WAC regulatory limits are absolute and independent of the existing acoustic environment; therefore, a baseline noise survey is not needed to determine conformance. The applicable WAC regulatory limits are further described in the Acoustic Assessment Report (see Section 1.3 and Tables 3 and 4 of Attachment Q).
Existing Conditions	As described Section 1.3 of Attachment Q, a baseline noise survey is not needed to demonstrate compliance with the WAC noise regulations. The existing sound level environment in the vicinity of the Project was estimated with a method published by the Federal Highway Administration (FHWA) in its Transit Noise and Vibration Impact Assessment (FHWA 2006). This document presents the general assessment of existing noise exposure based on the population density per square mile and proximity to area sound sources such as roadways and rail lines. The proposed Project is approximately 11 miles (17.7 kilometers) north of the city of Prosser, which has a population density of 1,302 per square mile according to the U.S. Census Bureau (2020). Using

	the FHWA method and Census data for Prosser, ambient sound levels near the Project area are approximately 50 dBA equivalent sound level (L_{eq}) during daytime hours, 45 dBA L_{eq} during evening hours, and 40 dBA L_{eq} during nighttime hours.

4.16a.C Changes to and from Existing Condition

4.16aC.1 Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.

☐ No	☒ Yes	
	Topical Area/issue	**Changes**
	Construction	Acoustic emission levels for activities associated with Project construction were analyzed in Attachment Q based on typical ranges of energy equivalent noise levels at construction sites, as documented by the EPA's (1980) "Construction Noise Control Technology Initiatives." The EPA methodology distinguishes between type of construction and construction stage. Using those energy equivalent noise levels as input to a basic propagation model, construction noise levels were calculated at a series of set reference distances. The assessment assumes construction work will not consist of a phased approach. Expected noise levels generated by the expected equipment to be used during Project construction are provided in the Acoustic Assessment Report (Attachment Q, Table 6). Noise levels resulting from the construction activities will vary significantly depending on several factors, such as the type and age of equipment, specific equipment manufacture and model, the operations being performed, and the overall condition of the equipment and exhaust system mufflers.
	Operation	Attachment Q presents modeling results for sound levels that are anticipated to be generated by the Project. Operational sound levels were analyzed using CadnaA (Computer Aided Noise Abatement; DataKustik GmbH 2020), an acoustic modeling software program that conforms with the International Organization for Standardization (ISO) 9613, Part 2: "Attenuation of Sound during Propagation Outdoors" (ISO 1996). The method described in this standard calculates sound attenuation under weather conditions that are favorable for sound propagation, such as for downwind

		propagation or atmospheric inversion, conditions which are typically considered worst-case. The Project's general arrangement was reviewed and directly imported into the acoustic model so that on-site equipment could be easily identified, buildings and structures could be added, and sound emission data could be assigned to sources as appropriate. The primary noise sources during operations are the solar array inverters and their integrated step-up transformers, BESS units, and collector substation transformers. The preliminary Project layout includes 150 step-up transformers distributed throughout the solar array areas. BESS units will be positioned in an approximately 40,000 square feet area approximately 200 feet west of the collector substation. The collector substation will have two 250 megavolt ampere (MVA) transformers. Sound emissions will be associated with the solar array transformers and inverters. Electronic noise from inverters can be audible but is often reduced by a combination of shielding, noise cancellation, filtering, and noise suppression. Substations have switching, protection, and control equipment, as well as power transformers, which generate the sound generally described as a low humming. The two transformer cores are the principal noise source at the Project collector substation, and cooling equipment (fans and pumps) are also noise components at this location. Details pertaining to the gen-tie line design have not been finalized and have not been included in the modeling analysis. Sound generated from the operation of the gen-tie line is not expected to impact sensitive receptors. Once the details of the Project's overhead 230-kV / 500-kV gen-tie line have been finalized, the noise analysis can be updated after further review, if needed. Reference sound power levels input to CadnaA were provided by equipment manufacturers, based on information contained in reference documents or developed using empirical methods. Broadband (dBA) sound pressure levels were calculated for expected normal Project operations assuming that all components identified previously are operating continuously and concurrently at the representative manufacturer-rated sound power level. It was assumed that all equipment would operate consistently during the daytime, while only the substation transformers and BESS units will operate during the nighttime. After calculation, the sound energy was then summed to

		determine the equivalent continuous A-weighted downwind sound pressure level at a point of reception. Attachment Q provides modeling results in both visual (i.e., sound contour) and tabular formats, providing received sound levels resulting from operation at discrete noise sensitive receptors (NSRs; i.e., non-participating residences) and at adjacent property lines containing non-participating residences. Incorporating a number of conservative assumptions, acoustic modeling results indicate that the Project will significantly comply with the 60 dBA daytime limit and 50 dBA nighttime limit at all non-participating NSRs implementing either BESS design configuration. In addition, the Project is predicted to comply with all the applicable WAC regulatory limits at the Project Siting Area boundary.

4.16a.C.2 Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?

☒ **No**	☐ **Yes**	
	Topical Area/issue	**Changes**
	N/A	N/A

4.16a.D Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?

☐ **No**	☒ **Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Best Management Practices (BMPs) - Noise	Washington Administrative Code (WAC) 173-60-050 exempts temporary construction noise from the state noise limits; however, BMPs will be implemented to reduce off-site construction noise impacts. Since construction equipment operates intermittently, and the types of machines in use at the Project change with the stage of	EFSEC

		construction, noise emitted during construction will be mobile and highly variable, making it challenging to control. Furthermore, reasonable efforts will be made to minimize the impact of noise resulting from construction activities, including implementation of standard noise reduction measures listed below. Due to the infrequent nature of loud construction activities at the site, the limited hours of construction, and the implementation of noise mitigation measures, the temporary increase in noise due to construction is considered to be a less than significant impact. The construction management protocols will include the following noise mitigation measures to minimize noise impacts: • Maintain construction tools and equipment in good operating order according to manufacturers' specifications. • Limit use of major excavating and earth-moving machinery to daytime hours per WAC 173.60.050. • To the extent practicable, schedule construction activity during normal working hours on weekdays when higher sound levels are typically present and are found acceptable. Some limited activities, such as concrete pours for transformer pad foundations or the parking area if needed, will be required to occur continuously until completion. • Equip any internal combustion engine used for any purpose on the job or related to the job with a properly operating muffler that is free from rust, holes, and leaks. • For construction devices that use internal combustion engines, ensure the engine's housing doors are kept closed, and install noise-insulating material mounted on the engine housing consistent with manufacturers' guidelines, if possible. • Limit possible evening shift work to low-noise activities such as welding, wire pulling, and other similar activities, together with appropriate material-handling equipment. • Use a complaint resolution procedure to address any noise complaints received from residents.	

4.16a.E Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?

☒ No	☐ Yes	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

4.16a.F References

DataKustik GmbH. 2020. Computer-Aided Noise Abatement Model CadnaA, Version MR 1 Munich, Germany.

EPA (U.S. Environmental Protection Agency). 1980. Construction Noise Control Technology Initiatives. Technical Report No. 1789. Prepared by ORI, Inc. Prepared for USEPA, Office of Noise Abatement and Control. September 1980. Available at: http://www.nonoise.org/epa/Roll5/roll5doc22.pdf

FHWA (Federal Highway Administration). 2006. FHWA Roadway Construction Noise Model User's Guide, FHWA-HEP-05-054, January.

ISO (International Organization for Standardization). 1996. Standard ISO 9613-2 Acoustics – Attenuation of Sound during Propagation Outdoors. Part 2 General Method of Calculation. Geneva, Switzerland.

U.S. Census Bureau. 2020. Decennial Census of Population and Housing Datasets. Available online at: https://www.census.gov/data/developers/data-sets/decennial-census.html

4.16b Light, Glare, and Aesthetics

4.16b.A Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.

Study name	Expected completion date	Expert agency participation Name, Title, and Involvement	Completed Y/N
Visual Resources Technical Report (Attachment H)	Completed (October 2022)	Prepared by SWCA, environmental consultant for the Applicant.	Y
Glint and Glare Analysis (Attachment G)	Completed (October 2022)	Prepared by Tetra Tech, environmental consultant for the Applicant.	Y

☒ Check this box when all proposed studies for this topic are completed

4.16b.B Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.

Topical area/issue	Existing Condition and Problems
General description of site	The Siting Area includes a Solar Array Siting Area to the south (11,179 acres) and a Transmission Line Corridor Siting Area to the north (10,841 acres). The final Project Area subject to development within the Siting Area is anticipated to be up to approximately 6,000 acres.
Visual Setting	As described in the Visual Resources Technical Report (Attachment H), the proposed Siting Area is located on unincorporated land in Benton County, Washington. The general setting of the Siting Area and surrounding areas are characterized by rural rangeland and agricultural lands with limited residential or commercial development. The Siting Area is characterized by a low-lying valley to the south with undulating topography and hills to the north. Agricultural and rural residential development has spread outward from the major arterial roadway corridors, including State Highways 24, 240, 241, 225, and Interstate (I) 82. Denser development follows I-82 (south of the Project Area), including Prosser approximately 7 miles to the southeast, Sunnyside approximately 6 miles to the west, and Grandview approximately 5.5 miles to the southwest of the Project. Matney Spring and the resulting Spring Creek begin just outside of the Project Area boundaries to the northeast and run south though the Siting Area. Landscape colors in the area consist of light brown to tan and gray soils, with green and yellow-green vegetation primarily made up of grasses and sage in the natural

	rangeland areas. These naturally vegetated areas contrast with the lusher deep green vegetation of the agricultural areas and maintained vegetation that surrounds residences. The majority of the Siting Area is privately owned. One state-owned parcel is surrounded by the land proposed for the Solar Array Siting Area. The Siting Area and Transmission Line Corridor Siting Area are bordered on the north by federal lands within the Saddle Mountain National Wildlife Refuge, which is a part of Hanford Reach National Monument. One rural residence with multiple supporting residential and agriculture structures, which is located at the intersection of Anderson Road and North Missimer Road, is completely enclosed by the Solar Array Siting Area. The Applicant has indicated that there are no installations planned for this residential area and has included a construction buffer around the residence to minimize potential disturbance. Existing sources of artificial light in the Siting Area are limited to structural lighting at interspersed scattered residential locations and security lighting from the existing substation. Mobile sources of light and glare originate from automobile traffic on surrounding roadways. Sources of glare in the Project Area include windows and reflective building materials such as metal roofs or siding.
Visibility of the site	The Visual Resources Technical Report (Attachment H) determined that visibility of the Siting Area varies between directional viewpoints and proximity to the Siting Area. Views of the Siting Area may be available from a greater distance but, in general, also tend to be limited to a short distance from the Siting Area due to intervening terrain, buildings, and vegetation.

4.16b.C Changes to and from Existing Condition

4.16b.C.1 Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.

☐ No	☒ Yes	
	Topical Area/issue	**Changes**
	Views	Depending on the viewpoint, views of the Siting Area will shift from agricultural uses, rural residential, local roadways, and existing substation and electrical transmission lines to solar arrays and supporting components associated with a solar energy generation facility. These views will be experienced primarily by drivers traveling on Highway 24, Cold Creek Road, County Line Road, North Missimer Road, and Bennett Road.

		Attachment O identifies nine key observation points (KOPs) that were selected to assess the level of visual change resulting from the Project using the BLM contrast rating system (BLM 1986). This system uses criteria to evaluate the degree of visual contrast (i.e., none, weak, moderate, and strong) and was followed to objectively measure potential changes to the visual environment. The BLM's contrast rating system is summarized in Section 1.6.2 of Attachment H. The nine selected KOPs provide views of each side of the Siting Area from publicly accessible locations. Factors considered in the selection of the KOPs included locations with sensitive viewers (e.g., local residences, recreationists, and motorists) and potential for the Siting Area to be visible (e.g., distance and view angle). Potential visual impacts at each KOP are evaluated using the BLM contrast rating system (see Appendix A of Attachment H). The Project will result in weak to strong contrast with the surrounding landscape based on the addition of the Project's structural components. The Project will not be visible from Highway 225 because of distance and the screening of the Project by terrain, buildings and vegetation and there will be no contrast. Views of the Project along Highway 241, W Snipes Road, N Wilgus Road, N Gap Road, and I-82 will be mostly limited to the edges of the Project closest to these roadways. Most of the Project facilities are screened by terrain, buildings, and vegetation. The level of contrast will be weak. The Project is clearly visible from KOPs along Highway 24, Cold Creek Road, County Line Road, North Missimer Road, and Bennett Road. From these KOPs, the landscape will appear heavily altered and modifications made by Project elements will dominate the visual setting of the landscape. Project elements will introduce form, line, color, texture not common to the surroundings, and be out of scale and contain detail that is out of character with the natural landscape as viewed in the foreground/middleground area. Views of the Project will attract attention and co-dominate or dominate the landscape. Depending on the proximity, the Project will result in moderate to strong contrasts with the existing landscape. See Attachment H for a detailed analysis of the KOPs, including representative visual simulations of how the Project may appear in the region (see Appendix B of Attachment H).
	Light	The Project is not expected to create a substantial new source of nighttime lighting. The Project will provide external safety lighting for both normal and emergency conditions at the primary access points, Project collector substation, BESS, and O&M building. However, lighting will be designed to provide the minimum illumination needed to achieve safety and security

		and will include mitigation measures such as being motion and/or switch-activated and downward-facing and shielded lighting to focus illumination in the immediate area. Therefore, the Project will not introduce a significant source of light that will impact views in the area.
	Glare	The glare analysis conducted for the Project analyzed potential glare hazards to residents, motorists, and pilots in the area. No significant glare impacts were predicted. See Attachment G for further discussion of the glare analysis and the modeling results. Therefore, the Project will not introduce a source of glare that will significantly impact motorists, residents, or pilots in the area.

4.16b.C.2 Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?

☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**
	N/A	N/A

4.16b.D Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?

☐ **No**	☒ **Yes**		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	The following are recommended best management practice (BMP) options to reduce visual impacts for Project components and activities if needed and feasible: • Locate and operate solar collectors to avoid off-site glare. • Screen solar collectors to avoid off-site glare. • Use anti-reflective glare coatings.	The Project location, design of solar facilities, and BMPs will be implemented to be the least visually obtrusive by blending in with the existing surrounding landscape. Colors, lighting, and surface treatments will reduce contrast with existing landscape and reduce creation of glare. Maintenance and/or addition of natural vegetation will assist with blending in with the existing surrounding landscape. Limits on lighting will eliminate light spill and trespass.	N/A

	• Maintain color-treated surfaces of solar collectors. • Maintain and utilize natural vegetation barriers for mitigation of solar glare where possible. • Avoid complete removal of vegetation beneath solar collector array. • Maintain and preserve the existing vegetation within the Siting Area to the greatest extent possible to reduce overall project impact. • If additional vegetation is used to enhance mitigation of project components, it should be similar to the non-invasive vegetation types that are currently present in the surrounding area. • Color treat structures to reduce contrasts with existing landscape. • Color treat grouped structures using the same color. • Color treat transmission line poles to reduce contrasts with existing landscape. • Maintain painted, treated, stained, or coated surfaces properly.		

	• Direct lights properly to eliminate light spill and trespass. • Use timers or motion sensors on building lighting to minimize unnecessary lighting. • Minimize lighting usage during construction and operations.		

4.16b.E Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?

☒ **No**	☐ **Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

4.16b.F References

BLM (Bureau of Land Management). 1986. Visual Resource Inventory. BLM Manual Handbook H-8410-1.

4.17 Recreation

Part 4 Analysis is not required for this section.

4.18 Archaeological and Historical Resources

4.18.A Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.

Study name	Expected completion date	Expert agency participation Name, Title, and Involvement	Completed Y/N
Cultural Resources Survey Report for the Hop Hill Solar Project (confidential Attachment M)	January 2023. The Cultural Resources Survey Report is drafted and the final version that incorporates DAHP and tribal review will be provided to EFSEC.	Prepared by Warm Springs GeoVisions; cultural resources consultant for the Applicant. The Department of Archaeology and Historic Preservation (DAHP), cultural survey review Washington EFSEC, permitting agency Confederated Tribes and Bands of the Yakama Nation Confederated Tribes of the Umatilla Indian Reservation The Nez Perce Tribe The Confederated Tribes of Warm Springs	N

☐ **Check this box when all proposed studies for this topic are completed**

4.18.B Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.

Topical area/issue	Existing Condition and Problems
Site Conditions from Cultural Resources Survey	A Pedestrian Surface Survey was performed on the 4,908-acre Area of Potential Effect (APE) for cultural resources in August and September of 2022 (confidential Attachment M). The survey and APE did not include an undetermined as-of-yet gen-tie corridor proposed to be up to 150 feet wide within the Transmission Line Corridor Siting Area. The background research on the cultural resources within the 4,908-acre APE did not identify any previously recorded resources within the APE. Four sites were previously recorded within one mile of the APE. Fifty-five archaeological resources were identified over the course of the survey for the 4,908-acre APE. The 55 archaeological resources consist of 46 archaeological sites and 9 archaeological

	isolates. The 46 archaeological sites consist of 3 pre-contact sites, 40 historical sites, and 3 multiple component sites with both pre-contact and historic archaeological resources found within their boundaries. The 9 isolates consist of 2 pre-contact isolates and 7 historic isolates. Eligibility testing has not yet been completed for the majority of archaeological sites identified by this survey. Precontact archaeological sites are protected by RCW 27.53, and input from the Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of Warm Springs is needed to determine their significance. Historic sites are not protected under RCW 27.53 but are protected under the National Historic Preservation Act of 1966 (as amended).

4.18.C Changes to and from Existing Condition

4.18.C.1 Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.

☐ No	☒ Yes	
	Topical Area/issue	**Changes**
	Disturbance of archaeological and historic property sites.	The Project has been designed to avoid direct impacts on cultural resources that are eligible or unevaluated/potentially eligible for listing on the NRHP or Washington Historic Register (WHR) when feasible. As currently designed, the Project has no direct impacts on sites identified, which are avoided by a minimum of 30 meters (100 feet), except for site HH-S11, which has a smaller buffer proposed. Untested isolates are being evaluated for avoidance or further testing. The Applicant remains in coordination with the Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of Warm Springs regarding appropriate buffers for sites that may hold traditional significance to their tribal members and intends to employ cultural monitors in order to guarantee avoidance. If additional sites are discovered during the process of construction, the Applicant will try to avoid them to adhere to the intended 100 percent avoidance policy. In the event that avoidance is impossible for any newly discovered site the applicant will adhere to practices laid out in the Inadvertent Discovery Plan (IDP; confidential Attachment M). In the case of culturally significant sites to the Tribes, the Applicant will assess best mitigation practices by

		coordinating with the Tribes (i.e., Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, Confederated Tribes of Warm Springs) and coordinating with DAHP. In the case of non-culturally significant sites, the Applicant will coordinate with DAHP to assess NRHP eligibility.
	A disturbance within unsurveyed areas.	A pedestrian survey of the entire Solar Array Siting Area was not conducted; however, the proposed Project Area located within the Solar Array Siting Area has had a pedestrian survey completed. A pedestrian survey of the area within the up to 150-foot-wide gen-tie easement within the Transmission Line Corridor Siting Area will be completed prior to construction. These areas may include significant archaeological and historic property sites. If such resources are identified during future planned surveys, the Applicant intends to avoid those resources by establishing a 30-meter buffer of the resource and continuing to coordinate regarding impacts to resources with traditional significance. Where avoidance is infeasible, the Applicant will adhere to practices laid out in the IDP (confidential Attachment M). In the case of culturally significant sites to the Tribes, the Applicant will assess best mitigation practices by coordinating with the Tribes (i.e., Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, Confederated Tribes of Warm Springs), and coordinating with DAHP. In the case of non-culturally significant sites, the Applicant will coordinate with DAHP to assess NRHP eligibility and any necessary mitigation.
	Modern development within the setting of historic property sites on adjacent parcels.	A survey of historic property sites has not been conducted on adjacent parcels.

4.18.C.2 Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?

☐ **No**	☒ **Yes**	
	Topical Area/issue	**Changes**
	Avoidance of significant impacts on archaeological and historical resources.	As currently proposed, the Project has been designed to avoid a 30-meter buffer around NRHP and WHR-eligible or unevaluated/potentially eligible resources, with the exception of Site HH-S11, which has a smaller buffer proposed. The Applicant re-designed portions of the

		Project to avoid cultural sites following the completion of the survey. Additionally, the Applicant remains in coordination with the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of Warm Springs regarding appropriate buffers for those sites that may hold traditional significance to their Tribal members. The Preliminary Site Plan in Figure A-2 to Attachment A demonstrates potential impacts based on a Project design that assumes worst-case disturbances to identified resources. If any precontact-era archaeological resource or an NRHP-eligible historic-era archaeological resource is impacted by the Project's final design, the Applicant will follow the procedures outlined in the IDP (in confidential Attachment M). The Applicant will continue to coordinate with the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of Warm Springs regarding the impacts to resources with traditional significance. The same efforts will be made for any precontact sites or NRHP-eligible historic-era archaeological sites that may be identified through future surveys of the 150-foot-wide gen-tie easement within the Transmission Line Corridor Siting Area that has not been field surveyed.

4.18.D Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?

☐ No	☒ Yes		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Avoidance of Protected Sites	Given the National Register of Historic Places (NRHP) or register-eligibility and/or protection under Revised Code of Washington (RCW) 27.53 of the 46 identified archaeological sites, these resources should be avoided by the Project's final layout. A minimum avoidance buffer of 30 meters (100 feet) around the sites is necessary to ensure the Project's policy of avoidance (confidential Attachment M) and is achieved in the current Project	DAHP, EFSEC, Confederated Tribes and Bands of the Yakama Nation (CTBYN), Confederated Tribes of the Umatilla Indian Reservation (CTUIR), Nez

		design, with the exception of site HH-S11, which has a smaller buffer proposed. Cultural monitors will be present during all processes of construction to ensure these buffered areas are avoided in totality and to ensure IDP compliance.	Perce Tribe (NPT), Confederated Tribes of Warm Springs (CTWS)
	Completion of Archaeological Survey	The entirety of the Project Siting Area has not been surveyed. A pedestrian survey of the entire Solar Array Siting Area was not conducted; however, the proposed Project Area located within the Solar Array Siting Area has had a pedestrian survey completed. Unsurveyed areas within the up to 150-foot-wide gen-tie easement within the Transmission Line Corridor Siting Area will be surveyed before construction with both pedestrian and extensive subsurface components.	DAHP, EFSEC, CTBYN, CTUIR, NPT, CTWS
	Archaeological Excavation Permit	Currently, there is no archaeological excavation permit.	DAHP, EFSEC, CTBYN, CTUIR, NPT, CTWS
	Inadvertent Discovery Plan (IDP)	A Project-specific IDP will be finalized before Project implementation, and a draft will be provided in the appendix of the forthcoming report. In the event that an unrecorded archaeological resource, intact archaeological deposits/ancestral remains, funerary items, or objects of cultural heritage (patrimony) are identified during Project construction or operation, work within 30 meters (100 feet) of the find will be halted and directed away from the discovery until it can be assessed in accordance with steps in the IDP (in confidential Attachment M). All contractors will be trained in the prescribed actions held therein. The IDP does not contain any confidential information and is intended to be shared with Project personnel and contractors.	DAHP, EFSEC, CTBYN, CTUIR, NPT, CTWS
	Continued Coordination with Native American Tribes	For Native American-related or potentially related resources, including but not limited to traditional hunting and plant gathering areas, traditionally utilized plant and animal resources, archaeological resources, ancestral remains, funerary items, objects of cultural heritage (patrimony), areas of spiritual significance, etc., that may be indirectly impacted by visual and/or auditory effects of the Project, coordination with the	DAHP, EFSEC, CTBYN, CTUIR, NPT, CTWS

		Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of Warm Springs, the Confederated Tribes of the Umatilla Indian Reservation, and the Nez Perce Tribe would be continued to assess any indirect Project impacts. Coordination and open communications will continue with the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of Warm Springs, the Confederated Tribes of the Umatilla Indian Reservation, and the Nez Perce Tribe during Project permitting and design to incorporate Tribal input regarding avoidance of potential impacts to cultural resources, including traditional use areas or other areas of significance to the Tribes.	

4.18.E Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?

☒ **No**	☐ **Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

4.18.F References

None.

4.19 Cultural Resources

4.19.A Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.

Study name	Expected completion date	Expert agency participation Name, Title, and Involvement	Completed Y/N
Cultural Resources Survey Report for the Hop Hill Solar Project (confidential Attachment M)	January 2023. The Cultural Resources Survey Report is drafted and the final version that incorporates DAHP and tribal review will be provided to EFSEC.	Prepared by GeoVisions; cultural resources consultant for the Applicant. The DAHP, prepared by Warm Springs GeoVisions; cultural resources consultant for the Applicant. Washington EFSEC, permitting agency Confederated Tribes and Bands of the Yakama Nation Confederated Tribes of the Umatilla Indian Reservation The Nez Perce Tribe The Confederated Tribes of Warm Springs	N

☐ **Check this box when all proposed studies for this topic are completed**

4.19.B Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.

Topical area/issue	Existing Condition and Problems
Existing tribal hunting or fishing rights	The Project Area consists of private land owned by non-tribal members that is part of the ceded lands of the Confederated Tribes and Bands of the Yakama Nation, as well as traditional lands of the Wanapum Band at Priest Rapids, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of Warm Springs.
Existing tribal plant gathering	Indigenous plants found through background research and observed during survey include rabbitbrush (*Chrysomanthus viscudiflorus*), threetip sagebrush (*Artemisia tripartite*), big sagebrush (*Artemisia tridentate*), sagebrush mariposa lily (*Calochortus macrocarpus*), spiny hopsage (*Grayia spinosa*), needlegrasses (*Stipa comate*), and bluebunch wheatgrass

	(*Agropyron spicatum*). Additional information regarding Tribal interest in plant species or known gathering locations may be made available via coordination with the Tribes (i.e., Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, Confederated Tribes of Warm Springs). It is important to note that culturally significant plants and gathering methods/seasonality may not be the same among all Tribes.
PreContact sites	Seven of the archaeological sites found during the Cultural Resources Survey of the Project area (confidential Attachment M) have been identified as sites associated with precontact activities: HH-S02, HH-S04, HH-S07, HH-S20, HH-S26, HH-S34, and HH-S46. The Project Area within the Solar Array Siting Area has been surveyed via pedestrian survey to date. It is possible that additional precontact sites may be identified when unsurveyed portions of the Project are surveyed.
A usual and accustomed area	The Project Area is within the ceded lands of the Confederated Tribes and Bands of the Yakama Nation per the 1855 Treaty with the Yakama, and the traditional lands of the Wanapum Band at Priest Rapids, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of Warm Springs.
Material culture artifacts	Archaeological sites related to Native Americans (precontact and/or historic-era) are representations of Native American material culture. At least seven of the archaeological sites identified by the Project's Cultural Resources Survey Report (confidential Attachment M) are associated with Native American occupation and land use. Additional Native American-related archaeological sites may be identified when unsurveyed portions of the Project are surveyed.
Activities on the site could impede views of tribal cultural sites	The Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of Warm Springs have not yet identified specific Tribal cultural sites that could be impacted by the Project to date. Tribal cultural sites may be identified during further review and communications with the Tribes.

4.19.C Changes to and from Existing Condition

4.19.C.1 Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.

☐ No	☒ Yes	
	Topical Area/issue	**Changes**
	Existing tribal hunting or fishing rights	This Project would restrict the ability to hunt or fish within the APE and affect fauna in the surrounding areas, thereby significantly altering existing hunting or fishing rights in the area.
	Existing tribal plant gathering	This Project would restrict access to plant life within the APE, as well as significantly affect plant life both within and around the APE, dependent on grading and vegetation management practices, thereby significantly affecting any existing tribal plant gathering.
	Tribal cultural sites	This Project would alter and possibly restrict access to all cultural sites within the APE, and alter access and use to sites around the APE.
	A usual and accustomed area	This Project would restrict access to the area within and around the APE. Any use of a usual and accustomed area would be affected.
	Material culture artifacts	This Project intends to avoid identified sites with a minimum of 30-meter (100-foot) buffers. Should there be an unavoidable unanticipated discovery, the Project would cease work within 30 meters (100 feet) of the site until an agreed upon course of action is identified and follow the process laid out by the IDP (confidential Attachment M).
	Activities on the site could impede views of tribal cultural sites	This Project would alter the visual landscape of the area within the APE and would therefore impede views of tribal and cultural sites with any line of site to the Project Area.

4.19.C.2 Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?

☐ No	☒ Yes	
	Topical Area/issue	**Changes**
	Tribal cultural sites	The Project will avoid by a minimum of 30 meters (100 feet) all known sites related to or potentially related to Native American activities. Those sites "potentially related to Native American activities" require further coordination with and input from the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of Warm Springs to determine their cultural affiliation. However, not all of the Project Area was accessible at the time of the cultural resources survey and additional such resources may be identified in the unsurveyed portions of the Project within the up to 150-foot-wide gen-tie easement within the Transmission Line Corridor Siting Area. The Applicant will coordinate with the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of Warm Springs regarding appropriate buffers for those sites that may hold traditional significance to their Tribal members and will continue to coordinate with these Tribes regarding impacts to resources with traditional significance. Given the NRHP or register-eligibility and/or protection under RCW 27.53 of the 46 identified Archaeological Sites these resources should be avoided by the Project's final layout. A minimum avoidance buffer of 30 meters (100 feet) around the sites and establishment of a Project specific IDP prior to Project implementation is necessary in order to ensure the project's policy of avoidance (confidential Attachment M) and is achieved in the current Project design. Cultural monitors will be present during all processes of construction to ensure these buffered areas are avoided, with the exception of Site HH-S11, in totality and to ensure IDP compliance. The same efforts will be made for any additional archaeological resources that may be identified through future surveys of the

		remaining Project Area that has not been surveyed.

4.19.D Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?

☐ No	☒ Yes		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Complete cultural resources survey	Revised Code of Washington (RCW) 27.53.060 (Disturbance of archaeological resource without permit) is addressed through identification of precontact archaeological resources and National Register of Historic Places (NRHP)-eligible historic-era archaeological resources in portions of the Project that were not identified in the field at the time of the Project's Cultural Resources Survey Report (confidential Attachment M). The entirety of the Project Area proposed for development within the up to 150-foot-wide gen-tie easement within the Transmission Line Corridor Siting Area was not accessible to the cultural resources survey conducted by GeoVisions at the time of its completion. The Applicant will ensure that any unsurveyed portions of the Project Area where development will occur will be surveyed for cultural resources prior to construction, boundary testing will occur in order to confirm identified surface boundaries, and identified sites will be avoided in the construction of Transmission Line Corridor Siting Area with a minimum avoidance buffer of 30 meters (100 feet) around the site boundaries (unless otherwise noted and approved in coordination with the tribes and Department of Archaeology and Historic Preservation [DAHP]) and adherence to the Project-specific Inadvertent Discovery Plan (IDP) in order to ensure the Project's policy of avoidance. In areas determined to be areas of high potential for subsurface materials an intensive subsurface survey will occur in order to determine the presence of sites. Any additional	DAHP, EFSEC, CTBYN, CTUIR, NPT, CTWS

		survey work by GeoVisions will continue to be conducted in coordination with the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of Warm Springs.	
	Avoidance of National Register of Historic Places (NRHP)- and Washington Historic Register (WHR)-eligible or unevaluated sites as well as sites protected by Revised Code of Washington (RCW) 27.53.060 when feasible and obtainment of Department of Archaeology and Historic Preservation (DAHP) excavation permit, if necessary.	The Project, as currently designed, avoids direct impacts on precontact archaeological sites by a minimum of 30 meters (100 feet). Untested isolates are being evaluated for avoidance or further testing. All sites and untested isolates are unevaluated for listing on the NRHP and WHR and are protected by RCW 27.53. Not all of the Project Area was accessible at the time of the cultural resources survey and additional such resources may be identified in the unsurveyed portions of the Project. The Preliminary Site Plan on Figure A-2 in Attachment A demonstrates the Project's intent to avoid identified resources. In order to avoid effects to unidentified archaeological sites, a Project-specific Inadvertent Discovery Plan (IDP) will be established prior to Project implementation. Briefing regarding the contents and the importance of the IDP will be provided to Project staff. If any pre-contact archaeological site or NRHP-eligible historic-era archaeological site related to Native American activities is impacted by the Project, IDP procedures will be followed and the Applicant will coordinate with the tribes regarding the resolution of any adverse effects caused by project implementation. The Applicant will obtain a DAHP excavation permit to perform any necessary archaeological work in order to comply with RCW 27.53.	DAHP, EFSEC, CTBYN, CTUIR, NPT, CTWS
	Inadvertent Discovery Plan (IDP)	Revised Code of Washington (RCW) 27.53.060 (Disturbance of archaeological resource without permit) is addressed through stop work orders if an unanticipated archaeological resource is discovered during construction. RCW 27.44.040 (Protection of Indian graves) is addressed through stop work orders in the instance of an unanticipated discovery of an unidentified archaeological	DAHP, EFSEC, CTBYN, CTUIR, NPT, CTWS

		deposit, human remains, funerary items, or items of cultural patrimony. In the event unrecorded archaeological resources are identified during Project construction or operation, work within 30 meters (100 feet) of the find will be halted and directed away from the discovery until it can be assessed in accordance with steps in the IDP provided in confidential Attachment M. This plan does not contain any confidential information and will be shared with Project personnel and contractors.	
	Ongoing Communication with Tribes	The Applicant will continue to coordinate with the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of Warm Springs regarding Tribal resources that may be affected by the Project. Additionally, the Applicant will continue to coordinate with the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of Warm Springs, and the Nez Perce Tribe regarding final design in relation to Native American cultural resources. Communication will remain open to better facilitate any response to inadvertent discoveries during construction.	DAHP, EFSEC, CTBYN, CTUIR, NPT, CTWS

4.19.E Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?

☒ **No**	☐ **Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

4.19.F References

None.

4.20 Traffic and Transportation

4.20.A Studies

Describe any studies that have already been conducted or will be conducted related to this topic and provide the expected timing for the completion of studies to be completed.

Study name	Expected completion date	Expert agency participation Name, Title, and Involvement	Completed Y/N
No studies are proposed for traffic and transportation.			

☒ **Check this box when all proposed studies for this topic are completed**

4.20.B Existing Condition and Issues

Describe the existing condition for this topic, including any existing problems associated with the issue being discussed.

Topical area/issue	Existing Condition and Problems
Transportation Systems	Figure A-2 in Attachment A shows the road network in the Project vicinity. Project traffic will reach the Project site via SR 241 and Sheller Road through Yakima County or along I-82 from the east. SR 241 is classified by WSDOT as a Rural Major Collector by the WSDOT Functional Classification Map (2022a). Sheller Road is classified by WSDOT (2022a) as a Rural Major Collector until it crosses the north-south running Bethany Road to the east, after which it has a local access classification by the Yakima County Transportation Element Maps - Horizon 2040 Comprehensive Plan (2017). Continuing east, Sheller Road becomes Anderson Road at County Line Road, the boundary between Yakima County to the west and Benton County to the east. Anderson Road continues east to intersect N Missimer Road. From there, the Project traffic may turn north and continue approximately 8.5 miles to the Project site. Anderson Road and N Missimer Road are both classified by Benton County Public Works Department Public Works Map (2022) as Rural Local Access roads. I-82 is classified by WSDOT (2022a) as an Interstate. Traffic traveling from the southeast on I-82 would exit on to N Gap Road, travel north for 2.5 miles, then turn west onto McCreadie Road. From there, the project traffic would continue west 1.0 miles then turn north on to N Missimer Road, and travel the remaining 13 miles to the Project site. N Gap Road is classified as both a Major Collector and a Minor Collector by WSDOT (2022a). McCreadie Road is classified as a Minor Collector by WSDOT (2022a). The intersection of Sheller Road and SR 241 is located in Yakima County. Access to Sheller Road will occur solely from SR 241, and SR 241 will be accessed from the north via SR 24. SR 24 to SR 241 will be the preferred route for the limited oversize deliveries for

	Project construction, such as support poles for the transmission line or the main power transformers. The majority of roads leading to the Project Area are paved and include I-82, SR 24, and SR 241. At the county line, where Sheller Road becomes Anderson Road, the road surface changes from paved to gravel. Anderson Road through to N Missimer Road is gravel. The regional highways and local streets that may be used by workers coming from homes or hotels to the Project Area are paved. The intersection with SR 24 and SR 241 is a two-way stop-controlled four-leg intersection. The intersection of SR 241 with Sheller Road as well as the intersection with W McCreadie Road with N Gap Road and W McCreadie Road with N Missimer Road is a two-way stop controlled four-leg intersection as well. Section 4.20.C below provides a summary of anticipated Project construction routes. The assessment provided in this section relies on WSDOT data, as well as aerial and street imagery provided by Google Maps (2022). Based on a review of this imagery and information provided on the WSDOT Corridor Sketch Summary Viewer (WSDOT 2022b), a summary of road conditions (all asphalt) by route follows: • SR 24: Mostly good to very good condition, with less than 5 percent of the route considered fair condition (per SR 24 Corridor Sketch Summary 2018). • SR 241: Appears to be in fair to good condition by aerial and street imagery, although the street imagery is dated 2012. No WSDOT ratings are available. • SR 240: Approximately 80 percent good to very good condition, with over 15 percent in fair condition and under 5 percent poor and very poor condition (per SR 240 Corridor Sketch Summary 2018). • I-82: Approximately 80 percent good to very good condition, with approximately 15 percent fair and 5 percent poor and very poor (per I-82 Corridor Sketch Summary 2018). • Sheller Road: Appears to be in fair to good condition by aerial and street imagery, although the street imagery is dated 2019. • Anderson Road: Appears to be in fair to good condition by aerial imagery. No street imagery is available. • N Gap Road: Appears to be in fair to good condition by aerial imagery. No street imagery is available. • N McCreadie Road: Appears to be in fair to good condition by aerial imagery. No street imagery is available. • N Missimer Road: Appears to be in fair to good condition by aerial imagery. No street imagery is available. Traffic counts have not been collected in direct association with the Project. However, available data regarding traffic levels from the WSDOT Traffic Count Database System (WSDOT 2022c) are as follows:

	• SR 24: 3,574 average daily traffic (ADT) near the intersection with SR 241 (2021). Near the intersection with I-82, the ADT is 23,060 (2022). • SR 241: The ADT is 1,441 near the intersection with SR 24 (2022). • SR 241: 3,203 ADT north of the intersection with Sheller Road (2022). • I-82: 47,000 to 51,000 ADT near the intersections with SR 24. (2022) 16,000-17,000 ADT near the intersections with SR 241 (2022). • N Gap Road: 6408 ADT at intersection with I-81 (2016). Traffic data are not available for other roads in the Project Area. WSDOT generically classifies state highways in rural areas with a level of service "C" as acceptable, indicating speeds near free flow but restricted freedom to maneuver. Site-specific level of service information for the state routes near the Project has not been developed by WSDOT, and Yakima and Benton Counties do not maintain information for state highways. However, it is anticipated that the actual level of service in the vicinity of the Project is closer to "B" or "A," indicating relatively free flow of traffic most of the time. Based on WSDOT Corridor Sketch Summaries, I-82 and SR 241 perform non-congested along 100 percent of the route, while SR 24 and SR 240 perform non-congested along approximately 90 percent of the routes, with approximately 10 percent of each road considered congested on a regular basis.
Waterborne, Air, and Rail Traffic	There are no deep draft shipping ports near the Project. However, the Ports of Seattle, Vancouver, or Portland are the most likely ports to receive solar equipment, which will then be trucked to the Project Area. The Port of Seattle is approximately 150 miles northwest (200 miles driving distance) from the Project. The Port of Portland is approximately 206 miles west of the Project via roadways. The Port of Vancouver, British Columbia, Canada is approximately 332 miles northwest of the Project via roadways. Air transportation is not anticipated for use in Project construction or operation. The Yakima Air Terminal in the city of Yakima provides air service to Seattle. Union Pacific Railroad's network includes a track between Wallula and the city of Yakima, which is to the west and south of the Project. Rail transportation is not anticipated for use in Project construction or operation.
Public and Pedestrian Traffic	The traffic access route consists of interstate highways and rural state routes that are not in areas associated with public transit, pedestrian demand, or pedestrian-oriented land use.
Parking	No designated parking areas are currently present at the Project location. Temporary parking areas will be established on the Project site to support construction.

Movement of People or Goods	The existing conditions related to the movement of people and goods near the Project are described above, under "Transportation Systems," "Waterborne Air and Rail Traffic," and "Public and Pedestrian Traffic."
Transportation Hazards	Given the mountainous terrain along transportation routes, steep grades and winding sections of roads are occasionally present along the access routes. Inclement weather such as snow and icy conditions may also contribute to hazards on steep and winding roads.

4.20.C Changes to and from Existing Condition

4.20.C.1 Changes to the Existing Condition from the Proposal

Could the activities associated with the proposal result in changes to the existing condition for this topic.

☒ No	☐ Yes	
	Topical Area/issue	**Changes**
	Transportation Systems	**Improvements** There are no anticipated changes or improvements to existing transportation infrastructure. New service roads constructed for the Project will be private and internal to the Project Area. These roads will generally be inside the Project fence line and will not provide any new travel routes for area residents. The Applicant will obtain County Right-of-Way Access Permits and a WSDOT Right-of-Way Access Permit for the proposed Project approaches on county and state routes based on final design. **Construction** During the estimated 24-month construction period, Project construction will add a peak of 690 one-way vehicle trips (i.e., 345 round trips) and an average of 464 one-way vehicle trips (i.e., 232 round trips) per day. Peak traffic numbers will occur over a 3-month period, with the numbers tapering up and down before and after the peak. The primary source of construction traffic will be worker commutes to the Project, originating from nearby communities including Yakima, Sunnyside, and the Tri-Cities. Based off available lodging and housing, the worker commutes were divided as follows: • 60 percent of workers commute from the Tri-Cities area, • 35 percent of workers commute from Yakima, and • 5 percent of workers commute from Sunnyside or neighboring communities. The trip estimate is based on the Project's estimated peak and average workforces, with a carpool factor of zero (to assume

		worst-case scenario), an average of 20 heavy truck equipment deliveries per day (peak of 35), and an average of 44 water truck deliveries per day (peak of 55). It is likely that some carpooling will occur, which would reduce the trips generated by worker commutes. These numbers were determined by looking at similarly sized solar energy projects in the area and the typical truck trips they generate. Construction traffic will include heavy-duty trucks, such as semi-trailer dump trucks and 40-foot container trucks, that will be carrying gravel and other materials required to improve or construct new access roadways. These heavy-duty trucks will also provide concrete for component foundations and materials for the solar module blocks themselves. In addition to concrete and gravel, water trucks delivering water to the Project will be required. An average capacity of 4,000 gallons per water truck was assumed for trip generation calculations. Water will be needed for dust control during road construction and for the temporary concrete batch plant. Semi-trailer flat beds carrying electrical equipment and materials required for solar panel construction and power transmission equipment also will be necessary. These truck delivery and water truck trips are expected to occur during off-peak hours throughout the workday. All truck deliveries are assumed to come from west of the Project along the interstates, and then SR 24 to SR 241, given the location of the Port of Seattle. It is assumed construction crews will drive pick-up trucks to and from the Project. During the 24-month construction period, traffic on SR 241 in the vicinity of Sheller Road will increase from an average of 3,203 trips per day to an average of 3,387 trips per day. The majority of these trips will consist of worker commute vehicles during the morning and evening commute times; approximately 35 percent of the workers commuting are assumed to arrive from the west via I-82and SR 241 (Yakima area). The other 65 percent are assumed to come from the southeast via I-82 to N Gap Road (Tri-Cities or Sunnyside areas). Worker commutes will average approximately 70 vehicles via I-82 to SR 241 during the morning commute and again in the evening. Approximately 130 vehicles on average would originate from the Tri-Cities or Sunnyside areas. During peak construction, these would be 105 vehicles and 195 vehicles, respectively. Equipment deliveries are expected to be approximately 35 per day during 7 months of peak construction activity and will taper before and after the peak construction activity, averaging 20 truck deliveries per day over the life of the Project. Water truck deliveries are expected to be an average of 44 per day and a peak of 55 per day. As a conservative assumption for this application, water truck deliveries are assumed to come either

		from the Moxee, Washington, or Sunnyside, Washington, areas. Equipment and water truck deliveries will occur during off-peak hours. Given the current uncongested nature of SR 241, the temporary increase in traffic counts, and anticipated traffic control measures described below, significant impact to traffic flow is not expected. Traffic on SR 24 will also increase temporarily during construction. ADT on SR 24 west of the intersection with SR 241 will increase from 3,574 to an average of 3,618 near the Project. The western portion of SR 24 near I-82 at Yakima is the most congested portion of the road with a current ADT of 23,060, which is estimated to increase to an average ADT of 23,104 during construction. This equates to less than a 1 percent increase and will not occur at peak times. Additional delays during construction could occur on SR 24 near I-82, but given the percentage of traffic increase, these delays will be minimal. Significant impacts to traffic flow along the remaining portions of SR 24 are not expected given the uncongested nature of the current state. Some worker commuting from the Tri-Cities area will travel along I-82 near N Gap Road. Considering the current 16,000 to 17,000 trips per day on I-82 in the vicinity of N Gap Road, the possibility of an additional 390 trips at peak construction will not significantly impact the current uncongested state of this roadway. The timing of peak construction activity on site may overlap with the harvest season; however, harvest vehicles typically travel throughout the day and are not limited to prime commuting hours, which is when the highest impact of workers commuting to the Project will occur. **Operations** Operations traffic will be negligible since there will be five or fewer permanent employees. The limited number of daily trips anticipated during Project operations will be negligible relative to current and projected level of services. Panel washing is expected to occur for approximately 2 to 3 weeks each year as part of the O&M phase. It is assumed the permanent operations employees will be utilized for the panel washing, and therefore, no additional worker trips are expected. Water truck trips may be required to bring water to the site for panel washing. If required, between 7 and 10 water truck deliveries per day are estimated to occur during panel washing. These deliveries will likely be during off-peak hours.
	Waterborne, Air, and Rail Traffic	No changes will occur to waterborne traffic as a result of Project construction or operation because the Port of Seattle is of sufficient size to accommodate any solar equipment that may be shipped to the Project. No changes will occur to rail or air traffic

		as a result of Project construction or operation because construction and operation of the Project will not use these modes of transportation.
	Public and Pedestrian Traffic	No changes will occur to the routing of public transit or the use of pedestrian and bike routes as a result of Project construction or operations. Also, none of these facilities are located close to the Project site.
	Parking	During construction, workers will park in designated areas of the construction site, off public roads. Construction will not adversely affect the availability of parking for other users because no parking is currently available. Parking needs during operations will be limited to occasional use by up to five employees at the O&M building. The Project will have a gravel parking area at the O&M building to accommodate these employees. As the O&M building is internal to the Project, no vehicular backing up or maneuvering will occur within a public right-of-way.
	Movement of People or Goods	Similarly, a Traffic Control Plan will be created with input requested from Benton County for construction of approaches along N Missimer Road. Post-construction, Project operations will not affect the movement of people or goods within or surrounding the Project Area.
	Transportation Hazards	By complying with local, state, or federal requirements related to traffic and transportation, the Project will not restrict vehicular use or increase local safety hazards. Furthermore, Project construction routes were chosen to minimize the use of urban roads to the extent possible. The Applicant will obtain oversize and overweight haul permits in compliance with WSDOT and Benton County requirements to safely haul equipment on highways and county roads. The Applicant will also obtain applicable permits from WSDOT and Benton County for access to public road right-of-way. A Traffic Control Plan will be prepared in coordination with WSDOT and the Benton County Public Works Department to mitigate transportation hazards during the construction of Project accesses to the public right-of-way. For these reasons, the Project will not result in significant transportation hazards or impacts to traffic safety.

4.20.C.2 Changes to the Proposal from the Existing Condition

Would the existing condition for this topic have the potential to affect the proposal now or in the future?

☒ No	☐ Yes	
	Topical Area/issue	**Changes**
	N/A	N/A

4.20.D Proposed Mitigation and Monitoring

☒ Check this box when all final proposed mitigation is described here, or the location of the mitigation information is referenced here.

Are you proposing any mitigation, either required in rules or proposed for impacts?

☐ No	☒ Yes		
	Mitigation	**Applicable law and how well it addresses the impact**	**Expert agency participation**
	Washington State Department of Transportation (WSDOT) Oversize and Overweight Permit	A permit will be obtained for heavy or oversized loads in accordance with WSDOT regulations including Revised Code of Washington 46.44 and Washington Administrative Code 468-38.	WSDOT
	Washington State Department of Transportation (WSDOT) Right of Way Access Permit	Per WAC 468-51, the Applicant will obtain a General Permit from WSDOT to upgrade the portion of the approach off State Route 241 that is within the WSDOT right-of-way, as needed.	WSDOT
	Benton County Right-of-Way Access Permit	Based on final Project design, the Applicant will obtain access permits to construct approaches to county road right-of-way from Benton County pursuant to County Standards, as needed.	Benton County Public Works Department
	Traffic Control Plan	A Traffic Control Plan will be prepared with feedback requested from the Washington State Department of Transportation (WSDOT) for traffic management during improvements of highway access. This plan will contain measures to facilitate safe movement of vehicles in the vicinity of the construction zone and will be in accordance with 23 Code of	WSDOT, Benton County Public Works Department

		Federal Regulations §655 Subpart F that provides for the Federal Highway Administration to maintain the Manual on Uniform Traffic Control Devices for Streets and Highways, which defines standards for traffic control. A Traffic Control Plan will be prepared with feedback requested form the Benton County Public Works Department for traffic management during construction and for construction of access approaches from county right-of-way.	

4.20.E Effects on Other Environmental Elements not yet Discussed

Does any information provided for this topic affect other environmental elements (e.g. water, plants, animals, noise), that has not already been considered and discussed in this form?

☒ **No**	☐ **Yes**	
	Environmental Element	**Additional changes or effects**
	N/A	N/A

4.20.F References

Benton County Public Works. 2022. Public Works Map. Available online at: https://bentonco.maps.arcgis.com/apps/webappviewer/index.html?id=6c2cc10410ad4009b53d3a7779c96b5e

Google Maps. 2022. Aerial Imagery for the Hop Hill Solar Project Area. Imagery date 2019. Accessed September 22, 2022.

WSDOT (Washington State Department of Transportation). 2022a. Functional Classification Map. Available online at: https://wsdot.maps.arcgis.com/home/webmap/viewer.html?layers=5fa0e9671d104edfadb7fa4e7f9ed17f

WSDOT (Washington State Department of Transportation). 2022b. Corridor Sketch Summary Map. Available online at: https://wsdot.maps.arcgis.com/apps/View/index.html?appid=fc716ce9593943198c491c383fc1c009

WSDOT. 2022c. Traffic Count Database System. Accessed September 2022. Available online at: https://wsdot.public.ms2soft.com/tcds/tsearch.asp?loc=Wsdot&mod=TCDS

Yakima County. 2017. Transportation Element Maps - Horizon 2040 Comprehensive Plan. Available online at: https://www.yakimacounty.us/DocumentCenter/View/15353/CHAPTER_10_Transportation_Element_Maps

4.21 Public Services and Facilities

Part 4 Analysis is not required for this section.

4.22 Utilities

Part 4 Analysis is not required for this section.